

**MALE INTIMATE PARTNER ABUSE:
DRAWING UPON THREE THEORETICAL PERSPECTIVES**

by

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This study addresses controversies in the literature of risk factors of abuse perpetrated by men against female intimate partners. Drawing upon the three theoretical perspectives dominant in the literature (family violence, mainstream feminist, and life-course perspectives), I approach the analysis from two directions. First, each perspective suggests risk factors in a particular category of influence; the family violence perspective suggests a focus on family influences, mainstream feminism suggests socio-cultural influences, and life-course theorists suggest a focus on individual/personal factors. Second, the family violence perspective and the life-course also suggested investigating influences organized by age group. I use a sample of 506 boys from the Pittsburgh Youth Study, a longitudinal study consisting of male individuals from public schools of Pittsburgh, Pennsylvania. More specifically, I focus on the 329 participants in the sample who reported being involved in a romantic relationship by age 23-25, age at which intimate partner abuse was investigated. The findings of the descriptive analysis show that intimate partner abuse is strongly correlated to the variables experience of corporal punishment in the family of origin, attitudes toward women, and delinquency (especially age 19-22). The multivariate analysis confirms that minority males, those who entered the relationship at younger age, those who experienced frequent corporal punishment in the family of origin (age 13-15), and those who had been antisocial during pre-adulthood (age 19-22) were more likely to abuse an intimate female partner during adulthood (age 23-25). The findings on race, age at entering the relationship, and

delinquency add new evidence to existing controversies in the empirical literature. In the case of corporal punishment, the results address a gap in the literature.

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CHAPTER I
INTRODUCTION

1.1 Introduction to the dissertation

In the last ten years, rates of intimate partner abuse have dropped in the United States (BJS, 2006), but the incidence of this social problem is still very high. During the year 2004, there were more than 620,000 non-fatal intimate partner victimizations (BJS, 2006). One third of all these victimizations were serious violent crimes (rapes, sexual assaults, and aggravated assaults) and involved serious injuries (BJS, 2006). The Center for Disease Control and Prevention (2003) estimates that intimate partner abuse causes nearly 2 million injuries and 1,300 deaths nationwide every year.

Victims of intimate partner abuse individually suffer from physical pain, psychological/emotional damage, and social isolation. Additionally, they suffer the economic costs of intimate partner abuse. The Center for Disease Control and Prevention has estimated that the total cost of intimate partner abuse exceeds \$5.8 billion each year, with \$4.1 billion spent for medical and mental health care and about \$1.8 billion in lost productivity (CDC, 2003).

Intimate relationships are supposed to provide love, nurturing, care, support, and protection; however, research has shown that in reality these relationships are not always peaceful and secure (Brush, 1990). In particular, women are at much higher risk to be victimized by intimate partners than by others. Findings from the National Violence against Women Survey (NVAWS) show that 64% of the women who reported experiencing rape, physical assault, and/or stalking since age 18 were victimized by a current or former husband, cohabiting partner, or date (Tjaden and Thoennes, 2000).

Although men and women are both capable of becoming violent/abusive within intimate relationships, males are more likely than females to inflict greater injuries or harm (Brush, 1990; Buzawa and Buzawa, 2003; Straus, 1991; Frieze, 2005). Males are also more likely than females

to kill an intimate partner; in fact, a study conducted by the BJS analyzed data from 1976 to 2002 and found that when the violence occurred among family members or intimate partners, about two thirds of murders were perpetrated by men (BJS, 2005). Research has consistently shown that males and females differ not only in their rates of abuse/violence within intimate contexts, but they also differ in terms of motivations for abusive/violent behavior. In particular, while females, most often, use violence to protect themselves and their children from violent outbursts, males use violence to control others (Miller, 2005).

The purpose of this dissertation is simply to understand why some males are more prone than others to perpetrate abuse against their intimate female partners in adulthood. In other words, this dissertation attempts to investigate specific risk factors of intimate partner abuse that make some males more likely than others to abuse their intimate female partners. For the purpose of this research, intimate partner abuse is defined as the use of physical, sexual, emotional and psychological abuse perpetrated by a man against his female partner.

Although a huge body of literature on violence/aggression within the family and intimate relationships has developed in the last three decades, research on risk factors of intimate partner abuse still shows many contrasting results. Recently, major controversies on the causes of male abusive/violent behaviors against their intimate female partners have been highlighted by theorists of the three dominant perspectives in the literature: the family violence, the mainstream feminist, and the life-course perspectives. By focusing on the complex set of interactions among family members/intimate partners, family violence theorists point out that research is needed to investigate whether interpersonal conflict within the family/intimate relationships, experience of corporal punishment in the family of origin, and a low level of parental bonding during adolescence influence an individual's propensity to perpetrate abuse against intimate partners

(Straus, 1991; Straus and Yodanis, 1996; Mills, 2003). In contrast, mainstream feminists focus on the association between intimate partner abuse and cultural values that justify and legitimize male dominance and control over women and suggest that there is a need for research examining whether having negative attitudes toward women influences males' behaviors within intimate contexts (Dobash and Dobash, 1998). While some research based on field work suggests that having a negative attitude toward women tends to affect a male's likelihood of abusing his female partners, there is little quantitative/empirical work in this area (Johnson and Sigler, 2000). Finally, life-course theorists suggest that risk factors of violence within intimate contexts have to be found within the predispositions of the individual, that is, within his/her personal characteristics and behaviors; more specifically, life-course and developmental theorists point out that research is needed to investigate whether academic competence, delinquency, and number of sexual partners are likely to influence an individual's propensity to abuse intimate partners. The three theoretical perspectives identify three categories of influence: family, socio-cultural, and individual/personal influences¹. In addition, all three perspectives identify three demographic variables as risk factors of intimate partner abuse: race, socio-economic status, and age at entering the relationship. Proponents of the three perspectives also agree that alcohol use/abuse should be investigated as a risk factor for intimate partner abuse².

Both the family violence and the life-course perspectives also suggest that it is important to investigate causes of intimate partner abuse over the course of development, taking into consideration different age-groups. Four age-groups (or developmental phases) are taken into consideration for the analysis: *Early adolescence* (age 13-15) is the phase in which an individual seeks his own "identity" and a role within his social network, neighborhood, school, or circle of

¹ In considering different categories of influence I follow Brofenbrenner (1979).

² The three demographic variables (race, socio-economic status, and age at entering the relationship) and the variable alcohol use will be included in the statistical analysis as control variables.

friends. *Late adolescence* (age 16-18) is the phase in which an individual feels and behaves more independently, following hormonal changes and sexual drive. *Pre-adulthood* (age 19-22) is the phase in which an individual attempts to loosen the ties with family members and starts to become more financially independent; *Adulthood* (age 23-25) is the phase in which an individual starts feeling less “self-absorbed”, looks for a more steady romantic relationship and attempts to settle down³.

I approach the empirical investigation from two directions. First, I explore whether risk factors considered by category of influence (family, socio-cultural, and individual/personal influences) affect the likelihood of being abusive against an intimate partner in adulthood. Second, I investigate which risk factors organized by age-group (adolescence, late adolescence, pre-adulthood) influence the likelihood of being abusive later in life, during adulthood.

A statistical analysis of secondary data from the Pittsburgh Youth Study (PYS) will be developed for this dissertation. The PYS is an ongoing longitudinal study of the causes and correlates of delinquency, psychopathologies, substance abuse, early sexual behaviors, and intimate partner abuse in urban males. The PYS sampled 3 cohorts from Pittsburgh’s Public Schools with the aim of investigating the cohort effect in the participants’ development and behaviors. However, this research only focuses on one of the three cohorts, more specifically on a group of 506 boys followed from seventh grade until age 25. Furthermore, only a sub-sample of 329 participants who reported being involved in a romantic relationship by age 23-25, were included in the statistical analysis. The PYS uniquely provides an opportunity to investigate and identify risk factors of violence/abuse by men against their intimate female partner; indeed, this study includes an enormous number of variables reflecting different aspects of their lives. Hence, most of the risk factors suggested by the literature are represented in the data set. Furthermore,

³ The developmental phases were inspired by Erik Erikson’s work on stages of development (1994).

because the PYS is a longitudinal study, it also allows study of risk factors of intimate partner abuse by age-group.

This dissertation offers a new approach to the study of risk factors of intimate partner abuse. First, it investigates risk factors that have been the focus of major controversies in the literature, either because they have been neglected in empirical research or because they have so far produced contrasting results. Second, this study offers two different types of analysis of risk factors of intimate partner abuse, one that takes into consideration factors by category of influence (family, socio-cultural , and individual/personal influences), and another that investigates factors over the course of development, by age-group. The findings of this study will be useful to researchers and policy makers interested in the design and implementation of prevention programs that will have a long-term effect in reducing the incidence of intimate partner abuse.

1.2 Organization of the dissertation

This dissertation is organized in six Chapters. Chapter 2 provides a historical overview of intimate partner abuse. Although intimate partner abuse has been recognized as a social problem only in the last two decades, violence against women in the family has a long history. For this reason, the historical antecedents to the problem need to be described in this dissertation. Chapter 3 reviews the literature with emphasis on the controversies around the causes of intimate partner abuse in existing research. The focus here is on three perspectives: family violence, mainstream feminist, and life-course. The family violence perspective suggests the importance of investigating the causes of intimate partner abuse within the family and within intimate contexts. In contrast, the mainstream feminist perspective blames intimate partner abuse on the social

structure and cultural norms that allow men to exercise power and control over women (in society in general, and in intimate relationships in particular). Finally, the life-course perspective suggests that causes and correlates of intimate partner abuse might be found among the predispositions of the individual and his personal characteristics. The three perspectives provide the conceptual framework for the empirical analysis of this study, including family, socio-cultural and individual influences. Chapter 4 describes the methodology used for this study. All the variables examined in this research come from the PYS data set. The analysis conducted for this dissertation focuses on the lives of 329 males from the public schools of Pittsburgh, Pennsylvania. The 329 participants are part of a cohort from the PYS (N= 506). The first interviews were conducted in 1987, when the boys were on average 13 years old (7th grade) and the last interviews were conducted in the year 2000, when they were 25 years old on average. Four groups of variables from the PYS data set are employed for the statistical analysis: 1. Experiences in the family of origin and intimate relationships (such as intimate partner abuse, interpersonal conflict with a romantic partner, experience of corporal punishment in the family of origin, and bonding to parents/caretakers during early adolescence); 2. Socio-cultural background (such as attitudes toward women and relationships with women); 3. Individual/personal characteristics and experiences (such as, academic competence, delinquency, and number of sexual partners); and 4. Demographics (such as race, age at beginning of the romantic relationship, and socio-economic status) and alcohol use. A descriptive analysis of these measures is provided in this Chapter. This Chapter also specifies the hypotheses at the multivariate level that are used as a guide for the empirical investigation. Chapter 5 provides a detailed description of the statistical techniques used for the multivariate analysis and presents the findings. Bivariate logistic regressions are used to estimate the participants' likelihood to

become abusive in adulthood based on the risk factors identified in the literature, first considered by category of influence (family, socio-cultural, and individual/personal influences) and then considered by age-group (age 13-15 or early adolescence; age 16-18 or late adolescence; and age 19-22 or early adulthood). Chapter 6 discusses the findings and implications for future research and policy. Furthermore, this Chapter specifies the limitations of the analysis and of the data set.

CHAPTER II
HISTORICAL BACKGROUND

2.1 Introduction to Chapter 2

Although abuse of women in the family became a “visible” social problem only with the Feminist Movement in the 1970s, historians have noted that it has existed for a long time. In previous eras, the issue was considered a private matter and was not included in the public discourse. In this Chapter, I attempt to trace the origins of intimate partner abuse through the lens of the history of violence against women in the family.

2.2 Early perspectives on abuse against intimates

Some historians claim that the origin of males’ desire to dominate and control women is rooted in the discovery, in prehistoric times, of the link between sex and procreation (Pagelow, 1984). In particular, the perceived need to limit women’s freedom and control their behavior stems from men’s anxiety about the ambiguity of paternity, and their desire to ensure that their mates’ children are their own (Pagelow, 1984).

In ancient civilizations violence against women in the family was justified by women’s inferior legal status vis-à-vis that of men. Men had the authority to rule the house and therefore to discipline their wives. Women had no power within the family and no voice in the public sphere; hence, they were left at the mercy of the husbands (Afoldy, 1987).

The basis for this legal control over women was first formalized in the Roman law of marriage by Romulus (around the 750 B.C.). More specifically, the law stated that women were subject to the ownership of their father who was invested with the paternal power (or *patria potestas*). Fathers were entitled to decide when their daughter had to marry and also had the legal power to choose her husband, even against the young girl’s will (Afoldy, 1987). After marriage the husband was given by hand (or *manus*) all the rights on the girl (*puella*), becoming by law

the father of the family (or *pater familias*). Although women had no alternative to marriage, the law specified all the rights that men had over the family and the obligations that women had toward their husbands (Pagelow, 1984; Dobash and Dobash, 1978). With the *patria potestas*, wife and children became the personal property of the man; husbands had the authority to rule their house, which also included the right to rape, beat, torture, or kill their wives (Johnson and Sigler, 2000). The legal control over women also specified that a husband could decide to put his wife to death for drinking his wine or for infidelity (Afoldy, 1987; Pagelow, 1984). However, women were not allowed to turn against their husbands for the same reasons. This double standard was specified in the Roman law as a means to protect the future of the family and the inheritance of the male children (Pagelow, 1984; Dobash and Dobash, 1978).

According to Pagelow (1984), many changes occurred over time in the Roman Empire that improved both the legal and the social statuses of women (at least upper class women). Due to the massive number of deaths among Roman soldiers during the Punic and the Civil wars (264-146 B.C.) women gained a new position in society and in their families (Afoldy, 1987). The role of the *mater familias* (or *matrona*) became stronger and women began participating more actively both socially and intellectually. However, when the Christians gained power (around the 300 A.C.), they demanded the subordination of women to men. Women had to be silent and obedient and they had to accept their husbands' authority (Dobash and Dobash, 1978; Pagelow, 1984). Christian leaders considered wife beating perfectly legitimate (Daniels, 1997). As Buzawa and Buzawa state, "Christianity [...] simply affirmed male-dominated family structures that were already in existence" (2003:57).

In Great Britain, the English Common Law explicitly provided a husband with the right and the responsibility to punish his wife and to keep her in a subservient position. The William

Blackstone's "rule of thumb" stated that, a husband had the right to legally beat his wife with a rod no thicker than his thumb (Daniels, 1995; Johnson and Sigler, 2000; Pleck, 1987; Pagelow, 1984; Dobash and Dobash, 1978). The English Common Law specified that women had no civil rights and that after marriage they became the 'chattel' of their husband (his personal property). Women had no power over their children and in case of parental separation, the father was granted the custody rights of his children (Pagelow, 1984).

2.3 Violence against women in the family in Colonial America

Colonial America inherited principles embedded in European custom and law. The first European settlers carried to the United States their cultural beliefs and rules of social organization, which also applied to the family. The Puritans who escaped persecution in England and moved to Plymouth and Massachusetts Bay were looking for a better life, and the family was considered their all new religious "experiment" (Daniels, 1997). According to Pleck (1987), families were entitled to create a sort of new social order that would have allowed the Puritans to survive in the new world. With the Massachusetts Body of Laws and Liberties, enacted in 1641, the Puritans were the first society to expressly define abuse within the family as an illegal act (Buzawa and Buzawa, 2003; Daniels, 1997; Pleck, 1987).

Throughout the 1700s, many English Common Laws were modified to better fit the conditions of the new world, so that women could have more freedom in the commercial areas (Pagelow, 1984). However, after a new wave of conservatism in 1776 and the American Revolution, women lost many of the privileges that they had previously gained (Pagelow, 1984).

Throughout the 19th century in the US, wife abuse was disciplined differently in different jurisdictions, although it was common throughout the nation to tolerate wife beating as long as

no permanent injury had been inflicted. For instance, in North Carolina the “curtain law” (1873) stated that “if no permanent injury has been inflicted, it is better to draw the curtain, shut out the public gaze, and leave the parties to forget and forgive” (Browne, 1987:167; Johnson and Sigler, 2000:167). Like in England, courts in the US relied on Blackstone’s “rule of thumb” (Browne, 1987). The first states to reject the use of this misogynistic practice were Alabama and Massachusetts in 1871 (Pagelow, 1984; Dobash and Dobash, 1979); these were followed by Mississippi, which also rescinded men’s privilege to beat their wives; and in Maryland (1882), Delaware (1881), and Oregon (1886) wife beating became punishable at the whipping post (Buzawa and Buzawa, 2003). However, in most court cases involving wife beating, judges were reluctant to blame the violence entirely on the men; in other words, the abuse was often justified and explained by the wife’s behavior (Pleck, 1987; Daniels, 1997). If the woman had behaved well, the man would have not been forced to use violence against her (Daniels, 1997).

Traditionally, violence among family members was considered as a private matter and the State was reluctant to intervene because of the legal principles around the public/private sphere. The perception that abuse within the family is not of public interest changed when, at the turn of the century (1900s), concerns about immigrant communities arose in the US. Indeed, racism and classism of European American groups shaped the way wife beating was viewed in society. Some authors speculate that the fear that abuse within the family would make crime rates rise in the communities, made white middle and upper class social leaders to become interested in criminalizing the issue (Daniels, 1997). Buzawa and Buzawa claim that, “when official punishment was deployed, it was far more extensively used against African Americans, immigrants, vagrants, and other groups without political, economic or social power” (2003: 65). Perhaps, economic expansion, growing population, and increasing immigration from other parts

of the world created the need for redefining social order, and the family had to be part of this definition (Daniels, 1997). However, things changed again during the Great Depression, when sympathy toward the poor, unemployed and exhausted men was often used to excuse violence against wives (Daniels, 1997).

2.4 Early feminist influence: Naming the issue

As Pleck (1987) points out, toward the end of the 1800s, several women activists became outspoken on the issue of wife-beating. For instance, Elizabeth Cady Stanton and Susan B. Anthony in 1870 asked for the death penalty for rape. Later, Lucy Stone pushed for the women's right to file for legal separation from their husbands in case of criminal assault; the proposal was presented three times – in 1879, 1883, and 1891 – but it always failed to pass (Daniels, 1997). Apparently, the proposals were seen as 'too radical' for the times (Pleck, 1987; Ferraro, 1989; Daniels, 1997).

It was not until the 1960s-70s that the general public, social service providers and legal actors started to see the violence that many women suffered within the family and intimate relationships as problematic. Consequently, violence against women was added to the public policy agenda as an issue of concern. Out of this, new definitions of violence within the family context emerged: domestic violence, woman battering, spouse abuse or wife abuse, and intimate partner violence. All these terms differ in the way they describe this social problem. For instance, the term "domestic violence" implies that the abuse is perpetrated within a family context and includes violence among family members (violence against a spouse, against a child, or a sibling) excluding all the violence that occurs among dating partners, former spouses, or ex-partners. The term "woman battering" clearly asserts the gendered nature of violence and does

not take into consideration the violence that men, too, might experience within intimate contexts. Instead, the term “spouse abuse” refers to both male and female victims; however, the utility of this term is limited because it applies only to violence occurring within married couples. Similarly, the term “wife abuse” specifies that women are the victims in intimate relationships, but it applies only to violence that occurs only within the context of marriage. The term “intimate partner violence” is gender neutral; "partner" can refer to a man or a woman. This term presents the advantage of including all types of intimate partners: married couples, unmarried but cohabiting, dating partners, ex-lovers, and ex-spouses (Daniels, 1997; Ferraro, 2001; Buzawa and Buzawa, 2003)⁴.

2.5 Policy response to violence against women in the family

As a result of the feminist movement and other advocacy groups, significant changes have occurred within the Criminal Justice System and new policies have been implemented. Major changes were first adopted by police departments. Throughout the 70s family violence intervention programs were introduced in several cities. With these programs, officers were trained to deal with intimate partner abuse calls in the manner of social workers; they were asked to mediate the dispute between the parties, to recommend counseling, or intervene to separate the parties. Thus, trained police officers were discouraged from treating domestic abuse from a law enforcement perspective, and arrest was considered only as last resort (Buzawa and Buzawa, 2003). However, the family specialized units within police departments became less and less popular during the 1980s because of the pressure of advocates and politicians who called for the criminalization of intimate partner abuse. And, in 1984 the U.S. Attorney General’s Task Force

⁴ For the purpose of this dissertation the term “intimate partner abuse” will refer to all acts of physical, verbal, sexual, and psychological abuse exercised by a man against his female partner. All the behaviors included in the scale used to assess intimate partner abuse are specified in Chapter 4.

on Family Violence mandated that violence between intimate partners should be considered a crime, and therefore arrest should be considered the best response to it (Ferraro, 1989).

At the beginning of the 1970s, a series of new statutory changes were introduced at both the State and the Federal level. However, it was not until the 1990s that the most important piece of legislation on the issue of intimate partner abuse/family violence was approved by the Federal Government: the Violence Against Women Act (VAWA), 1994, which was implemented as part of the Violence Crime Control and Law Enforcement Act. This legislation was designed to standardize the control of violent crimes perpetrated against women and children (outside the family and within family/intimate contexts). This document addressed a spectrum of related issues, including programs that would prevent the occurrence of intimate partner abuse and child abuse and programs designed for prosecuting the abusers. Besides funding more than 4,000 shelters for women and children who escape abusive situations, the VAWA has also established many rehabilitation programs for abusive men. Unfortunately, not all local governments take advantage of this opportunity, and, in many counties throughout the US, rehabilitation programs remain unavailable. Model legislation is perhaps provided by the State of Ohio, where next to the 22 shelter service programs for abused women and children, 27 rehabilitation programs for abusive men are offered. In Ohio 78% of these programs are funded by state and federal governments (<http://www.odvn.org>). Like women's shelters, batterers' programs struggled to survive throughout the country prior to the financial and political support provided by the VAWA legislation. Batterers' programs focus on the idea that many violent men can be rehabilitated; indeed, many of them are remorseful and they do want to change (Austin and Dankwort, 1998). When these programs were first introduced in the late 70s, the public expressed great skepticism about both the effectiveness of rehabilitating this group of offenders

and the increased safety for oppressed battered women (Austin and Dankwort, 1998). Today, it is still difficult to assess the effectiveness of these programs because of the large number of criteria used to evaluate them; however, many are the documented cases in which women and children have benefited as a result of abusers' participation in rehabilitation programs (Edleson, 1995). Unfortunately, the vast majority of batterers' participation in rehabilitation programs is still court-mandated (Healey et al., 1998); there are reasons to believe that if the initiative to change does not come from the batterer himself, most efforts are destined to fail. The VAWA was re-authorized in 1999 and more recently in 2006.

The next Chapter focuses on the three dominant perspectives of intimate partner abuse in the literature and on the major controversies around the analysis of risk factors of intimate partner abuse in research.

CHAPTER III
REVIEW OF THE LITERATURE

3.1. Three theoretical perspectives of intimate partner abuse in the literature

This study draws upon three different theoretical perspectives: the family violence, the mainstream feminist, and the life-course perspectives. In this Chapter I will review each perspective and discuss how I use the three perspectives to develop a model for examining why some males use violence against their intimate partners while other males do not.

3.1.1 The family violence perspective

Among the three perspectives, the family violence perspective is the oldest to study intimate partner abuse. Its proponents are responsible for coining the term “family violence” and for drawing attention to the problem. In the family violence perspective, violence between intimates is defined as a system of interactions in which both parties are involved in abusive behaviors (Mills, 2003). This perspective identifies dynamics of intimate relations in which violence triggers violence in a cyclical fashion. Thus, abuse is explained within the functioning or “dysfunctioning” of the family; the family as a whole is to be blamed for the abuse and not the individual. The social isolation that the family experiences – as a private institution – creates more opportunities for violent interactions (Healey et al., 1998).

One of the major contributions of the family violence approach is that it has pioneered the use of survey methods in a field that was dominated by qualitative research (Brush, 1990). In 1975, Murray A. Straus and Richard J. Gelles designed and conducted the National Family Violence Survey (NFVS). The study used a stratified sample of 6,002 families in which two racial groups (African Americans and Hispanics) were over-sampled in order to allow researchers to analyze racial and ethnic differences. Interviews were conducted by using the computer assisted telephone interviewing system (CATI). Respondents were asked about both

victimization and perpetration of violence/aggression, that is, either physical or verbal violence.

In particular, participants were interviewed about experiences of violence within the last year and throughout their life-span.

Reporting of the NFVS findings led to major theoretical/academic disputes around the issue of gender-symmetry in perpetration rates of intimate partner abuse. As a matter of fact, this study's findings pointed out that, in the family and in intimate relationships, women and men perpetrate abuse and violence at very similar rates. In particular, in the survey, 27% of men and 24% of women reported some form of abuse by their spouse at some point during their marriage (Straus, Gelles, and Steinmetz, 1980).

In 1985 the study was repeated with the main objective of comparing rates of violence within the family to the findings of the 1975 version. With this second survey researchers have found that, although rates of intimate partner abuse are similar between females and males, men are more likely than women to perpetrate multiple violent acts during a single attack; as a consequence, women tend to be injured more often than men during incidents of intimate partner abuse (perpetrated by men) (Stets and Straus, 1990).

The measure of violence used for the NFVS is known as Conflict Tactic Scale (CTS). This measure focuses on violent acts, such as throwing something at spouse, pushing, grabbing, shoving, slapping, kicking, biting or hitting spouse with a fist, hitting or trying to hit spouse with an object, beating up spouse, threatening spouse with a knife or gun, and using knife or gun against spouse. In 1985 this instrument was revised (CTS2) and questions about the injuries suffered by the victims as result of the violence were added to the questionnaire; participants were also asked whether the victim sought and received medical attention. Although the CTS2 offered researchers the opportunity to correct some of the limitations of the original NFVS

instrument used to assess intimate partner abuse, most scholars who have analyzed data from this survey have continued using the original version (Frieze, 2005).

In the last two decades, family violence researchers have focused on major controversies around the causes of family violence. Thus, they have identified several risk factors of intimate partner abuse that need to be further analyzed and they have provided suggestions to continue and improve research on abuse/violence within intimate contexts (Straus and Yodanis, 1996; Straus, 1991; 2004; Mills, 2003). One of the risk factors suggested by the family violence perspective is *interpersonal conflict*. Although family violence theorists assume that intimate partner abuse happens within a context of disagreement (as specified in the measure of violence applied in their study, the CTS), very few studies have analyzed the role of conflict and disagreement in the relationship in association with intimate partner abuse (Straus and Yodanis, 1996). One can think that the more partners argue and disagree with one another, the more likely they are to use physical or verbal force to resolve their conflict. However, the association between interpersonal conflict and intimate partner abuse is not at all clear in the family violence literature. Couples who argue a lot might not necessarily engage in abusive behaviors.

Drawing on social learning theory, family violence researchers have pointed to a second risk factor: a potential association between *experience of corporal punishment* in the family of origin and the likelihood to develop later aggressive behavior against an intimate partner (Straus, 1991; 2005; Straus and Yodanis, 1996; Mills, 2003). Since the family of origin is the place in which socialization begins, norms and rules of behavior are primarily copied from family members. Thus, many children who grow up in violent families learn that violence is part of family interactions, and that violence within the domestic walls is a private matter, and therefore it is not punished (Simons et al., 1998; Straus, 1991; Mills, 2003). Furthermore, violence

perpetrated by parents provides children with a sort of “scripted pattern of behavior” that explains interpersonal relations (Straus and Hotaling, 1980) and shows that violence is an effective means to control others (Simons et al., 1997). The real problem is that violence perpetrated in the family tends to repeat itself within an inter-gender and intergenerational system of dynamics (Mills, 2003). When a mother hits her child, the same child comes to believe that by using violence he can actually control other people’s behavior. Straus and Yodanis suggests that individuals who were frequently punished as children by their own parents will (as adults) have “less skills in managing conflict and, therefore, have more unresolved conflicts with their spouses” (1996:828).

One of the major difficulties in analyzing the link between corporal punishment and adult intimate partner abuse is that most of the available studies are cross-sectional. Retrospective methods of investigation employed in cross-sectional studies represent a limitation in empirical research. Indeed, information on past experiences and behaviors might not be reported correctly, due to forgetfulness or reinterpretation of facts. According to Straus (2004), the association between the two should be explored by using prospective data.

Recent theoretical work by Straus and other family violence researchers has pointed out that research on intimate partner abuse should also investigate the roles of one’s *parental bonding during* adolescence as another potential risk factor (Straus, 2004; Mills, 2003). More specifically, borrowing from Hirschi’s theory of Social Bonds (Hirschi, 1969), family violence researchers suggest that it is important to investigate whether a lack of attachment and a weakened bonding to one’s parents during childhood and adolescence increases an individual’s risk of becoming involved in abusive relationships with intimates later in life (Straus, 2004; Mills, 2003).

Family violence research has demonstrated that there is a substantial association between drinking and violence in the family and within intimate contexts (Gelles, 1974; Coleman and Straus, 1983; Kaufman Kantor and Straus, 1987). However, some scholars argue that “alcohol per se is not a necessary or sufficient cause of violence” (Gelles and Cavanaugh, 2005:180). The association between *alcohol use* and violence might be mediated by social factors like for instance socio-economic status, culture, attitudes toward violence, and the perception that alcohol triggers violence (Gelles and Cavanaugh, 2005).

Family violence researchers have also suggested several demographic risk factors, one of which is the individual’s *socio-economic status*. Although family violence studies have found that lower income families are at higher risk for becoming involved in abusive relationships (Straus and Hotaling, 1980), Mills (2003) suggests that intimate partner abuse exists across all social classes and that the association between socio-economic status and experience of intimate partner abuse needs further analysis.

Some family violence theorists have suggested that *age* might be associated with intimate partner abuse. Mills (2003) points out that there is evidence that younger couples tend to be at higher risk for intimate partner abuse.

In their studies, family violence researchers have found no racial differences in perpetration rates of intimate partner abuse. However, Straus (1991) points out that the relationship between *race* and intimate partner abuse is very complex and therefore needs further examination in research.

In spite of all the contributions offered by the family violence perspective, there are several limitations of this theoretical approach to the study of intimate partner abuse. The major limitation is related to the definition of violence between intimates itself. For example, Straus

and his collaborators have primarily focused on the traditional notion of the family. This leaves out other kinds of families and relationships, such as single parents and their children, homosexual couples, dating partners, former partners, and casual partners.

Other limitations are related to the CTS used to assess the violence/abuse; in particular critics have pointed out the following shortcomings. According to Brush (1990), questions on intimate partner abuse in the CTS are asked only within a context of conflict or disagreement, even though it is known that a lot of violence does not rise from disagreements. Another limitation of the CTS specified in the literature is that it does not include sexual violence (Brush, 1990; Kimmel, 2002; Frieze, 2005), nor does it consider forms of violence and control like vandalism against property and violence against pets (Brush, 1990). The CTS only includes violence by current spouses or cohabiting partners, but does not include violence by former spouses or dating partners (Kimmel, 2002). Another problem with the CTS is that outcomes of violent behaviors are not included in the questions (Brush, 1990). The CTS questions are rather short and – typical of survey methods – they do not allow the interviewee to provide detailed information about the situation(s) in which intimate partner abuse occurred (Brush, 1990; Frieze, 2005). Also, the CTS questions ignore details about who initiated the violence and whether the violence was actually perpetrated in self-defense (Brush, 1990). And, according to Browne (1993), the CTS does not include questions about the abuser's intention to hurt. Dobash and Dobash (1998) also indicate that the CTS does not allow the researcher to examine instances of sexual harassment or partner stalking: these non-criminal acts are also important to our understanding of the type of situations in which violence/abuse has occurred. Finally, the results produced by the CTS differ completely from the results of clinical samples (such as shelter samples and emergency room samples) (Dobash and Dobash, 1992).

3.1.2 The mainstream feminist perspective

The feminist movement played an important role in bringing attention to family violence by highlighting the problems of battered women. Out of this grew what is now referred to as the Mainstream Feminist perspective. This refers to violence between intimate partners as a gendered issue that affects mostly women. This perspective attributes intimate partner abuse to differences in power and authority between males and females (Healey et al., 1998). In our patriarchal social systems, men learn to be dominant and women to be subordinate (Pence and Paymar, 1993). Feminists argue that the major cause of intimate partner abuse is patriarchy. “Patriarchy is a system of social stratification, which means that it uses a wide array of social control policies and practices to ratify male power and to keep girls and women subordinate to men” (Chesney-Lind, 2006:9). In patriarchal systems women’s oppression is perpetuated because male violence against women is accepted, reproduced within everyday interactions and, therefore, institutionalized. Although the expression of masculinity as power and control over others is common to all men, differences among all individuals are to be found within the environment in which they develop social ties and seek the approval of others (Dobash and Dobash, 1998).

In contrast to the family violence perspective, which considers intimate partner abuse as a family dynamic problem, mainstream feminist scholars focus on intimate partner abuse as a gendered social problem. In particular the feminist approach shows that when women are involved, they are almost never the primary aggressor. Instead, women get involved in violence as a defense mechanism (Browne, 1987; Raphael, 2000; Miller, 2005). For instance, in a recent study on female offenders arrested for intimate partner abuse, Susan Miller (2005) points out that in society at large the “general violent woman” is an anomaly. The author identifies three groups

of female abusers: 1. Those who act in self defense to protect themselves and their children from violent partners (65% of the women in the sample). 2. Those who become aggressive out of frustration as a consequence of abuse suffered in the past or because of disagreement over delicate issues, such as, child custody, divorce, infidelity, and economic constraints (30% of the women who participated to Miller's work); and 3. Those who could be seen as generally violent – although, they are in most cases affected by the use of heavy drugs and abuse of alcohol (5% of the sample in Miller's study). Similar estimates were provided by Browne in an earlier study on women convicted for murdering their abusers (Browne, 1987).

Data from community samples confirm that women are, by far, the most vulnerable partners in intimate relationships in our society, representing 90% to 95% of all the victims of assault within intimate contexts reported to the Criminal Justice System (Dobash, Dobash, Wilson, and Daly, 2005). Estimates on intimate partner abuse from the National Crime Victimization Survey (NCVS) show that in 1998, about one million violent crimes were committed against persons by their current or former spouses, boyfriends, or girlfriends in the US (Rennison and Welchans, 2001). Among the victims, about 876,340 (85%) were women. Between the 1993 and 1998, violence against intimate partners made up 22% of the total violent crimes against women and 3% of the violent crimes against men (Rennison and Welchans, 2001). Findings from the Bureau of Justice Statistics indicate that, in 1992, about 28% of female victims of homicide (1,414 women) were killed by their husbands, ex-husbands, or boyfriends (Bachman and Saltzman 1995). In contrast, about 3% of male victims of homicide (637 men) were killed by their wife, ex-wife, or girlfriend. Also, estimates from the NVAWS (Tjaden and Thoennes, 2000) point out that 7.7% of women and .3% of men reported being raped by a current or former partner at some point during their life; 22.1% of women and 7.4% of men in

the survey reported being physically assaulted by an intimate partner during their life-time; and .5% of women and .2% of men in the survey reported being stalked at some point by an intimate partner or a former partner. In summary, the NVAWS indicates that women are at higher risk of victimization than men when violence within intimate contexts is explored. Indeed, in the study, women were significantly more likely to be raped, physically assaulted, or stalked by a current partner or former partner during their life-time (and also during the 12 months prior to the interviews) than their male counterparts. In addition, women were more likely than men to be injured during an assault perpetrated by an intimate partner (39% of women reported being injured during physical assault versus 24.8% of men; and 31.5% of women reported being injured during the last partner rape they experienced compared to 16.1% of men) (Tjaden and Thoennes, 1998, 2000).

Like the family violence researchers, feminist researchers have identified several risk factors of intimate partner abuse. First, they have pointed out that it is important to investigate *men's attitudes toward women and relationships with women*. Drawing upon social control theory (Hirschi, 1969), the mainstream feminist perspective assumes the existence of a system of common moral values – accepted by all members of society (in particular by men) – which are then internalized into a system of beliefs. It is through these moral values that males learn from young age what is the role of women in society, how to interact with women, and how to manage intimacy with them. However, within a social system, not all individuals behave the same and it is difficult to imagine that all men within a society view intimate partner abuse in the same way (Dobash and Dobash, 1998). It is in interaction with other factors (such as experiences in one's social network) that we need to consider the role of culture and the influence that social values have on the individual. When a boy witnesses violence against women in the family (or within

his social network), he perceives that women are subordinate to men, have fewer rights, and, therefore, intimate partner abuse is a normal part of inter-gender relationships (Dobash and Dobash, 1998). Unfortunately, it is difficult to operationalize this concept in quantitative/empirical research (Johnson and Sigler, 2000). The main problem is that existing data do not allow researchers to measure cultural values and beliefs.

Feminist literature also suggests that intimate partner abuse can be triggered by the *use/abuse of alcohol* (Dobash and Dobash, 1998; Raphael, 2000). For some men, drinking might be a way to escape the emotional burden of social problems like unemployment, discrimination, and exposure to violence (for instance, witnessing violence in one's family of origin) (Raphael, 2000). However, the use of alcohol is also part of many individuals' recreational activity, which is more accepted and encouraged in certain social networks. This form of recreation most often excludes female partners and keeps men away from the family, even when they are needed (Dobash and Dobash, 1998). Their constant attendance to drinking groups tends to increase the level of disagreement with their partner, often related to issues of jealousy and infidelity (Dobash and Dobash, 1998).

Proponents of the feminist theory have pointed out that studies on intimate partner abuse should also take into consideration the influence of demographic factors like race and class (Frieze, 2005; Raphael, 2000; Sokoloff and Pratt, 2005).

In the analysis of *race* as a risk factor of intimate partner abuse, empirical work has provided us with contrasting results. For instance, estimates from the NCVS show that while intimate partner abuse occurs across all racial categories, it is more prevalent among African American couples. According to Rennison and Welchans (2000), between 1993 and 1998, African American women, and were victimized by intimate partners at a rate 35% higher than

that of white women, and 2.5 times higher than that of women from other racial groups. For men the racial gap is even bigger, with African American men experiencing intimate partner abuse at a rate 65% higher than that of white men and 2.5 times higher compared to the rate of men in other racial groups. Using the NCVS data, for the years 1992 and 1993, Bachman and Saltzman (1995) found that race is not an important factor in the analysis of intimate partner abuse.

According to feminists, race and class issues together often create a nexus of opportunities for violence and degradation (Raphael, 2000; Sokoloff and Pratt, 2005). Empirical research is needed to investigate how race and *socio-economic status* affect one's likelihood to become abusive in intimate relationships. Using qualitative methods of research, mainstream feminist scholars have pointed out that African American men from low-income disadvantaged communities tend to be at higher risk of perpetration of abuse, because they seek control over someone within intimate relationships; their frustration is driven by their lack of achievement in a society that marginalizes them and makes them feel responsible for their inability to be the breadwinners (Raphael, 2000; Carbado, 1999).

A final demographic factor suggested by mainstream feminist scholars is *age at entering the relationship*. Although a few studies have reported that younger people tend to engage in abusive behaviors more often than older people (Frieze, 2005; Rennison, 2001), research is needed to further understand this association.

The mainstream feminist perspective has been criticized by proponents of the family violence perspective for several limitations, one of which is that studies of intimate partner abuse focus exclusively on violence perpetrated by males, mostly against female victims. The literature is rich with examples of "intellectual attacks" against mainstream feminist scholars, who are often accused of writing within an advocacy framework rather than within a scientific mode

(Straus, 1991), ignoring empirical evidence and neglecting the fact that abuse can become mutual within everyday interactions (Dutton and Nicholls, 2005).

3.1.3 The life-course perspective

In contrast to both the family violence perspective and mainstream feminism, the life course perspective studies behavior over time. The life-course perspective draws upon developmental theories in order to examine how psychopathologies, conduct problems and delinquent/antisocial behaviors tend to develop, change or stabilize, and desist over time. The focus is on change and stability in the expression of certain behaviors from childhood to adulthood. This perspective refers to intimate partner abuse as a gender neutral phenomenon and it focuses on the idea that causes of aggression and violence perpetrated against intimate partners must be investigated within the predispositions of the individual. More precisely, the life-course states that behavioral traits and features of the individual that manifest early in life (during childhood/adolescence) might associate to a certain tendency to become abusive against intimates during adulthood.

The life-course uses prospective measures of investigation within a framework of analysis provided by longitudinal studies. An example of a longitudinal study of the analysis of precursors of intimate partner abuse is the work by Moffitt and Caspi (1999). Their research was drawn from a longitudinal exploratory work that has been studied for over 20 years as part of the Dunedin Multidisciplinary Health and Development Study. Participants to the Dunedin study were interviewed about intimate partner abuse when they reached age 21 years. The instrument used to assess the occurrence of violence/abuse between intimate partners combined items from the CTS and the Domestic Conflict Scale identified by Margolin in 1990. In this research Moffitt

and Caspi found that perpetration rates of abuse were very similar between men and women; in particular, among the participants of the Dunedin study, 27% of the females and 34% of the males reported being physically abused by their partners. About 37% of women and 22% of men said that they had been abusive against an intimate partner. These findings show similarities between female and male participants both in the victimization and perpetration rates of intimate partner abuse. In this study, female victims were 10 times more likely than other female participants to become abusive against their male partners, and male perpetrators were 19 times more likely to be abused than other participants. Additionally, the authors have found that the two major risk factors of intimate partner violence among the participants were mental health problems and adolescent delinquency.

Another life-course study on intimate partner abuse is the research of Gorman-Smith et al. (2001). Using a sample of 141 African Americans and Latino males from the Chicago Youth Development Study (CYDS), the authors found an association between street crime during adolescence and intimate partner abuse. Similar issues were addressed in a longitudinal study conducted by Woodward et al. (2000). Using a sample of 201 males and 294 females from the Christchurch Health and Development Study (CHDS) conducted in Christchurch, New Zealand, the authors examined the association between adolescent onset of delinquent behaviors and adult perpetration and victimization of intimate partner abuse. Participants were interviewed about their experience of intimate partner abuse when they reached approximately age 21 years. Three groups of individuals were compared in the study: those with childhood onset delinquent/antisocial behavior problems; those with adolescent limited delinquent/antisocial behavior problems; and those who did not have a history of delinquent/antisocial behavior

problems. The study found an association between very early onset in delinquent/antisocial behavior and adult intimate partner abuse.

The life-course perspective also suggests that there might be an association between *number of sexual partners* and intimate partner abuse. In a 1994 study conducted in the United Kingdom, Farrington found that individuals at higher risk of partner abuse tended to be sexually promiscuous. Research is needed to understand the role that sexual number of sexual partners plays in explaining the nature and the causes of adult intimate partner abuse.

Although life-course studies have not found racial differences in the analysis of intimate partner abuse, it is important to further investigate whether *race* is associated to partner abuse (Moffit and Caspi, 1999; Gorman-Smith et al., 2000; Woodward et al., 2002)

Similarly to other theorists, proponents of the life-course perspective have pointed out that a risk factor for intimate partner abuse is one's *socio-economic status*. According to Magdol et al. (1997) individuals involved in abusive relationships were more likely to be unemployed. And, differently from other researchers, life-course theorists indicate that poverty in the family of origin can be a risk factor for abusive behaviors against intimates later in life (Fagan and Wexler, 1987; Farrington, 1994). However, one can speculate that coming from a poor family also makes an individual at higher risk of being poor himself during adulthood.

Life-course researchers have also found that there is an association between *age* and intimate partner abuse (Cate et al., 1982; Gorman-Smith et al., 2001); however, differently from proponents of the family violence perspective and the mainstream feminist perspective, life-course theorists have pointed out that younger couples tend to be less committed toward one another and therefore they are at a lower risk of becoming violent than older couples (Cate et al.,

1982; Gorman-Smith et al., 2001). Studies have indicated contrasting results and the association between age and intimate partner abuse still needs to be investigated.

Similarly to family violence researchers and mainstream feminists, life-course theorists have pointed out that there is a need for research to further clarify the role of *alcohol abuse* to explain the causes of intimate partner abuse (Magdol et al. 1997).

Like the other perspectives, the life-course perspective has controversies and limitations. The analysis of *delinquent/antisocial behavior* as a risk factor/precursor for adult intimate partner abuse is the focus of major controversies in the life-course literature. For instance, Gorman-Smith et al. point out that although their study's findings show that individuals who reported partner violence showed a propensity to be involved also in street violence during adolescence, "there is not complete overlap between these two types of violence, and it may be useful to gain a better understanding of the potential differences in risk between the two" (2001:290). Also, this study's findings might be affected by the age of the participants, who were between the age of 15 and 19 years when interviewed about intimate partner abuse. Also, the sample is primarily composed of minority groups from a poor urban community of Chicago.

Although Moffit and Caspi (1999) have found a link between delinquent/antisocial behavior at age 15 and adult intimate partner abuse, they also suggest that the association needs further investigation. While Woodward et al. (2002) have pointed out that very early onset in delinquent/antisocial behavior is an important precursor of adult abuse between intimates, participants to the study were interviewed on intimate partner abuse only at age 21, and abuse within intimate contexts might be still part of a general tendency in antisocial behavior rather than a separate problem. Furthermore, all these studies have focused on the association between intimate partner abuse and delinquent/antisocial behavior in the form of violent behavior. By so

doing, researchers have attempted to make a connection between behaviors that manifest at different ages in one's life but that might be of the same type (violent). Conversely, research is needed to investigate the association between delinquent/antisocial behavior (both violent and non-violent) and adult perpetration of intimate partner abuse. Further research is necessary to investigate the association between delinquent/antisocial behavior over the course of development and adult intimate partner abuse.

Another controversial issue on the analysis of risk factors of intimate partner abuse discussed in the life-course literature refers to the link between *low academic competence* and intimate partner abuse. Very few longitudinal studies have focused on this link. Farrington and West (1990) and Farrington (1994; 1997) found that a low academic competence from childhood to adulthood is strongly associated to perpetration of abuse and violence against intimates. From a psychological point of view one can think that individuals who are low in academic competence also lack in verbal skills, which might trigger aggression against a partner during a disagreement. Also, we may think that less competent/intelligent individuals tend to underestimate the consequences of abuse.

A limitation of the life-course perspective is that in the analysis of precursors of intimate partner abuse, this perspective focuses on the characteristics of the individuals and their own behaviors. However, while individual characteristics or individual behaviors by themselves, taken out of context, are relevant, it is important to take into consideration environmental factors and situational/contextual factors as well (Fagan et al., 1981).

3.2 Drawing upon the three perspectives: My theoretical model

While the research in each perspective has been important to understanding the problem of abuse within intimate contexts, none of the three perspectives provides the breadth of evidence needed to identify what leads to a pattern of intimate partner abuse. However, in light of their studies' findings, theorists and researchers that have embraced the three perspectives have highlighted major controversies on the causes of abuse perpetrated by men against their female intimate partners. I draw upon the three perspectives in order to construct a theoretical framework of analysis to investigate why some males become abusive against their intimate female partners during adulthood while others do not.

As suggested by the family violence perspective, I investigate whether certain family factors have an influence on a male's propensity to abuse an intimate partner; these factors are: interpersonal conflict with intimate partner, experience of corporal punishment in the family of origin, and a low level of parental bonding during adolescence. By following feminist research, I investigate the influence that attitudes toward women and relationships with women have on intimate partner abuse. And, as life-course researchers have suggested, I analyze the influence of a low academic competence, delinquency, and number of sexual partners on intimate partner abuse.

Furthermore, following the suggestions provided by family violence and life-course researchers, I investigate the influence that certain factors that manifest early in life (experience of corporal punishment, a low level of parental bonding, delinquency and number of sexual partners) have on adult abusive behaviors. Thus, I identify four different age-groups based on the individual's developmental phases⁵ (age 13-15 or early adolescence; age 16-18 or late

⁵ The 4 developmental phases used for the analysis were specified in Chapter 1.

adolescence; age 19-22 or young adulthood; age 23-25 or adulthood). Also following the three perspectives, I investigate whether demographic factors (race, socio-economic status, and age at the beginning of the romantic relationship) and alcohol use, have an influence on adult abusive behaviors perpetrated against intimate partners.

In my theoretical model, intimate partner abuse is the dependent variable and it is defined as the use of any physical, sexual, verbal and psychological abuse perpetrated by a man against his female intimate partner (either wife or girlfriend). The explanatory variables are interpersonal conflict with an intimate partner, experience of corporal punishment in the family of origin, a low parental bonding during adolescence, attitudes toward women and relationships with women, academic competence, delinquency, and number of female sexual partners. The control variables are race, socio-economic status, age at entering the romantic relationship, and alcohol use.

The next Chapter discusses the methodology; I will provide a detailed description of the sample used to investigate the abuse perpetrated by males against their female intimate partners. After describing the variables employed in the statistical analysis I will also specify the hypotheses that will guide the statistical analysis.

CHAPTER IV
METHODOLOGY

4.1 Introduction to Chapter 4

This research uses data from the Pittsburgh Youth Study (PYS). In this Chapter I will describe the sample used for the statistical analysis. Then, I will discuss my empirical model and the measures from the PYS data set. A descriptive analysis of each variable employed in the analysis will be provided. Finally, the hypotheses that guide this empirical investigation will be specified.

4.2 The Pittsburgh Youth Study data set (PYS)

For the analysis I use data from the Pittsburgh Youth Study (PYS), an ongoing longitudinal study of the causes and correlates of delinquency, psychopathologies, substance abuse, early sexual behavior, and intimate partner abuse in young urban males. The study begun in 1987; it sampled three cohorts from the Pittsburgh Public Schools in order to investigate “cohort effects” in participants’ development and behaviors (Loeber et al., 1998). The three cohorts consisted of a group of children from first grade, a group from fourth grade, and a group from seventh grade. The first graders were then named as “Youngest Sample”; the fourth graders were named as “Middle Sample” and the seventh graders were named as “Oldest Sample”. It is on the “Oldest Sample” that I focus for this dissertation. More specifically, the multivariate statistical analysis will use only the group of 329 males that reported being involved in a romantic relationship by age 23-25, the age at which intimate partner abuse was investigated in the PYS. However, because the 329 participants are a sub-sample of the “Oldest Sample” selected by the PYS investigators and researchers, I will provide the reader with a complete description of the original “Oldest sample” selection (section 4.2.1).

4.2.1 Participants: the “Oldest Sample”

The oldest sample comprises a total number of 506 participants. However, the sampling process began by contacting 1,011 families randomly selected from a list of male students attending the seventh grade of any public school of the Pittsburgh metropolitan area. In total, 84.7% of the families initially contacted agreed to participate (856 children were then counted in the initial screening). The first assessment allowed the identification of children at “high risk” of delinquency based on a number of antisocial behaviors indicated by the informants. Information about the children’s behaviors was gathered from each participant himself, one of his parents (usually the mother), and his teacher. Each informant was asked to complete a questionnaire. Participants were identified as “high risk” only if they engaged in three or more “disruptive behaviors;” these included: attacking someone, running away from home, setting a fire, stealing from a place other than home, truancy, vandalism, stealing from a car, robbery, stealing a bicycle, shoplifting, stealing a car, attacking someone with a weapon, gang fighting, hitting/hurting a teacher, hitting/hurting a parent, joyriding, burglary, being arrested, drinking alcohol, sniffing glue, or using marijuana. In total 30% of the participants in the original sample was identified as “high risk” (n=282); the remaining group was considered “low risk” (n=574). Then, 91% (n=257) of the participants from the “high risk” group and 43% (n= 249) of the participants from the “low risk” group were randomly selected; hence, the sample of 506 boys. The participants in the high-risk group were over-sampled at a ratio 2:1-1:0. Weights were then assigned in order to reflect the original random selection from the public school population of Pittsburgh⁶. The weight assigned to the high risk group is .6485 and the weight assigned to the low-risk group is 1.3626 (Loeber et al., 1998; Wei, 1999).

⁶ Pittsburgh is a city of medium size, located in South Western Pennsylvania with an urban population of 369,879 and a county population of 1,281,666 (as per 2000 US Census).

The statistical analysis developed for this study (Chapter 5) specifically uses a subsample comprising only the 329 participants that reported having an intimate partner by age 23-25 years.

4.2.2 The interviews

Participants in the oldest sample were interviewed 16 times since they were age 13 years⁷. The first five interviews were scheduled every six months and thereafter every year. Until the participants were 17-18 years of age, information was also gathered from the participants' parents (the mother) and their teachers. The interviews took place at the participants' homes and the average duration of interviews was between 2 and 3 hours. For the initial interviews, the boys received a fee of \$5. However, the fee increased gradually phase after phase, and in the last assessment participants were paid \$85. The parents also received a fee that increased from \$12.50 at the first interview to \$60 at the last interview.

Each wave of interviews corresponds to a specific phase of the PYS life (assessment phase); from the first assessment in 1987 to the last assessment carried out in the year 2000, 16 phases were developed. Each assessment phase is marked by an alphabetical letter; however, the order of the letters is not exactly loyal to the English alphabet; this choice can be explained by technical decisions made by researchers of the PYS. For instance, the first assessment phase is indicated as S – which stands for “Screening” (in this phase the participants were selected from the random sample identified as either high risk or low risk individuals as explained in the previous section).

⁷ The average cooperation rate for the oldest sample over the 15 follow ups was 89.5%, reflecting a very low attrition.

The table below shows how the assessment phases were identified at each interview, the year when interviews were completed, and the average age of participants at each phase of the interviews.

Table 4.1: Assessment phases for participants of the PYS Oldest Sample (N=506)

Assessment Phase	Year	Age (in years)
S	1987	13
A	1988	13.5
B	1988	14
C	1989	14.5
D	1989	15
E	1990	15.5
G	1990-1	16.5
I	1991-2	17.5
K	1992-3	18.5
M	1993-4	19.5
O	1994-5	20.5
Q	1995-6	21.5
SS	1996-7	22.5
U	1997-8	23.5
W	1998-9	24.5
Z	1999-2000	25.5

Note: As the dates of interviews show, participants were interviewed every 6 months from phase S up to phase E and every year thereafter.

4.3 Empirical models

With this study I investigate risk factors of intimate partner abuse. In my models the dependent variable is an individual's probability of being an adult perpetrator of intimate partner abuse. The explanatory variables are first considered by category of influence corresponding to the three theoretical perspectives: the family violence, the mainstream feminist, and the life-course perspectives, as discussed in the previous Chapter. Accordingly, the family influence includes interpersonal conflict, experience of corporal punishment in the family of origin, and parental bonding during adolescence; the socio-cultural influence includes attitudes toward women and relationships with women, and the individual/personal influence includes academic competence, delinquency, and number of sexual partners. Next, I investigate the effect of participants' experiences at different ages. This is done by considering as independent variables participants' behaviors in early adolescence (ages 13-15), late adolescence (ages 16-18); pre-adulthood (ages 19-22). Four control variables are also included in the analyses: race, socio-economic status (SES), age at entering the romantic relationship, and alcohol use.

4.4 PYS variables employed in the statistical analysis

The Dependent Variable: *Intimate partner abuse*

Data on intimate partner abuse in the PYS were collected for the first time when participants were approximately 21; interviews were repeated every year until participants were 25 (phases Q to Z). However, for this dissertation I focus on data collected when participants were 23 and again when participants were 25 (that is, phases U and Z). This choice was made after exploring the data collected in the last 5 phases of the study. Only in phase U and phase Z were all participants in the oldest sample interviewed on their experiences with an intimate

partner and only in those two phases, had researchers used the same questionnaire; therefore, only data gathered at age 23 and 25 are comparable.

The questionnaire used to assess intimate partner abuse comprises a total of 37 questions; in particular the questionnaire asks about 15 behaviors that are violent or aggressive in nature and 22 behaviors that can be categorized as non-physical/controlling. Violent behaviors in the questionnaire are: physically twisted partner's arm; pushed, grabbed or shoved partner; slapped partner; physically forced sex on partner; shaken partner; thrown partner bodily; pulled partner's hair; thrown something at partner; choked or strangled partner; kicked, bit, or hit partner with a fist; hit or tried to hit partner with an object; beat up partner; burned or scalded partner; threatened partner with knife or gun; used a knife or gun on partner. Non-physical controlling behaviors in the questionnaire are: damaged a household item or part of the home; disposed of an important item of partner, got upset if dinner/housework was not done; purposely damaged partner's clothes or car; insulted or shamed partner in front of others; locked partner in or out of the house; told partner that she could not work or study; tried to stop partner from seeing family and friends; restricted partner's use of car/telephone; made threats to leave the relationships; tried to turn family or friends against partner; ordered partner around; frightened partner; treated partner like she was stupid; given in to partner but planned revenge; ridiculed partner; threatened to hit or throw something on partner; told partner she was ugly or unattractive; become abusive after using drugs or alcohol; thrown, smashed, or hit something in a disagreement; followed partner when she said not to; gone to partner's workplace/home after she said not to⁸.

⁸Eight of the violent behaviors listed in the PYS questionnaire were taken from the Conflict Tactic Scale (CTS), discussed in the previous Chapter (Straus and Gelles, 1986); more precisely, behaviors from the CTS are: thrown something at partner; pushed, grabbed, shoved partner; slapped partner; kicked, bit or hit partner with a fist; hit or tried to hit partner with an object; beat up partner; threatened partner with a knife or gun; and, used a knife or gun against partner. The remaining behaviors listed in the PYS questionnaire were identified by Moffitt and collaborators for the Dunedin Study (Magdol et al., 1998).

Although non-physical/controlling behaviors and violent behaviors are different in nature, for the purpose of this research, all the behaviors were summarized into one variable named “intimate partner abuse”. The reliability analysis shows that the 37 items included in the scale might actually be part of the same type of behavior (Cronbach’s alpha = .87). Prior to the scale's creation, each item of the questionnaire was recoded into a dichotomous variable. In the PYS data set the possible answers to each question on intimate partner abuse behaviors were: Never, Once, Twice, Sometimes, Frequently and Very Frequently. Although the 37 behaviors were all combined into one scale, non-physical controlling behaviors and violent behaviors were recoded differently. More specifically, due to their level of seriousness, violent behaviors in the scale were recoded as 0 if the respondent answered “Never” and 1 for all other possible answers. In this way, even when a participant perpetrated a violent behavior only once, the scale is able to take that specific incident into consideration. Conversely, the scale for non-physical/controlling behaviors only includes those behaviors perpetrated more often in the interactions with a partner. In the scale, each non-physical controlling behavior was re-coded as 0 if the behavior never occurred or it occurred exceptionally (for instance, once or twice during the past year); it was coded as 1 if the behavior occurred sometimes, frequently or very frequently. This re-coding method was used in order to exclude behaviors that are very common between adult individuals involved in intimate relationships, which would explain very little about conflict within intimate contexts.

After all the 37 items were combined, the intimate partner abuse scale was dichotomized into a 0-1 variable for the statistical analysis. In this scale, 0 means that the participant reported never perpetrating any of the 37 behaviors listed in the scale, and 1 means that the participant perpetrated at least 1 of the 37 behaviors listed in the scale.

In the PYS, participants were first asked about their relationship with a current partner. In the study, current partner is a person with whom the participant has had a relationship for at least a month. All the participants who reported not being involved in a relationship with a current partner were interviewed about their relationship with a past partner. Furthermore, those participants who did not have a current partner or a past partner at the time of the interview were then asked about a relationship with a casual intimate partner. However, for the purpose of this dissertation the analysis focuses only on the group of participants who reported having a current intimate partner at the time of the interview.

In the PYS, participants were also interviewed about victimization of abuse at the hand of a partner (current, past, or casual partner). However, the variable victimization of abuse by an intimate partner won't be included in the statistical analyses of this dissertation⁹. This dissertation focuses solely on the analysis of abuse perpetrated by the participant against a female intimate partner.

In the first phase of interviews on intimate partner abuse considered for this research (phase U in the PYS data set), when participants were 23 years – a total of 52% of participants (n=263) reported having a current partner; however, only 46% of participants (n=234) were willing to answer questions about their relationship. In the second phase of interviews on intimate partner abuse considered for this dissertation (phase Z in the PYS data set), when participants were 25 years of age on average – 55% of participants (n=281) agreed to answer questions about their relationship with a current partner. Information gathered from the participants in phase U and phase Z was combined by computing the mean over the completed

⁹ A multivariate statistical analysis performed by using a 2-Stage Least Square regression indicated that the variable victimization of abuse by an intimate partner might be an endogenous factor in the analysis. In other words, the variable participant's victimization of abuse by an intimate partner is correlated to the error term in the model. This result might indicate that the two factors - perpetration of intimate partner abuse against a partner and participant's victimization of abuse by a partner - might be determined simultaneously in the model.

interviews. In this way, if participants were interviewed twice, the final score was computed as a mean of the two scores in each interview. If the participant was interviewed only once (because he skipped one of the two interviews) the score for the completed interview was considered as final score. Thus, only participants who skipped both interviews (at age 23 and age 25) were deleted from the count. In total 329 participants in the sample are taken into consideration for this empirical investigation; they represent 65.1% of the original “Oldest sample” of the PYS; the remaining group (n = 177) include participants who were not interviewed because they did not have a relationship with a current partner by age 23-25, those who refused, participants interviewed on a past or casual relationships, participants who skipped interviews and computer errors (in one case).

Table 4.2 summarizes the number of abusive behaviors perpetrated by the 329 participants of the Oldest sample against their wives/girlfriends between age 23 and 25. This analysis was developed by using the variable intimate partner abuse prior to dichotomization.

Table 4.2: Distribution of abusive behaviors against intimate partners (N= 329)

Number of behaviors from the intimate partner abuse scale	Prevalence	Value percent
0 No abuse	217	66.0%
1 Abusive behavior	41	12.4%
2 Abusive behaviors	24	7.4%
3 Abusive behaviors	13	4.1%
4 Abusive behaviors	10	3.1%
5 Abusive behaviors	7	2.0%
6 Abusive behaviors	3	1.0%
7 Abusive behaviors	5	1.4%
8 Abusive behaviors	1	.4%
9 or more Abusive behaviors	8	2.2%
Total N	329	100.0%

Note: The table shows the number of behaviors perpetrated against wives/girlfriends by the 329 participants from the “Oldest Sample” who reported being involved with an intimate partner by age 23-25. A weight was applied to this descriptive analysis.

Table 4.2 shows that over a half of the 329 participants who were involved with an intimate partner by age 23-25 reported not perpetrating any of the 37 behaviors (either violent or non-physical controlling behaviors) included in the intimate partner abuse scale used for this study. One fourth of participants perpetrated 1 to 3 of the behaviors included in the scale, while approximately 9% of the 329 participants perpetrated between 4 and 10 abusive behaviors. The remaining 2.2% reported perpetrating between 12 and 23 behaviors from the intimate partner abuse scale (23 is the maximum number of behaviors reported by the participants).

A descriptive analysis of the raw data performed by exploring each abusive behavior taken separately has indicated that among the PYS participants involved with an intimate partner by age 23-25 (N= 329), the most common non-physical/controlling behaviors perpetrated against a current partner were “got upset if dinner/housework was not done when it was supposed to be done” and “made threats to leave the relationship”; whereas the most frequently perpetrated violent behaviors were “pushed, grabbed, or shoved partner” and “physically twisted partner’s arm”.

Table 4.3 shows the prevalence of intimate partner abuse among the 329 participants who were involved in an intimate relationship by age 23-25. The descriptive analysis was developed by using the dichotomized version of the intimate partner abuse variable that will be employed in the multivariate statistical analysis developed in Chapter 5. A weight was applied to the analysis.

Table 4.3 Prevalence of intimate partner abuse - age 23-25

Ever perpetrated Intimate Partner Abuse	n	%
No	217	66.0%
Yes	112	34.0%
N	329	100.0%

Note: The analysis of prevalence was conducted using the dichotomous scale for intimate partner abuse. Data from phases U and Z were combined. A weight was used for the analysis. In total 329 participants of the original PYS Oldest sample (N=506) reported being involved in an intimate relationship by the time of the interview (age 23-25).

Table 4.3 shows that 34.0% (n = 112) of the 329 participants interviewed on intimate partner abuse against a current partner reported perpetrating at least one of the behaviors included in the intimate partner scale.

Explanatory Variables

I will describe how each explanatory variable was computed. For each variable I will also provide a short summary of the descriptive statistical analyses. I will also provide a comparison between the sub-sample of 329 participants interviewed on their relationship with an intimate partner (by age 23-25) and the original PYS Oldest Sample of 506 males selected by the PYS investigators with statistically accurate sampling methods. It is important to investigate whether the sub-sample reflects the characteristics of the original PYS sample from which it was drawn in all the aspects investigated in this research. Indeed, differences between the sub-sample of 329 participants and the original PYS sample of 506 males might indicate that participants who had a girlfriend/wife by age 23-25 (n=329) differ from the participants who were not involved in an intimate relationship at the time of the interview (phases U and Z) (n=177). Later, in Chapter 5, I

will test the statistical differences between the group of 329 participants interviewed on their relationship with an intimate partner (age 23-25) included in the multivariate analysis and the remaining group of 177 participants from the Oldest Sample who reported not having an intimate current partner at the time of the interview (age 23-25) and that were excluded from the multivariate statistical analysis.

I consider each explanatory variable in conjunction with the category of influence with which it is associated.

- Family influence

Interpersonal conflict: PYS participants were asked how often they and their partner (girlfriend/wife) agreed about something or spent quality time together. Five questions from the Dyadic Adjustment Scale questionnaire (Spanier, 1976) were used to measure the level of interpersonal conflict with an intimate partner among the 329 participants who reported having a wife/girlfriend at the time of the interview (age 23-25). In the PYS the questions were specified as: 1. How often do you and your partner agree about what you want out of life? 2. How often do you and your partner agree about aims, goals, and things believed important? 3. How often do you and your partner agree about amount of time spent together? 4. How often do you and your partner have an interesting chat? 5. How often do you and your partner calmly discuss something? (Loeber et al.,1998). The variable/scale “Interpersonal conflict” employed in the analysis was computed by combining the 5 different variables from the raw data. In each phase the 5 variables were summed after dividing each by the number of possible outcomes/answers¹⁰. Information from each phase (phase U and Z) was combined into one variable to be used in the analysis that was computed by taking the mean of all completed interviews. The scale is a

¹⁰ Question 1, 2 and 3 had five possible answers: 0 never, 1 hardly ever agree, 2 sometimes, 3 almost always agree, 4 always agree. Differently, questions 4 and 5 had six possible answers: 0 never, 1 less than once a month, 2 once or twice a month, 3 once or twice a week, 4 once a day, 5 more often.

continuous variable where the higher the score the lower the level of interpersonal conflict. The N for the scale “interpersonal conflict” is 313, which indicates that 16 of the 329 participants interviewed on their relationship with a current partner at age 23-25 either skipped the interview or refused to answer the question¹¹. The minimum value for the variable interpersonal conflict with intimate partner is 0 and the maximum value is 11.4. A descriptive analysis performed by comparing the responses to the five questions taken separately has indicated that between age 23-25 a total of 10% of participants reported being often in disagreement with their partner about time spent together and 9% of participants had trouble discussing an issue calmly with partner¹².

Experience of corporal punishment in the family of origin: For the analysis I use a construct of the participant’s experience of corporal/physical punishment computed by the PYS researchers (Loeber et al., 1998). This construct summarized information gathered from both the participant and his caretaker (usually the mother) about the way she/he usually disciplined the child. The questions addressed to the informants come from the Discipline Scale (Patterson and Stouthamer-Loeber, 1984). Caretakers were asked how often¹³ they slapped, spanked, or hit their son if he did something that he was not allowed doing or that they did not like. Participants were asked to supply the same information about the behavior of each caregiver, so that the replies could be more effectively corroborated. The responses from the informants were averaged and the construct was then dichotomized by applying a cutoff rule¹⁴. In the original PYS construct experience of corporal punishment, 0 means that corporal punishment was applied infrequently and 1 means that it was applied frequently. For the analysis, I have created a new variable by

¹¹ Only participants who reported being involved with a current partner at the time of the interview were asked questions about interpersonal conflict with an intimate partner (N=329).

¹² A weight was applied to the statistical analysis.

¹³ Possible answers were: almost never, sometimes, often, or very often.

¹⁴ The variable was set to 1 if the average was greater than 79.8% and to 0 otherwise.

calculating the mean over all the completed interviews from age 13 through age 15 (phases A through E); the value of this new variable ranges from 0 to 1 (continuous variable).

A descriptive analysis has indicated that, according to the caretakers' reports, one third of participants (approximately 30.0%) received corporal punishment by age 13-15. However, only one fifth of participants (19.5%) reported receiving corporal punishment by a parent/caretaker. When corporal punishment was applied, participants reported being punished more often by their fathers than by their mothers. This was true for both the participants in the Oldest Sample (N=506) and the 329 participants interviewed on their relationship with a current partner by age 23-25. A weight was applied to the analysis.

Parental bonding during adolescence: The PYS also provides detailed information about the participant's involvement with his parent/caretaker. Several constructs were computed by the PYS researchers by combining information gathered through the Supervision/Involvement Questionnaire¹⁵ that was administered to each parent/caretaker and participant in the study (Loeber et al., 1998). For the statistical analysis I have computed a new scale named "Parental Bonding" that combines information from 5 different PYS existing constructs: caretaker's time spent with child, caretaker talks about activities with the child, caretaker's communication with child, boy not involved with caretaker, and boy has bad relationship with primary caretaker. The reliability analysis for this scale shows Cronbach's alpha = .66. Information from interviews completed from age 13 to age 15 are included. A mean of the score of all the completed interviews was computed. The new scale is a continuous variable that ranges from 0 ("weak bonding" with parent/caretaker) to 1 ("better bonding" with parent/caretaker). An analysis of the frequencies computed by using weighted data from each phase (from phase A to phase E) shows

¹⁵ See the Supervision/Involvement Questionnaire in Appendix A. The scale was identified by the PYS researchers' literature review of family factors related to delinquency (Loeber and Stouthamer-Loeber, 1986; Moos and Moos, 1975; and Skinner et al., 1983).

that at age 13 to 15 years one fifth of participants experienced weak or no bonding to parents/caretakers. This was true for both the original “Oldest Sample” of the PYS (N=506) and the sub-sample of 329 participants who were interviewed on their relationship with a current partner (age 23-25)¹⁶.

- Socio-cultural influence

Attitudes toward women and relationships with women: In the PYS participants were asked about their attitudes toward specific issues, like their attitudes toward women and their relationships with women. The two variables selected for this analysis refer to the participant’s opinion about getting a girl pregnant and not helping her to bring up the child, and cheating on a girlfriend/wife. The two questions are part of the PYS Perception of Problem Behavior Questionnaire (Loeber, 1982; Loeber et al., 1998). For the analysis, I have combined the two variables into one scale that is intended to express the participant’s attitude toward women and relationships with women; this scale is a continuous variable (the higher the score the more negative the participant’s attitude toward women/relationships with women). Information from phases U and Z was combined by computing the mean over all the completed interviews. The scale’s value ranges from 2 to 8. An analysis of frequencies using weighted data has indicated that, between age 23-25, slightly more than 6% of participants reported that “it is alright to get a girl pregnant and not help her to raise the child”, and approximately 10% of participants said that it is alright sometimes to cheat on an intimate partner. This was true for both the original PYS Oldest Sample and the sub-sample of 329 participants interviewed on their relationship with a current intimate partner by age 23-25.

- Individual/Personal influence

¹⁶ Only 328 participants out of the 329 participants in the sub-sample responded to the interview on parental bonding.

Academic competence: Information about the participant's academic competence was gathered in the PYS (Loeber et al., 1998). Three informants were interviewed about each participant's performance on reading, writing, spelling, math, and three other subjects: the teacher, the caretaker and the participant himself. Caretakers were asked questions from the Child Behavior Check List (CBCL; Achenbach, 1978; Achenbach and Edelbrock, 1979, 1983), the teacher from the Teacher Report Form (TRF; Edelbrock and Achenbach, 1984), and the participant from the Youth Self-Report (YSR; Achenbach and Edelbrock, 1987). The scale for the evaluation of each performance consisted of failing, below average, average, and above average. The responses of the three informants were averaged and the construct was then dichotomized by applying a cutoff rule.¹⁷ The scale for academic competence used for the analysis is a continuous variable that was computed by calculating the mean of the construct over all the completed interviews (age 13 to 15, phases S through E). The scale's value ranges from 0 to 1. An analysis of frequencies developed by using weighted data has indicated that one third of participants were considered below grade level in their reading skills and one fourth of participants were considered below grade level in their writing, spelling, and math achievements. This was true for both the "Oldest sample" of 506 participants and the sub-sample of 329 participants interviewed on their relationship with a current intimate partner.

Delinquency: In the PYS delinquency was measured through the Self-Reported Delinquency Questionnaire (SRD) adapted from the National Youth Survey (Elliott et al., 1985). Information about the participants' delinquent behavior was also gathered from caretakers (CBCL) and teachers (TRF). The interviews with the participants were then compared to official records from juvenile and adult courts (arrest and conviction). These interviews were conducted consistently from age 13 years through age 25 years (from Screening – or phases S to Z). In total

¹⁷ The variable was set to 1 if the average was greater than 75.0% and 0 otherwise.

36 items were included in the scale to assess delinquency. A summary of the major questions of the SRD Questionnaire is reported in Appendix B. For the analysis I use a construct that was computed by the PYS researchers across all the phases of the study; the construct is labeled as “Number of Levels of Delinquency” and summarizes all possible outcomes of participants’ delinquency (Loeber et al., 1998). This construct identifies five levels of delinquency: 1. Vandalism at home or stealing from home; 2. Minor vandalism outside home, minor fire-setting, minor fraud, stealing from school or elsewhere, or shoplifting; 3. Major vandalism/fire setting, major fraud, stealing a bike/skateboard or something worth \$5-\$50, joyriding, pick pocketing, stealing from a car, holding stolen goods or something worth more than \$50, carrying a weapon or gang fighting; 4. Drug dealing, breaking and entering, auto theft, strong arm, attack or rape; 5. Two or more delinquent behaviors from level 4 of delinquency.

For the statistical analyses I have created a new variable by computing the mean over all the completed interviews from age 13 through age 22 for the existing PYS construct (phase S through phase SS). This variable allows me to summarize all the delinquent behaviors perpetrated by the participant from early adolescence through pre-adulthood. This scale is a continuous variable: the higher the score the more serious the participant’s level of delinquency. Descriptive statistics show that the minimum is 0 and the maximum is 4.33. Three more variables were computed by collapsing information about the participants’ delinquency by age group (13-15; 16-18; 19-22) by calculating the mean score over all the completed interviews. Thus, for the variable delinquency age-group 13-15, I have computed the mean over all the completed interviews between phase A and phase E; for delinquency age-group 16-18 I have computed the mean over all the completed interviews from phase G through phase K; and for

delinquency age-group 19-22 I have computed the mean over all the completed interviews from phase U through phase SS¹⁸.

An analysis of the trend in number of levels of delinquency (by age-group) among the participants (computed by using weighted data) has indicated that delinquency was higher between age 13 and 18 (it slightly increased from age 13-15 to age 16-18) and started declining thereafter, reaching its lowest level at age 25. This was true for both the original PYS Oldest Sample of 506 boys and the sub-sample of 329 participants interviewed on their relationship with a current partner at age 23-25. This trend confirms existing developmental theories in the literature, which point out that delinquent/antisocial behavior escalates during late adolescence (or during teenage years) and subsequently enters a phase of “desistance” (see for instance, Loeber and Le Blanc, 1990).

Number of sexual partners: Every year the PYS participants were interviewed about their sexual activity and about their sexual partners. For this dissertation, I have selected the construct “Number of heterosexual partners in the past year” (Loeber et al., 1998). However, for the statistical analysis I have combined information into three 3 different scales, one for each age-group considered in the analysis (age 13-15; age 16-18; and age 19-22) by taking the mean over all the completed interviews within each age group. Following the same criterion I have also created a continuous variable that summarizes about the participant’s number of sexual partners from age 13 to age 22 (computing the mean of all the completed interviews in phase A through phase SS); the higher the score the larger the numbers of female sexual partners¹⁹. Descriptive

¹⁸ A few missing cases were identified for the delinquency scales. More specifically, for the sub-sample of 329 participants interviewed on their relationship with an intimate partner, the variable delinquency age 13-15 carried no missing cases, the variable delinquency age 16-18 and the variable delinquency age 19-22 each carried 3 missing cases. Missing cases for the variable delinquency might be due to skipped interview or refusal to answer questions. A complete list of missing cases for all the variables employed in the analysis is reported in table 4.5.

¹⁹ A few missing cases for the variable “number of sexual partners” were identified among the 329 participants involved in a current romantic relationship by age 23-25. More specifically, the variable number of sexual partners

indicated that, while for the original PYS Oldest Sample of 506 participants the minimum number of heterosexual partners is 0 and the maximum is 29, for the sub-sample of 329 participants interviewed on their relationship with a current partner (age 23-25) the minimum is 0 but the maximum number is 24. However, an analysis of the distribution of sexual partners through the life-span, has indicated that, for both the original Oldest sample (N=506) and the sub-sample of 329 participants interviewed on their relationship with a current partner, the number of heterosexual partners are low during early adolescence (age 13-15), reach a peak during late adolescence (age 16-18) and tend to decrease during pre-adulthood.

Control Variables

The control variables in the analysis comprise three demographic factors (race, SES, and age at entering the relationship) and the variable alcohol use. I will describe how each variable was computed/recoded and I provide a summary of the descriptive analysis for each variable. Furthermore, I report a comparison between the sub-sample of 329 participants interviewed on their relationship with their current partner and the PYS Oldest Sample of 506 males from which it was drawn.

Race: In the PYS Oldest Sample (N=506), 213 participants are Whites, 281 are African Americans, 1 participant is Hispanic, 2 are Asians, and 9 are Biracial. In order to simplify the analysis I have recoded the original PYS race variable into a dichotomy that takes value 0 when participants reported being white and value 1 for all the non-White participants. For the PYS Oldest sample of 506 participants, 294 are non-White (58.1%) and the remaining 212 participants are White (41.9%). Among the 329 participants interviewed on their relationship

age 13-15 carries no missing cases, the variables number of sexual partners age 16-18 and number of sexual partners age 19-22 each carries 3 missing cases. The missing cases for the variable number of sexual partners might be due to either skipped interviews or refusal to report. A complete list of missing case for each variable included in the statistical analysis is reported in this Chapter (Table 4.5).

with a current intimate partner by age 23-25, 181 are non-White (55.5%) and the remaining 148 are White (44.5%).

Participants' SES: In the PYS constructs the participants' SES was computed by recoding the job categories (from 0 to 880 in the original code-book) according to the Hollingshead Scale (1975), which includes all groups of job-income categories from “farmer labor or menial worker” to “executive or major professional”. Job prestige and educational level are also included in the construct (Loeber et al., 1998). For the analysis I have computed a scale that combines information for participants age 23 and 25; the variable was computed by taking the mean over all the completed interviews from phase U through phase Z. The SES scale was then dichotomized and its value is 0 for Low SES and 1 for High SES. Frequencies show that by age 23-25, three quarters of the participants within the group of 329 males interviewed on their relationship with an intimate partner had a Normal-High SES, while only two thirds of participants among the 506 males of the original Oldest Sample had a Normal-High SES. In Chapter 5 I report the statistical differences between the group of participants included in the analysis (329) and the remaining group of the Oldest Sample not included (n=117).

Age at beginning of romantic relationship: Participants who reported having a current partner were interviewed about their age when they and their partner first started considering themselves as a couple. The question was asked in retrospective in the Intimate Partner Abuse Questionnaire (Loeber et al., 1998); therefore, only the 329 participants who were involved in an intimate relationship at the time of the interview (age 23-25) were asked this question²⁰. In Phase U (age 23 years) the age distribution shows that, on average, participants reported that they and

²⁰ An analysis of frequencies shows that the N for the variable “age at beginning of romantic relationship” is actually 324 (5 participants are considered missing). The missing cases might refer to participants who refused to answer the question or answered “don't know”. Since the question was asked in retrospective, it is possible that some of the participants could not remember at what age they and their partner had started considering themselves a couple.

their partner started considering themselves as a couple at around 21 years. The minimum for phase U is 13 years and the maximum is 25 years. The standard deviation in the distribution is 2.18 years. In Phase Z (age 25) participants reported starting to consider themselves a couple at around age 22 on average. The minimum for the distribution in phase Z is 13 and the maximum 27 years. The standard deviation for this distribution is 2.9 years. In order to combine information from both phase U and phase Z, I have computed a scale as the mean value across the phases. Missing values were limited to 1 for each phase per participant; in this way if the participant was interviewed in phase U but not in phase Z (or vice versa) the answer provided in one phase was taken into consideration. If the participant was not interviewed in either phase, then he was counted as a missing case, and if the participants were interviewed in both phases the two scores (age numbers) were averaged and the mean value was specified in the scale. The total N for the two phases combined is 324.

*Alcohol use*²¹: In the PYS participants were asked about their alcohol consumption from age 13 to 25. For the analysis I make use of a construct computed by the PYS researchers: “frequency of alcohol use”. This construct includes consumption of beer, wine, hard liquor, or any other type of alcohol used during the year prior to the interview. I create a new scale to combine the participant’s information about the frequency of alcohol use from age 13 through 25 by computing the mean over all the completed interviews. A descriptive analysis has indicated that, among the PYS participants, alcohol use was very low till age 17; it increased sharply from age 18 to 21 to decrease thereafter. This was true for both the Oldest Sample of 506 boys and the sub-sample of 329 participants interviewed on their relationship with an intimate partner (age 23-25). However, descriptive statistics indicated some differences in alcohol consumption between

²¹ This excludes drinking alcohol at festive occasions with parental knowledge when participants were minors (Loeber et al., 1998).

the two samples. More specifically, for the sub-sample of 329 participants interviewed on their relationship with an intimate partner, the mean of alcoholic beverages during the year prior to the interview is 41 and the standard deviation is 39. Differently, for the sample of 506 participants, the mean is 37 and the standard deviation is 39. This might indicate that some differences in frequency of alcohol use exist between the group of participants interviewed on their relationship with a current partner (n=329) and the group of participants not included in the analysis (n=177). In Chapter 5 I will assess the statistical differences between the two groups.

Further details about the data

Weight: As specified earlier in this Chapter, delinquent/antisocial individuals (or “high-risk” participants) were over-sampled in the PYS. In order to make sure that the analysis is conducted using a representative sample and that all the estimates are unbiased, I apply a weight to the distribution. The variable weight (w) takes 2 different values: .65 and 1.36. It was computed by researchers of the PYS to make sure that the sampling reflects the population at large. Table 4.4 explains how the weight is distributed among participants of the PYS in the analysis.

Table 4.4: Distribution of weight among PYS participants

Weight value	Oldest sample (N= 506)		Partner Abuse sample (N= 329)	
	Freq.	%	Freq.	%
.65	257	50.8	106	32.1
1.36	249	49.2	223	67.9
Total	506	100.0	329	100.0

Note: The weight was constructed by the PYS researchers; weighting is a standard procedure that is used to correct for over-sampling and it allows researchers to develop statistical analyses using unbiased estimators (Rosnow and Rosenthal, 1989). A comparison between the Oldest Sample of 506 males and the sub-sample of 329 participants interviewed on their relationship with an intimate current partner (age 23-25) is reported in the table.

Missing values: in the PYS missing cases are due to skipped interviews, refusals to answer questions, failure to remember information (“Don’t Know”) or computer errors.

The multivariate analysis developed for this dissertation focuses exclusively on the group of participants who were involved in a romantic relationship for at least a month at the time of the interview (N= 329); the remaining 177 participants from the PYS Oldest Sample, that is, those interviewed about a past partner and those interviewed about a casual partner, are counted as a separate group and won’t be included in the multivariate statistical analysis (i.e. they are not considered as missing cases).

The missing cases for the multivariate statistical analysis depend on the missing cases reported for each single variable employed in the multivariate analysis. Table 4.5 specifies the missing cases for all the variables included in the multivariate analysis. Because all the empirical models adopted for the analysis use different explanatory variables (risk factors of abuse), the missing cases might vary model by model according to the variables included in the analysis.

Human subjects: The PYS project was funded by the National Institute of Mental Health (NIMH) and the Office of Juvenile Justice and Delinquency Prevention (OJJDP). The research program was approved by the University of Pittsburgh Institutional Review Board (IRB). As an employee of the PYS research center, I had the opportunity to use the data as they were collected by expert trained interviewers. Being part of the Western Psychiatric Institute and Clinic (University of Pittsburgh Medical School) every researcher of the PYS who has access to data collected from human subjects has to be certified for responsible use of such data. A HIPPA Researchers Privacy Requirements Module associated with the Educational and Certification Program in Research & Practice Fundamentals was issued as formal authorization that allowed me to investigate and analyze the data from human subjects of the PYS. I do not intend in any

way to use information to me available to identify names or features of the individuals who participated in the study.

4.5 Summary of the variables employed in the statistical analyses

Table 4.5 lists the variables that are included in the statistical analyses. For each variable I specify the name and the age group to which the variable refers. Due to the particularity of the empirical models (which will be explained in detail in the next section), some of the explanatory variables were computed in two different ways, first grouping all the possible interviews (all phases from age 13 to age 22), and then age-group by age-group (13-15; 16-18; and 19-22); (see for instance the variables delinquency the variable number of sexual partners). Also, the table reports the total number of observations for each variable and its missing cases.

The N for intimate partner abuse is 329, that is, the total number of PYS participants in the “Oldest sample” (N=506) who were involved in a relationship with an intimate partner by age 23-25 and that agree to talk about that relationship. However, as discussed above, the missing cases vary across the independent variables: the variable interpersonal conflict has a total of 16 missing cases, the variable parental bonding shows 1 missing case, delinquency and number of sexual partners for the age-group 16-18 and for the age group 19-22 carry 3 missing cases. Among the control variables, the variable age at the beginning of the relationship has 5 missing cases. Missing cases might be due to skipped interviews, refusal to answer the question, failure to remember (“don’t know”), or computer error. The count of missing cases is important for the multivariate analysis. As a matter of fact, each variable carries its own missing cases within the empirical model affecting the total count for each statistical procedure. Hence, the maximum number of possible missing cases for the multivariate analysis is 34 out of the 329 participants

included in the analysis. The 177 participants who did not have an intimate partner at the time of the interview won't be included in the count.

Table 4.5: Summary of the variables included in the analysis

Variable name	Age-group	Type	N	Missing cases
<i>Dependent Variable</i>				
Intimate partner abuse	(23-25)	Dichotomous	329	16
<i>Explanatory Variables</i>				
Interpersonal conflict	(23-25)	Continuous	313	0
Experience of corporal punishment	(13-15)	Continuous	329	0
Parental bonding	(13-15)	Continuous	328	1
Negative attitudes toward women	(23-25)	Continuous	329	0
Academic competence	(13-15)	Continuous	329	0
Delinquency	(13-22)	Continuous	329	0
Delinquency by age group				
	(13-15)	Continuous	329	0
	(16-18)	Continuous	326	3
	(19-22)	Continuous	326	3
Number of sexual partners	(13-22)	Continuous	329	0
Number of sexual partners by age group				
	(13-15)	Continuous	329	0
	(16-18)	Continuous	326	3
	(19-22)	Continuous	326	3

Table 4.5: Summary of the variables included in the analysis (continue)

Variable name	Age-group	Type	N	Missing cases
<i>Control variables</i>				
Race	13 Screening	Dichotomous	329	0
SES	(23-25)	Continuous	329	0
Age at beginning of relationship		Continuous	324	5
Alcohol use	(13-25)	Continuous	329	0
Total			----	34

Note: The table summarizes the variables employed in the statistical analysis, specifying the age-group at which information was gathered, the variable type, the N count for each variable, and its missing cases. The N reported represent the actual N for the PYS distribution of participants who were interviewed on their relationship with a current partner at age 23-25.

4.6 Hypotheses and plan for the statistical analysis

In this section I specify the hypotheses that will guide the empirical investigation.

Hypotheses were derived from the literature, based on controversies on the causes of intimate partner abuse as discussed in Chapter 3. The hypotheses reflect the two empirical strategies specified in the introduction. First, I investigate risk factors of intimate partner abuse by category of influence (family, socio-cultural, and individual/personal influences). Second, I investigate which factors considered by age-group (13-15 or early adolescence; 16-18 or later adolescence; 19-22 or pre-adulthood) influence the likelihood of being abusive during adulthood (age 23-25). For each hypothesis, I anticipate the plan for the empirical models that will allow me to verify whether my statements are correct. I will develop the statistical analysis in Chapter 5 and also in Chapter 5 I will explain the technical advantages of using these particular statistical models.

Investigating risk factors of abuse by category of influence

The first hypothesis is: *Males who experience conflict within the relationship with an intimate partner (age 23-25), have experienced frequent corporal punishment in the family of origin (age 13-15), or have had weak bonds with parents/caretakers during early adolescence (age 13-15) are more likely to be abusive against their intimate partners in adulthood (age 23-25).* This hypothesis addresses the major issues/concerns discussed by proponents of the family violence perspective (Straus, 1991, 2005; Mills, 2003; Straus and Yodanis, 1996) and provides a theoretical basis to analytically investigate whether a family influence affects the individual's propensity of abusing an intimate partner in adulthood. In Chapter 5 I will test this hypothesis by using a binary logistic regression where the dependent variable is intimate partner abuse (age 23-25) and the explanatory variables are all the family risk factors for abuse (interpersonal conflict with one's partner (age 23-25), experience of corporal punishment (age 13-15), and parental bonding during adolescence (age 13-15)). Four control variables will be also included in the analyses: race, SES (age 23-25), age at the beginning of the relationship, and frequency of alcohol use (age 13-25). In addition, I will focus on the role of race as risk factor for adult intimate partner abuse; thus, I will re-run the same empirical model by separating the two racial groups (White and non-White). This strategy was suggested by PYS researchers who had previously analyzed the causes of violent/aggressive behaviors among the participants in the study by separating the two racial groups (see for instance the work by Loeber, Stouthamer-Loeber and Wei, 2002).

The second hypothesis is: *Males involved with an intimate partner who have negative attitudes toward women and toward relationships with women (age 23-25) are more likely to abuse their intimate partners in adulthood (age 23-25).* This hypothesis reflects an important

issue that has concerned mainstream feminist theorists for almost fifty years (Dobash and Dobash, 1998). Although, the influence of one's beliefs, values and attitudes has been the focus of a number of research studies in feminist literature, quantitative/empirical papers have neglected this problem, mainly because of lack of available data. This hypothesis provides me with a theoretical basis for analyzing whether a socio-cultural influence exists within the causes of male intimate partner abuse. In Chapter 5 I will test this hypothesis by using a binary logistic regression model. For this model, the dependent variable is intimate partner abuse (age 23-25) (dichotomy) and the explanatory variable is attitudes toward women and relationship with women (age 23-25). Like in the previous model, four control variables are included in the analysis: race, SES, age at the beginning of the romantic relationship, and frequency of alcohol use (age 13-25). Furthermore, I will focus on the role of the variable race in the analysis of socio-cultural factors. Thus, I will re-run the empirical model to test the second hypothesis by separating the two racial groups (White and non-White).

The third hypothesis is: *Males involved with an intimate partner who have a low academic competence (age 13-15), are delinquent (age 13-22), or have had large numbers of female sexual partners (age 13-22) are more likely to perpetrate abuse against their intimate partners (age 23-25).* This hypothesis summarizes the main controversies on the causes of intimate partner abuse that have been indicated by life-course researchers (Moffitt and Caspi, 1999; Farrington 1994). It provides me with a theoretical basis for investigating whether individual/personal influences affect the probability of being abusive against an intimate partner in adulthood (age 23-25). In Chapter 5 I will test this hypothesis by using a binary logistic regression where the dependent variable is intimate partner abuse age 23-25 and the explanatory variables (individual/personal risk factors) are: academic competence (age 13-15), delinquency

(age 13-22), and number of sexual partners (age 13-22). Four control variables will be also included in the analysis: race, SES (age 23-25), age at the beginning of the relationship, and frequency of alcohol use (age 13-25). In Chapter 5 I will also develop an analysis of the individual/personal risk factors by separating the two racial groups (White and non-White). This strategy seems to be necessary to explore in depth how intimate partner abuse in adulthood varies among the participants by race (Wei, 1999).

The fourth hypothesis is: *Risk factors of abuse range among different categories of influence (family, socio-cultural, and individual influences). I hypothesize that family risk factors are more likely than socio-cultural or individual risk factors to influence one's likelihood of being abusive against an intimate partner in adulthood.* This hypothesis summarizes all the main controversies on the causes of intimate partner abuse discussed in the literature by proponents of the family violence, mainstream feminist, and life-course perspectives and reflects the dominant view in sociology/criminology literature that experiences in the family during early adolescence tend to shape an individual's ability to manage interpersonal relationships (Siegel, 2006). Furthermore, this hypothesis provides a theoretical basis for comparison of that influence that each category of influence have on the individual's propensity of perpetrating abuse against an intimate partner in adulthood. In Chapter 5 I will test this hypothesis by using a multi-level binary logistic regression where the variables are analyzed by block. The dependent variable for the model is intimate partner abuse (age 23-25). The first equation (or block) includes all the control variables (race, SES, age at the beginning of the relationship, and frequency of alcohol use). The second equation, which represent the family influence block, includes the family risk factors, namely, interpersonal conflict with partner (age 23-25), experience of corporal punishment (age 13-15), and parental bonding during adolescence (age 13-15). The third

equation, the socio-cultural block, includes the factor attitudes toward women and relationships with women (age 23-25). The fourth equation, the individual/personal block, includes the factors academic competence (age 13-15), delinquency (age 13-22), and numbers of sexual partners (age 13-22).

Investigating risk factors of intimate partner abuse by age-group

The fifth hypothesis is: *Personal characteristics, experiences, and behaviors that manifest early in life (during early adolescence) tend to influence the probability of being abusive against intimate partners during adulthood (measured at 23-25 years) more than experiences and behaviors that manifest later in life (age groups 16-18 and 19-22)*. This hypothesis reflects the suggestions provided by both family violence theorists and life-course theorists who suggest that experiences/behaviors that manifest early in life may influence adult behaviors within intimate contexts (Straus, 2005; Moffitt and Caspi, 1999; Mills, 2003). Furthermore, this hypothesis provides a theoretical basis for analyzing risk factors of intimate partner abuse by age-group (early adolescence or age 13-15, late adolescence or age 16-18, pre-adulthood or age 19-22, and adulthood or age 23-25)²². In Chapter 5 I will test this hypothesis using a multilevel binary logistic regression, where the variables for each age group are added to the model by block (or group of factors). The first block includes all the control variables (race, SES, age at the beginning of the relationship, and frequency of alcohol use). The second block includes all the risk factors of adult intimate partner abuse that were measured between age 13 and 15 (academic competence, experience of corporal punishment, parental bonding, delinquency, number of sexual partners). The third block includes all the risk factors measured between age 16 and 18 that are used for this dissertation (delinquency and number of sexual

²² The rationale behind the 4 age-groups has been explained in both Chapter 1 and Chapter 3. The four age groups represent 4 developmental phases/stages and they were inspired by Erik Erikson readings on stages of development (1994).

partners). The fourth block includes all the risk factors measured between age 19 and 22 (delinquency and number of sexual partners).

In the next Chapter I will develop the statistical analysis and I will test all the hypotheses above specified. I will discuss each empirical model and I will report the findings. After testing each hypothesis, I will construct a model that would take into consideration only risk factors of abuse that were statistically significant in the models used to test the 5 hypotheses. I will refer this model simply as the “final model”. The final model will help to summarize the main findings of the statistical analyses.

CHAPTER V
STATISTICAL ANALYSIS

5.1.: Empirical investigation

In this Chapter I develop the statistical analysis. First, I compare participants included in the analysis (those interviewed on their relationship with a current partner) to participants who are not included in the analysis because they did not have a current partner or simply did not agree to talk about their intimate relationship. Second, I investigate the bivariate association between each risk factor of intimate partner abuse (explanatory variables) and intimate partner abuse (dependent variable). Finally, I develop the multivariate analysis at the core of this empirical investigation. The multivariate analysis includes an analysis of risk factors of intimate partner abuse by category of influence (family, socio-cultural, and individual/personal influences) and an analysis of precursors of intimate partner abuse considered by age-group (age 13-15; age 16-18; and age 19-22). The empirical models designed for this investigation allow me to test the five hypotheses that I have specified in Chapter 4.

5.2 Comparing the “current partner-group” to the other participants in the sample

Among the PYS participants in the “Oldest sample” (N=506), a total of 329 males (65.1%) were interviewed about their relationship with a current partner (a partner with whom they were in a romantic relationship for at least a month prior to the time of the interview). It is important to compare these 329 participants (current-partner group) to the 177 participants (34.9%) excluded from the analysis (group of participants who did not report having a current partner at the time of the interview by age 23-25). In particular, it is appropriate to verify that the group of participants excluded from the analysis is not different from the group of participants included in the analysis with respect to aspects taken into consideration for this research, that is, race, SES, attitudes toward women, parental bonding, corporal punishment, academic

competence, delinquency, and number of sexual partners. Differences about interpersonal conflict and age at entering the relationship will not be investigated here because only participants who were interviewed on a current partner were asked questions about these two matters.

By using a statistical procedure that allows me to investigate the mean differences between the two groups of participants (independent sample t-test), I test the differences between the current partner-group and the non-current partner groups' experiences of corporal punishment (age 13-15), parental bonding (age 13-15), attitudes toward women and relationships with women (age 23-25), academic competence (age 13-15), delinquency (age 13-22, age 13-15, age 16-18, and age 19-22), number of sexual partners (age 13-22, age 13-15, age 16-18, and age 19-22), SES (age 23-25), and alcohol use (age 13-25). Furthermore, I test racial differences between the current partner-group and the non-current partner group of participants by using the Chi-square test²³. The results of the analysis are indicated in Table 5.1.

²³ The variable race is a dichotomous variable, therefore differences between the two groups can be assessed by using the Chi-square statistics.

Table 5.1: Comparison between the “current partner-group” and other participants in the sample

Comparison Variable(s)	Current		Other		Test	Mean difference	
	N	Mean	N	Mean		Coefficient	Significance
<u>Explanatory Variables</u>							
(Frequent) Corporal punishment (13-15)	329	.24	177	.26	T-test	.72	.474
(Low) Parental bonding (13-15)	328	.85	177	.80	T-test	-1.8	.070
(Negative)Attitudes toward women (23-25)	329	4.1	126	3.9	T-test	-1.3	.188
(Low) Academic competence (13-15)	329	.78	177	.73	T-test	-1.9	.054
(High) Delinquency (13-22)	329	.001	177	.96	T-test	-.86	.077
(13-15)	329	.90	177	1.0	T-test	1.2	.217
(16-18)	326	.88	165	1.2	T-test	2.8	.005
(19-22)	326	.82	154	.60	T-test	-.97	.332
(High)Number of sexual partners (13-22)	329	2.2	177	2.9	T-test	1.0	.050
(13-15)	329	.99	177	1.6	T-test	2.1	.040
(16-18)	326	3.3	162	3.6	T-test	.60	.560
(19-22)	326	2.4	153	3.9	T-test	1.8	.070

Table 5.1: Comparison between the “current partner-group” and other participants in the sample (continue)

Comparison Variable(s)	Current		Other		Test	Mean difference	
	N	Mean	N	Mean		Coefficient	Significance
<u>Control Variables</u>							
(Non-White) Race	329	-----	177	----	Chi-square	2.5	.115
(Low) SES (23-25)	329	.80	127	.64	T-test	-4.0	.000
(High) Frequency of alcohol use	329	41.3	177	29	T-test	-3.4	.001

Note: The table compares the group of 329 participants interviewed on their relationship with a current partner (age 23-25) to the group of 177 participants who reported not having an intimate partner at the time of the interview (age 23-25). The tests used for this computation are the independent sample t-test (for continuous variables) and the Chi-square test (for dichotomous variables). The variables “interpersonal conflict” and “age at entering the relationship” were not included in this analysis because participants were asked about the two matters only if interviewed on their relationship with a current partner. Coefficients are considered significant when p-value is < .050. A weight was used through the analysis. The table shows the N for each variable included in the analysis. The missing cases for each variable may be due to skipped interviews, refusal to answer the question, or computer error. The missing cases for each variable are also reported in Chapter 4 (section 4.5).

The comparison of means between the two groups (as reported in Table 5.1) indicates that participants who reported being involved in a relationship with a current partner by age 23-25, were, on average, less delinquent during late adolescence (age 16-18) than participants who reported not having a romantic relationship at the time of the interview (age 23-24). The difference in levels of delinquency between the two groups is statistically significant with p-value $< .010$. Also, participants involved in an intimate relationship by age 23-25 reported having, on average, a smaller number of heterosexual partners throughout their life span (age 13-22) and especially during early adolescence (age 13-15) than participants who were not involved in a current romantic relationship by age 23-25. The analysis reported on Table 5.1 shows that the difference in number of sexual partner between the two groups is statistically significant with p-value $< \text{or} = .05$. Also, participants involved in a romantic relationship by age 23-25 reported having a higher SES in adulthood than those who reported not having a romantic relationship at the time of the interview (age 23-25). As reported on Table 5.1, the difference in SES between the two groups is statistically significant with p-value $< .001$. Finally, the analysis shows that participants involved in a romantic relationship with a current partner at the time of the interview (age 23-25) reported consuming alcohol more frequently than participants who did not have a romantic partner at the time of the interview (age 23-25). Table 5.1 shows that the difference in alcohol consumption between the two groups is statistically significant with p-value $< \text{or} = .001$.

The Chi-square test for the racial differences between the two groups, White and non-White (as reported on Table 5.1) indicates that there are not statistically significant racial differences between the two compared groups.

In summary, the results of the analysis developed to compare participants who reported being involved in a romantic relationship by age 23-25 and those who reported not having a

current romantic relationship at the time of the interview, show that some statistically significant differences can be observed between the two groups. This confirms what the results of the descriptive analysis developed in Chapter 4 had anticipated²⁴. I will exclusively focus on the subsample of 329 participants interviewed on their relationship with an intimate partner (age 23-25) for the multivariate analysis.

5.3 Bi-variate associations (between intimate partner abuse and each risk factor)

In this part of the analysis I verify the statistical significance of the association between the dependent variable and each risk factor (or independent variable) taken into consideration for this research. The dependent variable intimate partner abuse (age 23-25) is dichotomous and the explanatory variables are continuous; therefore, I compute the bi-variate correlations using the Pearson's coefficient. Only one of the control variables included in the analysis is recoded as a dichotomy (race); hence, to test the bivariate association between intimate partner abuse and race, I compute the cross-tabulation and use the Chi-square statistics. Table 5.2 summarizes the results of the analysis.

²⁴ Chapter 4 reports a comparison between the group of 329 participants from the PYS Oldest sample interviewed on their relationship with a current partner and the 506 males of the original sample (PYS Oldest sample).

Table 5.2: Bivariate associations between the dependent variable and the each risk factor

Explanatory Variable	Test	Value	Significance	N
(High) Interpersonal Conflict (23-25)	Correlation	-.01	.831	313
Frequent Corporal punishment (13-15)	Correlation	.12	.004	329
(Low) Parental bonding (13-15)	Correlation	-.11	.043	328
(Negative) Attitudes toward women (23-25)	Correlation	.16	.003	329
(Low) Academic competence (13-15)	Correlation	-.06	.231	329
(High) Delinquency (13-22)	Correlation	.16	.004	329
(13-15)	Correlation	.07	.211	329
(16-18)	Correlation	.01	.115	326
(19-22)	Correlation	.23	.006	326
(High) Number of sexual partners (13-22)	Correlation	.15	.005	329
(13-15)	Correlation	.09	.117	329
(16-18)	Correlation	.12	.024	326
(19-22)	Correlation	.10	.071	326
(Non-White) Race	Chi-square	10.5	.001	329
(Low) SES (23-25)	Correlation	-.10	.063	329
(Younger) Age at entering the relationship	Correlation	-.16	.003	324
(High) Frequency of alcohol use	Correlation	.07	.181	329

Note: The table shows the bivariate statistical associations between the independent variable intimate partner abuse and each risk factor for abuse. The test used for the analysis is specified in the second column. A weight was applied to the analysis. Coefficients are considered significant if p-value < .050. The N for each variable is reported in the last column of the table. The sub-sample of participants interviewed on their relationship with an intimate partner comprises in total 329 males. There are a few missing cases for the variables interpersonal conflict, parental bonding, delinquency, number of sexual partners, and age at entering the relationship. Missing cases might be due to skipped interviews, refusal to answer the question, or computer error.

Table 5.2 shows that there is a positive statistically significant correlation between the variable experience of corporal punishment (age 13-15) and intimate partner abuse (age 23-25), which indicates that the higher the frequency of corporal punishment received during early adolescence the higher the participant's likelihood of being an adult intimate partner abuser. Also, there is a negative statistically significant correlation between parental bonding during early adolescence (age 13-15) and adult intimate partner abuse; this indicates that the lower the level of bonding to parents during early adolescence, the higher the likelihood of abusing an intimate partner in adulthood. Table 5.2 also indicates that there is a positive statistically significant correlation between attitudes toward women/relationship with women (age 23-25) and adult intimate partner abuse (age 23-25). This means that the more a participant has negative attitudes toward women and relationships with women, the more likely he is to abuse an intimate partner in adulthood. Also, there is a positive statistically significant association between delinquency (age 13-22) and adult intimate partner abuse (age 23-25). When age-groups are taken into consideration, the analysis indicates that delinquent behavior in pre-adulthood (age 19-22) is statistically significantly associated with adult intimate partner abuse (age 23-25). This indicates that more delinquent individuals are also more likely to perpetrate abuse against their intimate partners. There is also a positive statistically significant association between number of sexual partners (age 13-22) and adult intimate partner abuse. When age groups are taken into consideration, the analysis shows that having more heterosexual partners during late adolescence (age 16-18) might increase the likelihood to perpetrate abuse against intimate partners in adulthood. This might suggest that more promiscuous individuals tend to abuse their intimate partners more often than those who are less promiscuous.

The bivariate statistical associations also show that both race and age at entering the romantic relationship are negatively associated to intimate partner abuse. More specifically, being non-White increases the likelihood of being abusive against intimate partners; and the younger the age at which participants have entered the romantic relationship, the more likely they are to perpetrate abuse against their intimate female partners (age 23-25).

The variables interpersonal conflict with one's partner, academic competence during early adolescence, delinquency (age 13-15 and age 16-18), number of sexual partners (age 13-15 and age 19-22), SES, and frequency of alcohol use are not significantly correlated to the dependent variable intimate partner abuse (age 23-25) with $p\text{-value} > .05$.

The analysis of bi-variate associations has been useful to better understand how each explanatory variable included in the analysis (risk factor of intimate partner abuse) is linked to the dependent variable intimate partner abuse. In the next section I will focus on the multivariate statistical analysis and I will test the 5 hypotheses developed in Chapter 4.

5.4 Multivariate analysis: Testing hypotheses

The multivariate analysis is divided into three different parts. In the first part I investigate risk factors of intimate partner abuse by category of influence (family, socio-cultural, and individual/personal influences) and I test hypotheses 1 through 4 as specified in Chapter 4. In the second part of the multivariate analysis I investigate the role of risk factors of intimate partner abuse by age-group (age 13-15, age 16-18, and age 19-22), and I test hypothesis 5 as specified earlier in the previous Chapter. In the third part of the analysis I design a final model by taking into consideration only those risk factors of intimate partner abuse statistically significant in part 1 and part 2 of the multivariate analysis.

5.4.1 Part 1: Analysis of risk factors of intimate partner abuse by category of influence

In this first part of the multivariate analysis, risk factors of intimate partner abuse are investigated in association with the dependent variable by category of influence (family, socio-cultural, individual/personal influences). The empirical models used to develop this first part of the analysis explore how factors considered by category of influence affect the likelihood of perpetrating abuse against an intimate partner in adulthood (age 23-25).

Family influence (Testing hypothesis 1)

In Chapter 4 I hypothesized that males who have experienced conflict within an intimate relationship (age 23-25), have experienced frequent corporal punishment in the family of origin (age 13-15), or have had weak bonds with parents/caretakers (age 13-15) are more likely to abuse an intimate partner in adulthood (age 23-25). This hypothesis refers to the risk factors identified by proponents of the family violence perspective (discussed in Chapter 3) that have been the focus of major controversies. In order to test this hypothesis I use a binary logistic regression model. The binary logistic regression model is the most appropriate empirical model because it allows me to assess whether the odds of the observed values of the dependent variable (intimate partner abuse) are determined by the observed values of the explanatory variables (risk factors of abuse). Furthermore, this model allows me to use a dependent variable that has been recoded as a dichotomy.

In the model the dependent variable is “intimate partner abuse” perpetrated against a current partner (age 23-25) and the explanatory variables are all the risk factors categorized as family influence, i.e., the probability of intimate partner abuse (age 23-25) = $\text{Exp}(\beta X) / [1 + \text{exp}(\beta X)]$ where X includes an intercept (α), interpersonal conflict (age 23-25), experience of

corporal punishment (age 13-15), parental bonding (age 13-15), four control variables (race, SES, age at entering the romantic relationship, and alcohol use).

Table 5.3 shows the results of the statistical analysis.

Table 5.3: Family influence model

Variables in the Equation	B	Significance	95% C.I. Exp (B)
<i>Explanatory Variables</i>			
(High) Interpersonal conflict (age 23-25)	-.04	.420	(.86; 1.1)
(Frequent) Corporal punishment (age 13-15)	1.0	.020	(1.2; 6.3)
(Low)Parental bonding (age 13-15)	-.90	.043	(.17; .97)
<i>Control Variables</i>			
(Non-White) Race	.76	.006	(1.2; 3.6)
(Low) SES (age 23-25)	-.10	.806	(.39; 2.1)
(Young) Age at beginning of relationship	-.15	.003	(.77; .95)
(High) Frequency of alcohol use	.01	.185	(.99; 1.0)

N = 311

Pseudo R-square = .100

Note: The variables corporal punishment (age 13-15), and parental bonding (age 13-15) are statistically significant with p-value < .050; also, the control variables race and age at the beginning of the relationship are significant at p-value < .010. A weight was used throughout the analysis. The analysis focuses only on the sub-sample of 329 participants interviewed on their relationship with a current partner (age 23-25). In total 18 cases are identified as missing, due to skipped interview, refusal to answer, or failure to remember (like in the case of the variable “age at the beginning of the romantic relationship that was investigated in retrospective).

Table 5.3 reports the findings of the analysis conducted by using a binary logistic regression model to test hypothesis 1 as specified in Chapter 4. The analysis is limited to the 329 participants from the PYS “Oldest Sample” that were interviewed on their relationship with a current partner by age 23-25. However, 18 missing cases are evident from the N reported in Table 5.3. In Chapter 4, Table 4.5 specified the missing cases for each variable included in the analysis. Table 5.3 shows that participants’ experience of corporal punishment, and bonding with parents/caretakers are statistically significant in the analysis even when controlling for race, SES, age at entering the relationship, and frequency of alcohol use. Among the control variables race and age at the beginning of the relationship are statistically significant.

The B coefficient for the variable corporal punishment is positive and it is significant (p -value $< .050$). Hence, the analysis shows that the more frequent corporal punishment the participant received during early adolescence (age 13-15), the more likely to perpetrate abuse against an intimate partner during adulthood (age 23-25). Also, the 95% confidence interval for the exponential B shows that increasing the frequency of corporal punishment by 1 unit multiplies the odds of abusing an intimate partner by a value between 1.12 and 6.3.

The B coefficient for the variable parental bonding is negative and it is significant with p -value $< .05$, which indicates that the weaker the bond with one’s parents during early adolescence, the more likely the participant is to abuse an intimate partner in adulthood (age 23-25). Thus, as I had hypothesized in Chapter 4, participants who experienced frequent corporal punishment in the family of origin (age 13-15) and those who suffered from weak bonding with parents/caretakers were more likely to perpetrate abuse against an intimate partner during adulthood (age 23-25). Contrary to my hypothesis, the variable interpersonal conflict (age 23-25) is not significant in the analysis.

Among the control variables, age at the beginning of the relationship and race are statistically significant. More specifically, the B coefficient for the variable age at the beginning of the relationship is negative and it is significant with $p\text{-value} < .010$. This indicates that being younger at the beginning of the relationship increases the likelihood of abusive behaviors against an intimate partner in adulthood (age 23-25). The B coefficient for the variable race is positive and is also significant with $p\text{-value} < .010$. The 95% confidence interval for the exponential B shows that being non-white multiplies the odds of abusing a partner in adulthood (age 23-25) by a value between 1.2 and 3.6. Surprisingly, the variable SES is not significant. As indicated by statistical findings, race and SES are moderately correlated; therefore it is possible that the effect of race tends to wash out the effect of SES in the multivariate analysis. More specifically, race and SES are negatively correlated, that is, non-White people are more likely than White people to have a low SES; the Pearson's coefficient for the association between the two is $-.328$ and it is significant at $p < .001$. This confirms existing sociological theories that explain how race and SES are intertwined and it is impossible to understand the one without observing the other (Sokoloff and Pratt, 2005). The variable frequency of alcohol use included in the analysis as control variable is not statistically significant.

As already specified, Table 5.3 clearly shows that non-White participants are more likely than White participants to be involved in abusive intimate relationships. In order to better understand the role of the variable race in the analysis, I have tested the same model separating the two racial groups (White and non-White), computing a logistic regression for each group. This method was also suggested by literature developed by PYS researchers (see for instance Wei, 1998).

Table 5.4 summarizes the findings of the comparison between the two models considered by racial group.

Table 5.4: Family influence model – Analysis by racial group

Variable	White Participants			non-White Participants		
	B	Significance	C.I. Exp (B)	B	Significance	C.I. Exp (B)
<i>Explanatory Variables</i>						
(High) Interpersonal conflict (23-25)	.04	.018	(.86; 1.2)	-.12	.100	(.77; 1.0)
(Frequent) Corporal punishment (13-15)	-.88	.306	(.08; 2.2)	1.9	.001	(2.3; 21.3)
(Low) Parental bonding (13-15)	-1.3	.050	(.07; 1.0)	-.96	.125	(.11; 1.3)
<i>Control Variables</i>						
(Low) SES (23-25)	-2.1	.018	(.02; .70)	.65	.205	(.70; 5.2)
(Young) Age at beginning of relationship	-.12	.162	(.74; 1.0)	-.19	.005	(.72; .94)
(High) Frequency of alcohol use	-.01	.866	(.99; 1.0)	.01	.064	(1.0; 1.1)
N = 142				N = 169		
Pseudo R-square = .080				Pseudo R-square = .135		

Note: The table shows the different results for the two models that compare the 329 participants interviewed on their relationship with an intimate partner by racial group. The B Coefficients are considered significant when their p-value is < .050. A weight was used throughout the analysis. The total N for the two groups is 311 (same as per Table 5.3). There are 18 missing cases, which might be due to skipped interviews, refusal to answer questions, or computer error. The missing cases for each explanatory variable included in the analysis are specified in table 4.5.

Table 5.4 shows that for the White racial group, participants who experienced conflict with their intimate partner (age 23-25), those who had weak bonds with parents/caretakers and those with a lower SES were more likely to become abusive in adulthood (age 23-25). More specifically, the B coefficient for the variable interpersonal conflict with partner (age 23-25) is positive and it is significant with p-value $< .050$. The analysis indicates that the higher the level of interpersonal conflict with one's intimate partner the more likely a White participant is to perpetrate abuse against his intimate partner (age 23-25). The B coefficient for the variable parental bonding is negative, but it is only marginally significant (p-value = $.050$). Among the control variables, the participant's SES is the only statistically significant one. The B coefficient for the variable SES is negative and significant with p-value $< .05$. This indicates that the lower a White participant's SES, the higher his likelihood to perpetrate abuse against an intimate partner in adulthood (age 23-25). In total 142 participants were included in the White racial group.

In contrast, for the non-White participants, the statistical results show that participants who experienced frequent corporal punishment in the family of origin (age 13-15) and those who entered the relationship at a younger age were more likely to become abusive against their intimate female partner in adulthood (age 23-25). More specifically, the B coefficient for the variable corporal punishment is positive and it is significant with p-value $< .001$. This shows that the more frequent a non-White participant's experience of corporal punishment during early adolescence (age 13-15) the higher his likelihood to perpetrate abuse against an intimate partner in adulthood (age 23-25). The 95% confidence interval for the exponential B shows that by increasing the frequency of corporal punishment by 1 unit multiplies the odds of abusing an intimate partner by a value between 2.3 and 21.3. The B coefficient for the variable age at the beginning of the relationship is negative and it is significant with p-value $< .010$. This indicates

that the younger a non-White participant is at the beginning of the romantic relationship, the more likely he is to perpetrate abuse against an intimate partner in adulthood (age 23-25). In total 169 participants were included in the non-White group.

Socio-cultural influence (Testing hypothesis 2)

Earlier in this dissertation (see Chapter 4) I have hypothesized that males involved with an intimate partner who have negative attitudes toward women and toward relationships with women (age 23-25) are more likely to be abusive against their intimate partners in adulthood (age 23-25). The statement summarizes the main risk factor of intimate partner abuse identified by proponents of the mainstream feminist perspective. Although thoroughly investigated in field work studies, the variable attitudes toward women/relationships with women has been often neglected in quantitative/empirical papers. To test this hypothesis I use a binary logistic regression model where the dependent variable is intimate partner abuse perpetrated against a current partner (age 23-25) and the explanatory variables are all the risk factors identified as socio-cultural influence, i.e., probability of intimate partner abuse (age 23-25) = $\text{Exp}(\beta X) / [1 + \exp(\beta X)]$ where X includes an intercept (α), attitudes toward women and relationships with women (age 23-25), and four control variables (race, SES, age at entering the romantic relationship, and alcohol use). The binary logistic regression is the most appropriate empirical model because it allows me to investigate the participant's likelihood of being abusive against an intimate partner in adulthood (age 23-25) with a model that uses a dichotomous dependent variable (intimate partner abuse).

Table 5.5 summarizes the findings of the binary logistic regression used to investigate the socio-cultural influence model.

Table 5.5: Socio-cultural influence model

Variables in the Equation	B	Significance	95% C.I. Exp(B)
<i>Explanatory Variables</i>			
(Negative) Attitudes toward women (23-25)	.41	.017	(1.1; 2.1)
<i>Control Variables</i>			
(Non-White) Race	.65	.013	(1.1; 3.2)
(Low) SES	-.45	.264	(.29; 1.4)
(Young) Age at beginning of relationship	-.14	.006	(.79; .96)
(High) Frequency of alcohol use	.01	.449	(.99; 1.0)

N = 324

Pseudo R-square = .079

Note: The variable attitudes toward women (23-25) and race are significant with p-value < .050 and age at the beginning of relationship is statistically significant at p-value < .010. A weight was used throughout the analysis. The N for the analysis is 324, which shows that 5 of the 329 cases for the analysis are considered missing. The missing cases might be due to skipped interviews, refusal to answer the questions, or computer error. Chapter 4 (section 4.5) specifies that the variable age at the beginning of the relationship carries 5 missing cases.

Table 5.5 shows the results of the statistical analysis for the socio-cultural influence model that includes a total of 324 participants from the sub-sample 329 males interviewed on their relationship with an intimate partner (age 23-25). The analysis shows that 5 participants were considered missing. In Chapter 4 (table 4.5) it was specified that the variable age at the beginning of the relationships carries 5 missing cases. Table 5.5 indicates that participants who had negative attitudes toward women and relationships with women (age 23-25) were more likely than participants who did not to abuse an intimate female partner (age 23-25). More

specifically, the B coefficient for the variable attitudes toward women is positive and it is significant with $p\text{-value} < .050$. This indicates that the more negative the attitudes toward women the more likely a participant is to abuse an intimate partner in adulthood (age 23-25). The existing literature on intimate partner abuse has for many years explained that sexist values and gendered expectations among males and females in society are acquired within one's network (family, workplace, recreational circles, and community at large) and they reflect the characteristics of the environment in which the individual grew up (Dobash and Dobash, 1998). Although field work has provided a great contribution in explaining how cultural values affect men's relationships with women in intimate contexts, researchers have so far struggled to find a way to measure this association using a quantitative type of information (empirical studies). The PYS provides the unique opportunity to verify the role of the variable attitudes toward women and relationships with women in this research. In the model, the association between the explanatory variable attitudes toward women (age 23-25) and the dependent variable intimate partner abuse (age 23-25) is controlled by the three demographics (race, SES, and age at entering the relationship) and by the variable frequency of alcohol use. As in the previous model, race and age at entering the relationship are statistically significant. And like in the empirical model used to test family risk factors, non-White participants were more likely than their White peers to abuse their female intimate partner during adulthood (age 23-25). The B coefficient for the variable race is positive and it is significant with $p\text{-value} < .050$. Also, participants who entered the romantic relationship at a young age were at higher risk of developing abusive behaviors against their intimate partner in adulthood (age 23-25). The B coefficient for the variable age at the beginning of the romantic relationship is negative and it is significant with $p\text{-value} < .010$. The findings of this model confirm my hypothesis.

As I have already mentioned, Table 5.5 has indicated that race is a statistically significant risk factor for intimate partner abuse in adulthood. In order to better understand the role of race in determining the participants' probability to abuse an intimate partner I develop two different binary logistic regressions that allow me to compare the two racial groups (White and non-White). This methodology was also suggested by the literature developed by PYS researchers (Wei, 1998). Table 5.6 summarizes the findings for the two logistic regressions that analyze the socio-cultural model for the White and non-White groups.

Table 5.6: Socio-cultural influence model - Analysis by racial group

Variable	White Participants			non-White Participants		
	B	Significance	C.I. Exp (B)	B	Significance	C.I. Exp (B)
<i>Explanatory Variable</i>						
(Negative)Attitudes toward women (23-25)	.80	.058	(.97; 5.1)	.31	.102	(.94; 2.0)
<i>Control Variables</i>						
(Low) SES	-1.8	.034	(.03; .87)	-.06	.893	(.39; 2.3)
(Young) Age at beginning of relationship	-.13	.135	(.75; 1.0)	-.15	.017	(.76; .97)
(High) Frequency of alcohol use	-.00	.999	(.98; 1.0)	.00	.286	(.99; .01)
N = 147				N = 177		
Pseudo R-square = .071				Pseudo R-square = .061		

Note: The table compares the results of the logistic regression for the White and non-White groups. The B coefficients are considered significant when their p-values are < .050. A weight was used throughout the analysis. The total N for the two regressions is 324 (same as table 5.5), which indicates that 5 cases are considered missing in the analysis. There were 5 missing cases for the variable age at beginning of the relationship as specified in Chapter 4 (table 4.5). Only the 329 participants interviewed on their relationship with an intimate partner (age 23-25) are considered for the analysis.

Table 5.6 shows that for the White racial group, the participants who had a lower SES in adulthood (age 23-25) were more likely than participants with a higher SES to perpetrate abusive behaviors against their intimate partner (age 23-25). The B coefficient for the variable SES is negative and it is significant with $p\text{-value} < .050$. Instead, the analysis for the non-White racial group indicates that the younger the participant the more likely he is to perpetrate abuse against an intimate partner in adulthood (age 23-25). The B coefficient for the variable age at entering the romantic relationship is negative and it is significant with $p\text{-value} < .050$. In the original socio-cultural risk factors model, where the variable race is included as a control variable, individuals with negative attitudes toward women and relationships with women were more likely than those who did not have negative attitudes to perpetrate abusive behaviors against their intimate partner (age 23-25). However, when the two racial groups are considered separately the influence of the variable “attitude toward women” is not significant for the non-White group and it is only marginally significant for the White group (with $p\text{-value}$ slightly greater than $.050$). This might be due to the small samples size once the two groups are split. In total 148 White participants and 176 non-White participants were included in the analysis of socio-cultural risk factors of intimate partner abuse. The five missing cases from the 329 group of participants interviewed on their relationship with an intimate partner (age 23-25) are all within the non-White group. As specified in Chapter 4, the variable age at the beginning of the relationship carries 5 missing cases, due to either skipped interviews, refusal to answer the question, or failure to remember information (in this case the question was asked in retrospective).

Individual/personal influence (Testing hypothesis 3)

In Chapter 4 I have hypothesized that males with a lower academic competence (age 13-15), those who were delinquent (age 13-22), and those who had larger numbers of female sexual partners (age 13-22) were more likely to abuse their intimate partner during adulthood (age 23-25). This statement attempts to investigate the risk factors of intimate partner abuse as suggested by proponents of the life-course perspective. Furthermore, this hypothesis provides me with a theoretical basis for exploring whether individual/personal characteristics (such as, academic competence, delinquency, and number of sexual partner) influence an individual propensity of abusing an intimate partner in adulthood (age 23-25). In order to test this hypothesis I use a binary logistic regression where the dependent variable is “intimate partner abuse” perpetrated against a current partner and the explanatory variables are all the risk factors categorized as individual/personal influence, i.e., probability of intimate partner abuse (age 23-25) = $\text{Exp}(\beta X) / [1 + \exp(\beta X)]$ where X includes an intercept (α), academic competence (age 13-15), delinquency (age 13-22), number of sexual partners (age 13-22), and four control variables (race, SES, age at the beginning of the relationship, and alcohol use). Like for the previous hypotheses, the binary logistic regression seems to be the most appropriate empirical model because it allows me to investigate the individual’s probability of abusing a partner and it also allows me to employ a dependent variable that is dichotomous (0 non abuse, 1 abuse).

Table 5.7 (below) reports the statistical findings of the binary logistic regression for the individual/personal influence model.

Table 5.7: Individual /personal influence model

Variables in the Equation	B	Significance	95% C.I. Exp (B)
<i>Explanatory Variables</i>			
(Low) Academic competence (age 13-15)	.01	.995	(.38; 2.7)
(High) Delinquency (age 13-22)	.35	.062	(.98; 2.0)
(High) Number of sexual partners (age 13-22)	.06	.231	(.96; 1.2)
<i>Control Variables</i>			
(Non-White) Race	.61	.025	(1.1; 3.1)
(Low) SES (age 23-25)	-.27	.517	(.33; 1.8)
(Young) Age at beginning of relationship	-.15	.003	(.78; .95)
(High) Frequency of alcohol use	.01	.942	(.99; 1.0)
N = 324			
Pseudo R-square = .083			

Note: The table shows the results of the logistic regression to test individual/personal risk factors of intimate partner abuse (age 23-25). The variable delinquency (13-22) and the variable race are statistically significant at p-value < .050 while the variable age at the beginning of the relationship is significant at p-value < .010. A weight was used throughout the analysis. The N for the analysis is 324, which indicates that 5 of the 329 participants interviewed on their relationship with an intimate partner (age 23-25) are considered missing (due to skipped interviews or refusal to answer the question). The analysis exclusively focuses on the 329 participants of the Oldest Sample interviewed on their relationship with a current intimate partner at the time of the interview (age 23-25).

Table 5.7 shows that none of the explanatory variables included in the analysis are statistically significant in the individual/personal influence model. This does not confirm my initial hypothesis and it also contrasts with the results of other life-course studies on intimate partner abuse (Moffitt and Caspi, 1999; Gorman-Smith et al., 2001; Woodward et al., 2002; Farrington, 1994; 1997). However, no conclusion can be drawn at this point of the statistical analysis; the association between individual/personal risk factors of adult intimate partner abuse needs to be further investigated.

Among the control variables in the model race and age at the beginning of the relationship are statistically significant. More precisely, the B coefficient for the variable race is positive and it is significant with $p\text{-value} < .050$. This indicates that non-White participants are more likely than White participants to abuse their intimate partners in adulthood. The 95% confident interval for the exponential B indicates that when the variable race takes value 1 (that is, non-White) multiplies the odds of being abusive against an intimate partner by a value between 1.1 and 3.1. The B coefficient for the variable age at entering the relationship is negative and it is significant with $p\text{-value} < .010$. The analysis shows that the younger the participant was at the beginning of the romantic relationship, the more likely he is to abuse an intimate partner in adulthood (age 23-25). The variable frequency of alcohol use is not statistically significant.

Although it was found that non-White participants are more likely than their White peers to abuse their intimate partners in adulthood (age 23-25), it is important to further investigate the role of race in the analysis. I test the same individual/personal influence model by using two separate binary logistic regressions, one for the White group and one for the non-White group. As earlier specified this strategy was suggested by literature developed by PYS researchers (see

for instance Wei, 1998). Table 5.8 shows the results of the two logistic regressions individual/personal influence model specifying the analysis by racial group.

Table 5.8: Individual/personal influence model – Analysis by racial group

Variable	White Participants			non-White Participants		
	B	Significance	C.I. Exp (B)	B	Significance	C.I. Exp (B)
<i>Explanatory Variables</i>						
(Low) Academic competence (13-15)	-.13	.870	(.17; 4.3)	.24	.708	(.37; 4.4)
(High) Delinquency (13-22)	.51	.111	(.89; 3.1)	.32	.195	(.85; 2.2)
(High) Number of sexual partners (13-22)	-.11	.513	(.64; 1.3)	.08	.161	(.97; 1.2)
<i>Control Variables</i>						
(Low) SES (23-25)	-1.5	.099	(.04; 1.3)	.03	.959	(.40; 2.6)
(Young) Age at beginning of relationship	-.15	.065	(.73; 1.0)	-.16	.012	(.76; .97)
(High) Frequency of alcohol use	-.00	.858	(.99; 1.0)	.00	.709	(.99; .01)
N = 148				N = 176		
Pseudo R-square = .064				Pseudo R-square = .073		

Note: The table shows the results of the analysis for the individual/personal influence model by racial group (White and non-White). The coefficients are considered significant when their p-values are < .050. A weight was applied throughout the analysis. The actual N is 148 for the White group and 176 for the non-White group. The missing cases are 5 as in the previous model (see table 5.7). Missing cases might be due to either skipped interviews, refusal to answer the question, or computer error. The analysis takes into consideration the sub-sample of 329 (from the original 506 PYS sample) participants interviewed on their relationship with an intimate partner (age 23-25).

Table 5.8 shows that for the White group, none of the explanatory variables included in the analysis is actually significant. However, for the non-White group the analysis shows that participants who entered the relationship at a younger age were more likely to become abusive against their intimate partner by age 23-25. The B coefficient for the variable age at the beginning of the romantic relationship is negative and it is significant with $p\text{-value} < .050$. This shows that the younger the participant was at the beginning of the relationship, the more likely he is to perpetrate abuse against his intimate partner in adulthood (age 23-25). The N is 148 for the White group and 176 for the non-White group. Five cases in the analysis are considered missing. The analysis exclusively focuses on the 329 males of the PYS Oldest Sample interviewed on their relationship with an intimate current partner.

Combining all the risk factors together (Testing hypothesis 4)

In Chapter 4 I have specified that risk factors for abuse against intimate partners range among different categories of influence (family, socio-cultural, and individual/personal influences). I have hypothesized that family risk factors are more likely than other risk factors (socio-cultural or individual risk factors) to influence one's likelihood to abuse an intimate partner in adulthood. This statement summarizes what can be perceived as the dominant view on violent/aggressive behaviors in sociology/criminology literature (Siegel, 2006). More specifically, it is believed that experiences within the family of origin, especially during adolescence, tend to shape adult human behavior and the ability to manage interpersonal relationships (Siegel, 2006). In order to verify whether this statement is correct, I test a binary logistic regression where the dependent variable is "intimate partner abuse" against a current partner, and the explanatory factors are all the risk factors included in the three previous models (family influence, socio-cultural influence, and individual/personal influence models). The

binary logistic regression model uses the Maximum Likelihood Estimator which, in this case, would allow me to assess whether the odds of the observed values of intimate partner abuse are determined by the observed values of all the risk factors of abuse included in the analysis. Differently from the previous regressions used for the multivariate analysis, in this model the explanatory variables are included by block, i.e., probability of intimate partner abuse = $\text{Exp}(\beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4) / [1 + \exp(\beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4)]$ where X_1 includes the four control variables (race, SES, age at entering the relationship, and alcohol use), X_2 includes interpersonal conflict (age 23-25), experience of corporal punishment (age 13-15), and parental bonding, X_3 includes attitudes toward women and relationships with women (age 23-25), X_4 includes academic competence (age 13-15), delinquency (age 13-22), and number of sexual partners (age 13-22). Furthermore, the Chi-square test (used in the Block model) allows me to understand how each group of risk factors of abuse contributes to explain the variance within the model. Table 5.9 reports the findings of the statistical analysis for this model.

Table 5.9: Analysis of risk factors of intimate partner abuse by category of influence – Logistic regression (N = 311)

Equations	Control Variables (1)	Family influence (2)	Socio-cultural influence (3)	Individual/Personal influence (4)
Variables				
Race	.78** (1.3; 3.7)	.75** (1.3; 3.7)	.72** (1.2; 3.5)	.66* (1.1; 3.4)
(Low) SES (age 23-25)	-.41 (.30; 1.4)	-.10 (.39; 2.1)	-.15 (.37; 1.9)	-.14 (.34; 2.1)
(Young) Age at beginning of relationship	-.12* (.80; .97)	-.15** (.78; .95)	-.15** (.78; .95)	-.15** (.77; .95)
(High) Frequency of alcohol use	.00 (.99; 1.0)	.00 (.99; 1.0)	.00 (.99; 1.0)	.00 (.99; 1.0)
Chi-square = 22.190 (5 degrees of freedom) p-value <.001				
Pseudo R-square = .068				
(High) Interpersonal conflict (age 23-25)		-.04 (.86; 1.0)	-.05 (.85; 1.0)	-.04 (.86; 1.1)
(Frequent) Corporal punishment (age 13-15)		1.0* (1.2; 6.3)	.97* (1.1; 6.2)	.87* (1.0; 5.7)
(Low) Parental bonding (age 13-15)		-.90* (.17; .97)	-.89* (.17; .99)	-.79 (.18; 1.1)
Chi-square improvement = 10.67 (3 degrees of freedom) p-value < .010				
Pseudo R-square = .100				

Table 5.9: Analysis of risk factors of intimate partner abuse by category of influence – Logistic regression (N = 311) (continue)

Equations	Control Variables (1)	Family influence (2)	Socio-cultural influence (3)	Individual/Personal influence (4)
Variables				
(Negative) Attitudes toward women (age 23-25)			.36* (1.0; 2.0)	.33 (.98; 1.9)
Chi-square improvement 4.403 (1 degree of freedom) p-value < .050				
Pseudo R-square = .112				

(Low) Academic competence (age 13-15)				.10 (.41; 3.0)
(High) Delinquency (age 13-22)				.18 (.81; 1.8)
(High) Number of sexual partners (age 13-22)				.05 (.95; 1.2)
Chi-square improvement 2.204 (3 degrees of freedom) p-value > .100				
Pseudo R-square .118				
N = 311				

Note: For each equation the B value is reported with level of significance identified by (*). The p-value is * for alpha = .05; ** for alpha = .01; and, *** for alpha = .001. The value reported into parentheses is the 95% C.I. for each equation. The N for the analysis is 311. Only the 329 participants interviewed on their relationships with a current intimate partner (age 23-25) were considered. However, the table shows that 18 cases were missing in the analysis.

Table 5.9 shows the empirical findings for the model used to test hypothesis number 4 (as specified in Chapter 4, section 4.6). The analysis takes into consideration information gathered among the 329 participants of the PYS Oldest Sample interviewed on their relationship with a current intimate partner (age 23-25). However, the table shows that 18 of the 329 participants are considered missing in the analysis. The missing cases for each variable included in the statistical analysis are specified in Chapter 4 (Table 4.5).

Table 5.9 indicates that for the first block of variables (control variables) the Chi-square is 22.190 with 5 degrees of freedom²⁵ and it is significant with p-value < .001. The variable race and the variable age at entering the romantic relationship are statistically significant. The B coefficient for the variable race in the model is positive and it is significant with p-value < .010. This indicates that non-White participants are more likely than White participants to be abusive against an intimate partner in adulthood (age 23-25). The B coefficient for the variable age at the beginning of the relationship is negative and it significant with p-value < .010. That is, the younger the participant was at the beginning of the romantic relationship, the more likely he is to abuse his intimate partner in adulthood (age 23-25). The variables SES and frequency of alcohol use are not statistically significant in the analysis. These results confirm the findings of the analysis conducted separately for the three models (family influence, socio-cultural influence, and individual/personal influence models) reported in Tables 5.3, 5.5, and 5.7. When the second block of variables is added (family risk factors) the Chi-square value increases to 32.861; thus, the Chi-square improvement is approximately equal to 11 and it is statistically significant with p-value < .010 (with three degrees of freedom). Among the explanatory variables, corporal punishment and parental bonding are both statistically significant. The B coefficient for corporal punishment is positive and it is significant with p-value < .050. This shows that the more

²⁵ The number of degrees of freedom for equation number 1 includes the four control variables and the constant.

frequent the corporal punishment during early adolescence (age 13-15) the more likely the participant is to perpetrate abuse against an intimate partner in adulthood (age 23-25). The B coefficient for the variable parental bonding during early adolescence (age 13-15) is negative and it is significant with $p\text{-value} < .050$. This indicates that the weaker the bond between the participant and his parents/caretakers during early adolescence (age 13-15) the more likely the participant is to perpetrate abuse against an intimate partner in adulthood (age 23-25). These findings confirm the results reported in table 5.3, 5.5, and 5.7 where each model was tested separately. Among the control variables race and age at the beginning of the romantic relationship are the only two statistically significant factors. As in the previous equation, the analysis shows that non-White participants and those who were younger at the beginning of the romantic relationship are more likely to be abusive against their intimate partners in adulthood (age 23-25). When socio-cultural risk factors are added to the model (third equation), the Chi-square value becomes 37.264, improving by 4.40, significant with $p\text{-value} < .050$ with (1 degree of freedom). The variable attitudes toward women is statistically significant. The B coefficient for attitudes toward women is positive and it is significant with $p\text{-value} < .050$. This indicates that participants who reported having negative attitudes toward women are more likely than those who did not to be abusive against their intimate partners in adulthood (age 23-25). This confirms the results of the analysis reported in 5.5 where the empirical model for the socio-cultural risk factors was tested separately. The variables corporal punishment and parental bonding during adolescence are also statistically significant. This indicates that, even when socio-cultural factors are added to the model, the analysis still shows that participants who experienced corporal punishment and those who had a weak bond with parents/caretakers during early adolescence (age 13-15) were more likely to be abusive against an intimate partner in

adulthood (age 23-25). Among the control variables, race and age at the beginning of the romantic relationship are still statistically significant, indicating that non-White participants and those who reported being younger at the beginning of the relationship are more likely to be abusive against an intimate partner in adulthood (age 23-25). When the individual/personal risk factors are added to the model (equation 4), the Chi-square value becomes 39.468, improving by only 2.2; this improvement is not statistically significant with $p\text{-value} > .100$ (3 degrees of freedom). The results show that none of the individual/personal risk factors is significant in this model. This confirms the results reported in Table 5.7 where the individual/personal risk factors model was tested separately. However, in the same equation, the factor corporal punishment (age 13-15) and the control variables race and age at the beginning of the relationship are statistically significant. The B coefficient for the variable corporal punishment is positive and it is significant with $p\text{-value} < .050$. The 95% confidence interval for this factor indicates that by adding 1 unit to the frequency of corporal punishment during early adolescence (age 13-15) multiplies the odds of being abusive against an intimate partner in adulthood (age 23-25) by a value between 1.0 and 5.7. As in the previous equations, the B coefficient for race is positive and it is significant with $p\text{-value} < .050$. Finally, the B coefficient for age at the beginning of the romantic relationship is negative with $p\text{-value} < .010$. These results confirm that non-White participants, those who were younger at the beginning of the relationship with an intimate partner and those who received frequent corporal punishment during early adolescence (age 13-15) were more likely to be abusive against intimate partners in adulthood (age 23-25).

In summary, Table 5.9 shows that the family risk factors are the most statistically significant in the analysis. As a matter of fact, when the family influence block is added, the Chi-square improvement is significantly higher than that of socio-cultural and individual/personal

factors. Furthermore, the variable experience of corporal punishment (age 13-15) is significant throughout the analysis, within each block added to the model. Perhaps, having experienced frequent corporal punishment during the age 13-15 produces a devastating effect and increases the chance that boys would abuse their intimate partners later in life (during adulthood). These statistical findings confirm my initial hypothesis. Among the control variables, race and age at the beginning of the relationship are consistently significant in the model. This confirms what was found in the previous models, that is, non-White participants and those who were younger at the beginning of the romantic relationship were more likely to be abusive against an intimate partner in adulthood (age 23-25).

5.4.2 Part 2: Analysis of risk factors of intimate partner abuse by age-group

In this part of the multivariate analysis, I investigate how factors considered by age-group (age 13-15; age 16-18; age 19-22) can influence the likelihood of abusing an intimate partner in adulthood (age 23-25). In this part of the analysis I test hypothesis 5 that I have specified in Chapter 4 as: Personal characteristics, experiences, and behaviors that develop and manifest early in life (during early adolescence age 13-15) tend to influence the probability of being abusive during adulthood (age 23-25) more than personal characteristics, experiences, and behaviors that manifest later in life (during later adolescence and pre-adulthood, age groups 16-18 and 19-22). This hypothesis was suggested by both proponents of the family violence and the life-course perspectives, who have pointed out that it is important to investigate causes of intimate partner abuse among factors that manifest early in life (during early childhood or adolescence). In order to verify whether my hypothesis was correct, I test a binary logistic regression where the dependent variable is “intimate partner abuse” perpetrated against a current

partner and the explanatory variables are included by block, i.e., probability of intimate partner abuse = $\text{Exp}(\beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4) / [1 + \exp(\beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4)]$ where X_1 includes the four control variables (race, SES, age at entering the relationship, and alcohol use), X_2 includes academic competence (age 13-15), experience of corporal punishment (age 13-15), parental bonding (age 13-15), delinquency (age 13-15), and number of sexual partners (age 13-15), X_3 includes delinquency (age 16-18), and number of sexual partners (age 16-18), and X_4 includes delinquency (age 19-22) and number of sexual partners (age 19-22). This empirical model seems to be the most appropriate to test hypothesis 5. As a matter of fact, the binary logistic regression allows me to assess whether the odds of the observed values of the dependent variable intimate partner abuse are determined by the observed values of all the explanatory variables (risk factors of abuse) included in the analysis. Furthermore, the binary logistic regression allows me to use a dependent variable that is dichotomous (abuse or non-abuse). The Chi-square test applied in the binary logistic regression with block analysis allows me to estimate the improvement of the model for each group of variables added to the model itself. This would explain how much of the variance each group of risk factors is able to explain. In this model each group of factors corresponds to an age-group. The age-group chosen for the analysis represent different developmental stages in the lives of participants. As it was specified earlier in this dissertation, age 13-15 (*early adolescence*) is the age at which an individual wants to discover his “identity” and a role within his social network (school, circle of friends, and neighborhood); age 16-18 (*late adolescence*) is the age at which an individual feels and behaves more independently, following hormonal changes and sexual drive and avoiding parental supervision; age 19-22 (*pre-adulthood*) is the age at which an individual attempts to loosen the ties with family members, starts being more financially independent; age 23-25 (*adulthood*) is the age at

which an individual starts feeling less “self-absorbed”, looks for a more steady romantic relationship and attempts to settle down²⁶.

Table 5.10 shows the results of the analysis developed by using the age-group model.

²⁶ The developmental stages were inspired by Erik Erikson’s reading on on stages of development (1994).

Table 5.10: “Risk factors of intimate partner abuse by age group” model – Logistic regression (N = 317)

Equations	Control Variables (1)	Age group 13-15 (2)	Age-group 16-18 (3)	Age-group 19-22 (4)
Variables				
Race	.69** (1.2; 3.3)	.66** (1.1; 3.3)	.61* (1.1; 3.2)	.42 (.87; 2.7)
(Low) SES (age 23-25)	-.51 (.27; 1.3)	-.22 (.34; 1.9)	-.28 (.32; 1.8)	-.25 (.32; 1.9)
(Young) Age at beginning	-.13** (.79; .96)	-.15** (.78; .95)	-.15** (.78; .95)	-.18*** (.75; .93)
(High) Frequency of alcohol use	.00 (.99; 1.0)	.00 (.99; 1.0)	.00 (.99; 1.0)	-.00 (.99; 1.0)
Model Chi-square = 21.738 (p < .001)				
Pseudo R-square = .066				
-(Low) Academic competence (13-15)		-.01 (.37; 2.7)	.03 (.38; 2.8)	.10 (.39; 3.2)
(Frequent) Corporal punishment (13-15)		.84* (1.0; 5.4)	.81 (.97; 5.3)	.90* (1.0; 5.9)
(Low) Parental bonding (13-15)		-.77 (.18; 1.1)	-.72 (.19; 1.2)	-.83 (.17; 1.1)
(High) Delinquency (13-15)		.06 (.77; 1.4)	.05 (.72; 1.5)	.10 (.75; 1.6)
(High) Number of sexual partners (13-15)		.02 (.86; 1.2)	.02 (.85; 1.2)	.00 (.84; 1.2)
Model Chi-square Improvement = 8.33 (p > .100)				
Pseudo R-square = .090				

Table 5.10: “Risk factors of intimate partner abuse by age group” model – Logistic regression (N = 317) (continue)

Equations	Control Variables (1)	Age group 13-15 (2)	Age-group 16-18 (3)	Age-group 19-22 (4)
Variables				
(High) Delinquency (16-18)			-.00 (.72; 1.4)	-.44* (.44; .95)
(High) Number of sexual partners (16-18)			.02 (.98; 1.1)	.03 (.98; 1.1)
Model Chi-square improvement = .951 (p > .100)				
Pseudo R-square = .093				
<hr/>				
(High) Delinquency (19-22)				.87*** (1.6; 3.7)
(High) Number of sexual partners (19-22)				.04 (.95; 1.1)
Model Chi-square improvement = 19.6 (p < .001)				
Pseudo R-square = .147				
N=317				

Note: For each equation the B value is reported with level of significance identified by a (*). The p-value is * for alpha = .05; ** for alpha = .01; and, *** for alpha = .001. The value reported into parentheses is the 95% C.I. for each equation. The N for this regression is 317. The analysis takes into consideration only the sub-sample of 329 participants interviewed on their relationship with an intimate partner (age 23-25). In total 12 cases are identified as missing cases, due to skipped interviews, refusal to answer questions, or computer error. The missing cases for each variable included in the statistical analysis are specified in Chapter 4 (section 4.5)

Table 5.10 reports the findings of the statistical analysis for risk factors of intimate partner abuse by age-group. The analysis uses information gathered from the 329 participants of the PYS Oldest Sample that were interviewed on their relationship with their current intimate partner at age 23-25. The N for the model is actually 317. In total 12 observations were identified as missing cases in the analysis.

As Table 5.10 indicates, when the first equation (represented by the control variables) is tested in the “risk factors of intimate partner abuse by age-group” model, the Chi-square is 21.738 and it is significant with $p\text{-value} < .001$. Both the variable race and age at entering the romantic relationship are statistically significant, and this confirms the statistical results of the analysis of risk factors considered by category of influence. The B coefficient for race is positive and it is significant with $p\text{-value} < .010$. This indicates that non-White males are more likely than White males to be abusive against an intimate partner in adulthood (age 23-25). The B coefficient for the variable age at entering the romantic relationship is negative and it is significant with $p\text{-value} < .050$. This shows that the younger the participant was at the beginning of the romantic relationship, the more likely he is to perpetrate abuse against his intimate partner in adulthood (age 23-25). The variables SES and alcohol use are not significant in the regression. When the second equation is added (factors for age-group 13-15) the Chi-square improvement is 8.33 for 5 degrees of freedom and it is not significant with $p\text{-value} > .100$. None of the explanatory variables included in the second equation are statistically significant. However, among the control variables, race and age at the beginning of the relationship are statistically significant. The B coefficient for the variable race is positive and it is significant with $p\text{-value} < .010$. This indicates that non-White participants are more likely than White participants to be abusive against an intimate partner in adulthood (age 23-25). The B coefficient for the variable

age at the beginning of the romantic relationship is negative and it is significant with $p\text{-value} < .010$. This shows that the younger the participant was at the beginning of the romantic relationship, the more likely he is to abuse an intimate partner in adulthood (age 23-25). When the third equation is added to the analysis (age group 16-18) the robustness of the model Chi-square improves by .952 for 2 degrees of freedom and it is not significant with $p\text{-value} > .100$. None of the two variables included in the analysis are statistically significant at this stage. However, the control variable race and age at the beginning of the relationship are still statistically significant. These findings indicate that non-White participants and those who were younger at the beginning of the romantic relationship are more likely to be abusive against an intimate partner in adulthood (age 23-25). When the fourth equation is added to the model (age 19-22) the robustness of the Chi-square improves by 19.6 for two degrees of freedom and it is significant with $p\text{-value} < .001$. The variable delinquency as measured at age 19-22 is strongly statistically significant. The B coefficient for the variable delinquency 19-22 is positive and it is significant with $p\text{-value} < .001$. The 95% confidence interval for the exponential B indicates that increasing the participant's level of delinquency by one unit multiplies the odds of abusing an intimate partner in adulthood (age 23-25) by a value between 1.6 and 3.6. Corporal punishment (age 13-15) and delinquency (age 16-18) are also statistically significant. The B coefficient for the variable corporal punishment (age 13-15) is positive and it significant with $p\text{-value} < .050$. The 95% confidence interval for the exponential B of the variable corporal punishment indicates that by adding 1 unit to the frequency of corporal punishment in early adolescence (age 13-15) multiplies the odds of being abusive against an intimate partner in adulthood (age 23-25) by a value between 1.0 and 5.9. The B coefficient for the variable delinquency age 16-18 is negative and it is significant with $p\text{-value} < .05$. However, no conclusions can be drawn from this result

about the link between adolescent delinquency (age 16-18) and intimate partner abuse (age 23-25). Indeed, it would be erroneous to consider delinquency age 16-18 as a “protective” factor for abuse. Among the control variables only age at the beginning of the relationship is significant. The B coefficient for the variable age at the beginning of the relationship is negative and it is significant with $p\text{-value} < .001$. This indicates that the younger the participant was at the beginning of the romantic relationship with partner, the more likely he is to perpetrate abuse against his intimate partner during adulthood (age 23-25).

The Chi-square analysis for the different age-groups indicates that behaviors/experiences/personal characteristics that develop or manifest early in life (age 13-15) are neither more nor less important than behaviors/experiences/personal characteristics that manifest or develop later in life (age 16-18; and age 19-22). For instance, experience of corporal punishment (that is more likely to happen during early adolescence) is an important risk factor of adult intimate partner abuse. However, delinquency during pre-adulthood (age 19-22) seems to have a stronger impact on the likelihood of abusing an intimate partner than delinquency during early adolescence (age 13-15). These statistical results contrast with existing findings from longitudinal studies where it was found that delinquent/antisocial behavior at age 15 is one of the major risk factors for intimate partner abuse (Moffit and Caspi, 1999) and that early onset of delinquent/antisocial behavior makes certain individuals more likely to abuse an intimate partner (Woodward et al., 2002). Also, contrary to the Dunedin Study (Moffit and Caspi, 1999), this research shows that race is an important risk factor of intimate partner abuse, especially among delinquent males, and non-Whites are more likely than Whites to abuse their intimate partners.

5.4.3 Part 3: Final model

The final model for this dissertation is organized by taking into consideration only factors that showed statistical significance in the analysis of risk factors considered by category of influence (family, socio-cultural, and individual/personal influences) and in the analysis of risk factors by age-group.

Throughout the analysis the variable race (recoded as 0 White and 1 non-White) has been strongly statistically significant, indicating that non-White participants are more likely than White participants to perpetrate abuse against an intimate partner by age 23-25. In order to better understand the association between race and intimate partner abuse in the final empirical model, I run two separate equations, one for White participants and one for non-White participants²⁷. Each of these equations is a binary logistic regression where the dependent variable is “intimate partner abuse” perpetrated against a current partner and the explanatory variables are all the statistically significant factors in the analysis of risk factors considered by category of influence and in the analysis by age group. For each racial group I test the following empirical model: probability of intimate partner abuse is $= \exp(\beta X) / [(1 + \exp \beta X)]$ where X includes an intercept (α), the variable corporal punishment (age 13-15), parental bonding (age 13-15), delinquency (age 19-22), three control variables (SES, age at the beginning of the romantic relationship, and alcohol use). Also in this case, the binary logistic regression model seems to be the most appropriate because it allows me to assess the odds of being abusive within intimate contexts through the observed values of the explanatory variables (risk factors of abuse) with a dependent variable recoded as a dichotomy.

Table 5.11 reports the results of the two logistic regressions developed for the final model.

²⁷ This strategy was also suggested by literature developed by PYS researchers (see Wei, 1998).

Table 5.11: Final Model - Analysis of risk factors of intimate partner abuse by racial group

Variable	White Participants			non-White Participants		
	B	Significance	C.I. Exp (B)	B	Significance	C.I. Exp (B)
<i>Control Variables</i>						
(Low) SES (age 23-25)	-1.6	.074	(.04; 1.1)	.49	.335	(.60; 4.4)
(Young) Age at beginning of the relationship	-.17	.046	(.71; .99)	-.18	.007	(.74; .95)
(High) Frequency of Alcohol use	-.00	.684	(.99; 1.0)	.00	.705	(.99; 1.0)
<i>Explanatory Variables</i>						
(Frequent) Corporal punishment (age 13-15)	-.79	.342	(.09; 2.3)	1.8	.002	(1.9; 18.1)
(Low) Parental bonding (age 13-15)	-1.0	.137	(.09; 1.4)	-.93	.150	(.11; 1.4)
(High) Delinquency (age 19-22)	.69	.021	(1.1; 3.6)	.46	.019	(1.1; 2.3)
N = 147				N = 173		
Pseudo R-square = .103				Pseudo R-square = .142		

Note: The table summarizes the findings for the final model of the dissertation that takes into consideration only risk factors of intimate partner abuse that were found to be statistically significant in the first two parts of the multivariate statistical analysis (analysis by category of influence and analysis by age-group). The B coefficients are considered significant when their p-values are < .050. A weight was used throughout the analysis. The actual N for the analysis is 320 (that is, N= 147 for the White group and N= 173 for the non-White group). There are 9 missing cases in the analysis. As specified in Chapter 4 (section 4.5) the variable age at the beginning of the relationship carries 5 missing cases, the variable parental bonding carries 1 missing case, and the variable delinquency (age 19-22) carries 3 missing cases.

Table 5.11 shows the results of the statistical analysis for the empirical final model that includes two separate logistic regressions, one for the White group of participants (with N= 147) and another one for the non-White group of participants (N=173). The total N for the two regressions is 320. There are 9 missing cases in the analysis.

Findings reported on table 5.11 show that for the White group, the variable age at the beginning of the relationship and delinquency age 19-22 are the only significant factors in the analysis. The B coefficient for the variable age at the beginning of the relationship is negative and it is significant with p-value < .050. This indicates that the younger a participant was at the beginning of the romantic relationship, the more likely he is to be abusive against his partner in adulthood (age 23-25). The B coefficient for the variable delinquency (age 19-22) is positive and it is significant for p-value < .050. This indicates that the more delinquent a participant was during pre-adulthood, the more likely to abuse an intimate partner later in adulthood (age 23-25).

For the non-White group, the factors age at the beginning of the relationship, corporal punishment, and delinquency (age 19-22) are all statistically significant in the binary logistic regression model. More specifically, the B coefficient for the control variable age at the beginning of the relationship is negative and it significant with p-value < .010. This shows that the younger the participant was at the beginning of the relationship, the more likely he is to perpetrate abuse against his intimate partners during adulthood (age 23-25). The B coefficient for the variable corporal punishment is positive and it is significant with p-value < .010. The 95% confidence interval indicates that increasing the frequency of corporal punishment (age 13-15) by just 1 unit multiplies the odds of being abusive in adulthood (age 23-25) by a value between 1.9 and 18.1. This shows that among the non-White participants, the more frequently corporal punishment was received during early adolescence, the more likely the participant is to abuse an

intimate partner during adulthood (age 23-25). The B coefficient for the variable delinquency (age 19-22) is positive and it is significant with p-value .050. The higher the level of delinquency during pre-adulthood (age 19-22), the more likely the participant is to abuse his intimate partners in adulthood (age 23-25).

A comparison between the two racial groups highlights that non-White abusive males in the sample were more likely than White abusive males to have experienced corporal punishment during adolescence (based on the differences between the significance levels and the odds in the two models). No other relevant differences between the two groups can be discussed at this point. The variables parental bonding, SES, and alcohol use were not significant for either of the two models.

In the next Chapter I will discuss the findings, the implications for future research, and the limitations of the study.

CHAPTER VI
DISCUSSION

6.1 Discussing the findings

This study has investigated risk factors of intimate partner abuse among 329 young males from the Oldest Sample (N=506) of the PYS who reported being involved in a romantic relationship by age 23-25. By drawing upon three theoretical perspectives (family violence, mainstream feminist, and life-course perspectives), risk factors for abuse were first analyzed by category of influence (family, socio-cultural, and individual/personal influences) and then by age groups (age 13-15, or early adolescence; age 16-18, or late adolescence; and age 19-22, or pre-adulthood).

Similar to other longitudinal studies (see for instance Moffitt and Caspi, 1999) the prevalence of intimate partner abuse was high: one third of participants reported having perpetrated some form of violence/abuse against their intimate partner.

Compared to other participants in the Oldest Sample, the 329 males interviewed on their relationship with an intimate partner by age 23-25 were less delinquent during adolescence (age 16-18), less sexually promiscuous (especially during early adolescence, age 13-15), more wealthy (age 23-25), and more inclined to consume alcohol from adolescence through adulthood (age 13-25).

Descriptive statistics have indicated that the independent variable intimate partner abuse (age 23-25) was strongly correlated to several of the risk factors included in the analysis, especially experience of corporal punishment (age 13-15), negative attitudes toward women (age 23-25), delinquency (19-22), number of sexual partners (age 13-22), race, and age at entering the romantic relationship.

Five hypotheses have guided the multivariate analysis. In particular, the first 4 hypotheses were part of the analysis by category of influence and the last hypothesis specifically referred to the analysis of risk factors by age-group.

The hypothesis that males who experienced conflict within an intimate relationship (age 23-25), have experienced frequent corporal punishment in the family of origin (age 13-15), or have had weak bonds with parents/caretakers during early adolescence (age 13-15) are more likely to abuse an intimate partner in adulthood (age 23-25) was only partially confirmed by the multivariate analysis. It was found that interpersonal conflict with partner (age 23-25) was not a significant factor in the analysis. Although family violence theorists have pointed out that it seems naturally to assume that abuse/violence most often arises from disagreement/interpersonal conflict (Straus and Yodanis, 1996), this is not always the case. This finding confirms Lisa Brush's theory on intimate partner abuse (Brush, 1990). While explaining the limitations of the Conflict Tactic Scale, Brush (1990) points out that most of the violence among intimate partners does not come from disagreements. As hypothesized, the variable experience of corporal punishment (age 13-15) was strongly associated with adult intimate partner abuse (age 23-25). This finding addresses a gap in the literature on intimate partner abuse. Although Straus and Yodanis (1996) found a causal link between adolescent corporal punishment and later spouse assault, they used only retrospective data from the National Family Violence Survey. Straus (1990; 2005) has suggested that researchers should investigate the link between adolescent corporal punishment and adult spouse abuse by using prospective studies. The PYS data set has allowed me to implement this suggestion and confirm the earlier result. Similarly, it was found that a weak bonding with parents/caretakers during early adolescence (age 13-15) might lead some individuals to become abusive against their intimate partners. No other longitudinal study

on intimate partner abuse had provided these results, although it was suggested by family violence theorists that lack of attachment to parents/caretakers while growing up can translate into an increased risk for later partner violence/abuse (Straus, 2005). By following the example of PYS researchers (Wei, Loeber, and Stouthamer-Loeber, 2002) the hypothesis was re-tested separating the two racial groups (White and non-White). The findings showed that risk factors for abuse do differ by racial group. More specifically, the analysis indicated that among the White participants, those who experienced conflict within their relationship with an intimate partner (age 23-25) and those who had a weak bond with parents/caretakers, were more likely to abuse their partner (age 23-25). Instead, among the non-White participants, those who had more frequent experiences of corporal punishment during early adolescence were far more likely than those who did not to abuse an intimate partner (age 23-25).

The hypothesis that males who have negative attitudes toward women and toward relationships with women (age 23-25) are more likely to abuse their intimate partners (age 23-25) was confirmed by the multivariate analysis. This finding is important because very few empirical studies have so far investigated how having certain attitudes affects the likelihood to abuse an intimate partner (Dobash and Dobash, 1998). Although it is common to investigate how participants view certain issues in field work studies, it is very difficult to operationalize abstract concepts like attitudes in empirical data sets (Johnson and Sigler, 2000). Beliefs and attitudes are learned in one's social networks (family, circle of friends, school) and they are internalized at the level of personality (Dobash and Dobash, 1998). These results make us reflect on the values in our culture and society at large. Why are many individuals learning that it is ok to be disrespectful and dominant within intimate relationships? Early educational programs should also address these issues and focus on more egalitarian principles about gender roles and

expectations. When the hypothesis was re-tested by separating the White and non-White participants, the analysis did not completely confirm the results of the analysis developed by taking into consideration all the 329 males involved in a relationship with a current partner (age 23-25). The variable negative attitudes toward women was only marginally significant for the White group, but it was not significant for the non-White group. However, as earlier specified, this might be due to the small sample size once the two groups are split.

The hypothesis that males with a lower academic competence (age 13-15), those who were delinquent (age 13-22), and those who had larger numbers of female sexual partners (age 13-22) were more likely to abuse their intimate partner during adulthood (age 23-25) was not confirmed by the multivariate statistical analysis. These results contradict the findings of other longitudinal studies. More specifically, previous studies had suggested that a low academic competence, might in some cases, be a precursor of adult intimate partner abuse. Therefore, the association between early adolescent academic competence and adult intimate partner abuse needs to be further investigated. Also, Moffit and Caspi (1999) and Woodward et al. (2002) had found that early delinquent behavior was associated to adult intimate partner abuse. And, Farrington (1994) had found that males who were sexually promiscuous were also more likely to be abusive against intimate partners. When the hypothesis was re-tested by separating the two racial groups (White and non-White) the statistical results did not change.

The hypothesis that family risk factors are more likely than other risk factors (socio-cultural and individual/personal risk factors) to influence one's likelihood to abuse an intimate partner in adulthood was confirmed by the multivariate analysis. The hypothesis was tested by using a multilevel logistic regression model; the ranking among the three different categories of influence was based on both a comparison among the significance level of each risk factor taken

separately and the Chi-square improvement test used to assess the robustness of the model after adding each group of factors. In particular, the analysis confirmed that experiencing frequent corporal punishment and a low parental bonding during early adolescence might significantly increase the odds of being abusive against an intimate partner in adulthood. The evidence on the role of family factors in determining abusive behavior suggests that parenting education programs may help to mitigate children's proclivity to perpetrate abuse within intimate contexts later in life. In particular, advising parents about potential detrimental effects of corporal punishment and insubstantial bonding with children may act to reduce these behaviors.

Hypotheses 1 through 4 allowed me to investigate risk factors of intimate partner abuse by category of influence. In summary, this part of the analysis has indicated that a multi-contextual framework of analysis is useful to confirm and compare the importance of the different factors. My statistical findings strongly support the hypothesis that family factors are more important than socio-cultural or individual factors in affecting an individual's likelihood to abuse an intimate partner.

The last hypothesis specified for this dissertation guided the analysis of risk factors of intimate partner abuse as considered by age group. In particular, I had stated that personal characteristics, experiences, and behaviors that manifest early in life (during early adolescence) tend to influence the probability of abusing an intimate partner during adulthood (age 23-25) more than experiences and behaviors that manifest later in life (age groups 16-18 and 19-22). The multivariate analysis did not confirm my initial hypothesis. It was found that adolescent experience of corporal punishment (age 13-15) is a very important factor in the analysis, confirming the results of the analysis by category of influence. A strong association between delinquency in pre-adulthood (age 19-22) and adult intimate partner abuse (age 23-25) was also

found. Although prevalence rates in delinquency among the PYS participants were higher during age 13-15 than during 19-22, the statistical analysis has strongly indicated that delinquency during pre-adulthood is a much important factor in the analysis (based on a comparison of the B coefficients and 95% confidence intervals) than delinquency during early adolescence. My results contrast with the findings of previous longitudinal studies on intimate partner abuse, which have indicated that very early onset in delinquent behavior (Woodward et al, 2002) and delinquency at age 15 (Moffit and Caspi, 1999) are the most important risk factors for intimate partner abuse. However, it is important to point out that, in contrast to those studies, this research takes into consideration both violent and non-violent types of delinquency (using the PYS measure of “number of levels of delinquency”). The finding that experiences in the family of origin during early adolescence (age 13-15) and delinquency during pre-adulthood (age 19-22) are the most significant risk factors in the empirical analysis, indicating that there is not a specific age-group that is “most relevant” in the analysis. The ranking among factors considered by age-groups in the multilevel logistic regression was based on both the B coefficients for each factor and the Chi-square difference test after each group of factors was added to the model.

Throughout the analysis, four control variables were included in each empirical model: race, SES, age at the beginning of the relationship, and frequency of alcohol abuse. It was found that non-White participants were more likely than White participants to become abusive against their intimate partners. However, the analysis developed by separating the two racial groups pointed out that, although minority males tend to be more often involved in conflictual relationships and tend to be more abusive than their White peers, they are also more often exposed to frequent corporal punishment during early adolescence. This suggests that, even if race is strongly directly associated to intimate partner abuse, other factors (like experience of

corporal punishment during adolescence) tend to exacerbate the association between the two. These findings suggest that it is not sufficient to address dating violence through prevention programs/educational programs that target poor minority communities, but it is important to start educating parents about the deleterious effects of corporal punishment, especially among minorities. What brings minority parents to hit their children more often than White parents? Is it part of their culture/customs or is it rather the last resort to exercise control and supervision in communities that do not offer much to youth? As Sokoloff and Pratt (2005) point out, often researchers try to justify certain facts through culture; but culture cannot always explain it all. Perhaps we need to pay more attention to certain patterns of marginalization that originate within a stratified social structure, that tend to affect minority men, women, and children, creating opportunities for social and economic marginalization. These findings on race as risk factor for intimate partner abuse add new evidence to existing controversies in the literature on intimate partner abuse. As reported in Chapter 3, conflicting findings have been reported by major cross-sectional and longitudinal studies about the role that racial differences play in the analysis of risk factors for intimate partner abuse (Straus, 1980, 1991; Bachman and Saltzman, 1995; Moffit and Caspi, 1999).

The strong effect of race in the statistical analysis may have washed out the effect of SES. However, in the first part of the analysis, in both the family risk factors model and the socio-cultural risk factors model (where risk factors of intimate partner abuse were considered by category of influence), the statistical findings indicated that being poor increases the chance to abuse a partner for Whites but not for non-Whites. The analysis of the interaction between race and SES needs to be further investigated in studies on risk factors of intimate partner abuse.

Throughout the analysis, this study has consistently found that individuals who entered the romantic relationship at a young age were more likely to become abusive later in life, during adulthood. This was especially true for non-White participants. As in the case of race, these findings contrast existing literature in the field (Frieze, 2005; Rennison, 2001, Cate et al., 1982; Gorman-Smith et al., 2001).

The control variable frequency of alcohol abuse was found not significant throughout the statistical analysis. This contrasts with findings from other studies that pointed to an association between alcohol use/abuse and intimate partner abuse (Dobash and Dobash, 1998; Gelles, 1974).

The final model developed for this dissertation, which was designed by taking into consideration only factors that were significant in the analysis of risk factors by category of influence and in the analysis by age-group, pointed out that among non-White participants, those who entered the romantic relationship at a young age, those who received corporal punishment frequently during early adolescence, and those who were delinquent during pre-adulthood (age 19-22) were far more likely than other participants to become abusive against their intimate partner in adulthood (age 23-25). Similarly, among the White participants, those who entered the romantic relationship at younger age and those who were delinquent during pre-adulthood were more likely to be abusive against their wife/girlfriend in adulthood (age 23-25). Differently from their non-White peers, the White participants involved in conflictual relationship, did not report significant experiences of adolescent corporal punishment.

Because experience of corporal punishment is one of the most important risk factors of adult intimate partner abuse (especially among non-Whites), one can think that the roots of abusive behaviors within intimate contexts are found primarily in the family of origin. The family is a microcosm of our society and the family mirrors our socio-cultural and structural

problems. Non-White families (especially African Americans) are often confined to marginalized neighborhoods and networks that lack resources, income, appropriate schooling, and recreational activities (Carbado, 1999). They are often marked by poverty, degradation, crime, and discrimination. Perhaps we ought to pay more attention to the needs that minority communities have. Hence, we might find that prevention programs, which are needed to buffer the devastating effects of intimate partner abuse, can target the same groups of people and communities that are at risk of other forms of crime.

6.2 Strengths and limitations of the study

A major strength of this dissertation is that it provided an analysis of risk factors that are focus of major controversies in the literature and that needed to be further investigated. Furthermore, by drawing upon three theoretical perspectives (family violence, mainstream feminist, and life-course perspectives), this dissertation has provided two different types of analysis: first, I have investigated risk factors of intimate partner abuse by category of influence (family, socio-cultural, and individual/personal influences) including both past and concurrent factors; then, I have developed an analysis of precursors of intimate partner abuse by age-groups (age 13-15, or early adolescence; age 16-18 or late adolescence; and age 19-22 or pre-adulthood) where only past factors were included in the analysis. This was made possible by the unique features of the PYS; indeed this study includes nearly all the variables suggested by the literature and it also provides researchers with the opportunity to use information gathered during the course of development.

In contrast with most existing studies on intimate partner abuse, this research uses an intimate partner abuse scale that was designed to take into consideration a large number of

behaviors that include not only physical (violent and sexual) abuse but also non-physical controlling behaviors. This is a major innovation in a field where researchers have mostly focused on the use of the original version of the Conflict Tactic Scale, in spite of all the major criticisms and limitations explained by experts in the field (see Chapter 3).

By drawing upon the literature on violence developed by researchers of the PYS (Loeber et al., 2003; Wei, 1999; Wei et al, 2002), this investigation has differentiated between two racial groups, White and non-White, providing the reader with a better understanding of how risk factors of abuse are distributed across racial categories.

Although the PYS is one of the most important longitudinal studies in the US, it also presents some limitations; one of them is that interviews on intimate partner abuse only involved the participants and not their romantic partners (wives/girlfriends). It would certainly be very interesting to compare information gathered from both partners. Also, it is relevant to specify that although the PYS intimate partner abuse questionnaire is very rich compared to other instruments employed in other studies, questions are limited to descriptions of behaviors perpetrated by the participants against their partners (and vice-versa), and do not include details about the situation or the context in which the abuse occurred. In spite of the high level of violence described in several of the PYS questions on intimate partner abuse, the questionnaire does not allow the researcher to investigate whether the victim was injured as a consequence of the abuse. Furthermore, the questionnaire does not include questions that would help researchers to identify who initiated the violence and for what reason. Other limitations refer to the information on the participants' cultural background and beliefs about masculinity, male dominance, and abuse against women. It is certainly relevant to be able to assess the individual's ideological background when investigating the social problem of intimate partner abuse.

The major limitation of the empirical analysis refers to the fact that it would have been more efficient to investigate precursors of intimate partner abuse by using dynamic modeling. Indeed, through dynamic statistical models it is possible to observe how specific transitions during the life-span influence an individual's behaviors. The limitations of the empirical models are also due to the limitations of the PYS data set, which provides information on intimate partner abuse that are comparable only over two different points in time (two phases). Dynamic modeling requires that behaviors are observed for a larger number of years or over a larger number of phases. Another limitation of the analysis is that it does not take into consideration information on the participants' victimization of abuse by an intimate partner. The reason for excluding this variable is based on a technical/statistical problem that was explained in Chapter 4. In addition, the limitations of this research are the same limitations of most studies based on information gathered through survey/empirical methods. By making use of open ended questions, qualitative methods of research can best describe certain details of the situation in which abuse occurs and specific features of individual behaviors that are very relevant to our understanding of the social problem of intimate partner abuse.

6.3 Implications for further research

The analysis of this research has pointed out the importance of making use of all the possible suggestions provided by different theoretical perspectives in order to understand the nature and the causes of intimate partner abuse. Certainly, many other investigations are needed to better interpret the role that certain factors play in determining one's likelihood to abuse an intimate partner. For instance, it is important to investigate why abuse more often occurs among non-Whites. A better understanding of how one's cultural background makes certain individuals

more prone than others to perpetrate abuse against women in general and against intimates in particular needs to be pursued. However, culture will not explain it all. An analysis of the socio-economic structure is needed in order to investigate at what level the marginalization that non-Whites experience in our society affects their likelihood to become involved in dysfunctional relationships. Qualitative investigations conducted by well cited sociology scholars (see for instance Carbado, 1999) has caused me to doubt about the efficiency of using a variable like the SES to explain the social and economic marginalization of individuals from the non-White communities. There are dynamics of marginalization that follow from one's past experiences (like experience of incarceration) that affect an individual for life. The lack of power and control might not be captured by empirical measures of one's socio-economic status; perhaps, these kinds of dynamics can be best explored by making use of qualitative research.

Researchers should also attempt to understand how perpetration of abuse and experience of abuse by a partner are associated with one another; in other words, it is important to investigate the dual aspect of abuse by interviewing both partners. Perhaps the principal investigators of the PYS might one day decide to also gather information about the occurrence of aggression/abuse from both partners.

Other studies on intimate partner abuse should also attempt to understand the contribution of delinquency to abuse/violence within intimate contexts. Although it seems clear that deviant/delinquent individuals tend to be more prone to abuse their intimate partners, we need to further investigate how specific situational/contextual factors intervene to mediate the association between delinquency and abuse.

It would be very helpful to gather information on intimate partner abuse over several phases (years) so that it would be possible to capture changes within the relationship(s) that

would help us to better explain the nature and the causes of intimate partner abuse. The PYS researchers have investigated abuse within intimate relationships at the age 23-25 years. Other relevant longitudinal studies have focused on intimate partner abuse among couples of younger age (Magdol et al, 1997; Gorman-Smith et al., 2000). It would be interesting to observe abuse within intimate contexts over time in order to understand whether changes in level of commitment, transitions in one's life-span (such as parenthood or divorce), or simply maturation influence participants' behaviors toward intimate partners.

APPENDICES

APPENDIX A
SUPERVISION/INVOLVEMENT QUESTIONNAIRE

Both parents and participants were administered versions of the Supervision/Involvement Scale. Here below I report some of the questions included in the original questionnaire based on the PYS literature (Loeber et al., 1998).

Questions as were addressed to caretakers:

1. When was the last time that you discussed with you son his plans for the coming day?
2. In the past six months, about how often have you discussed with your son his plans for the coming day?
3. When was the last time you talked with your son about what he had actually done during the day?
4. In the past six months, about how often have you talked with your son about what he had actually done during the day?
5. Does your son have a set time to be home on school nights?
6. Does your son have a set time to be home on weekend nights?
7. If your son did not come home by the time that was set, would you know?
8. If you or another adult are not at home, does your son leave you a note or call you to let you know where he is going?
9. Do you know who the companions of your son are when he is not at home?
10. When you are not at home, does your son know how to get in touch with you?
11. When your son is out, do you know what time he will be home?
12. Is it important to you to know what your child is doing when he is outside of the home?
13. Where does your child usually go after school?
14. When is he usually in the evening?
15. Where is he usually on weekends?

16. How many of his friends do you know?
17. When you and your son are both at home, do you know what he is doing?
18. Does your son help to plan family activities?
19. Does your son get involved in family activities?
20. Do you find time to listen to your son when he wants to talk to you?
21. Do you and your son do things together at home?
22. Does your son go with members of the family to movies, sports events, or other outings?
23. Does your son go with members of the family to church, synagogue, or Sunday school?
24. How often do you have a friendly chat or talk with your son?
25. Does your son help you?
26. Does your son prefer to be with his friends rather than with the family?
27. Do you talk with your son about how he is doing in school?
28. On the average, how much time each day are you together with your child on weekdays,
that is, when you and your child are both awake?
29. And, on weekend days?
30. On weekdays, how much of that time are you doing something together, like making
something, playing a game, talking or going out together?
31. And, on weekend days?
32. In general, are these activities enjoyable?

APPENDIX B
SELF-REPORTED DELINQUENCY QUESTIONNAIRE

In this Appendix I report some of the questions included in the SRD questionnaire (Loeber et al., 1998).

In the past six months:

1. Have you run away from home?
2. Have you skipped classes without an excuse?
3. Have you lied about age to get into someplace or buy something?
4. Have you hitchhiked where it was illegal to do so?
5. Have you carried a hidden weapon?
6. Have you been rowdy, unruly in a public place so that you got into trouble?
7. Have you begged money or things from strangers?
8. Have you drunk in a public place?
9. Have you purposely damaged other people's property?
10. Have you purposely set fire to a house, building, car or other property?
11. Have you avoided paying for things?
12. Have you broken into a building?
13. Have you stolen or tried to steal things worth \$5 or less?
14. Have you stolen or tried to steal things worth \$5 to \$50?
15. Have you stolen or tried to steal something worth \$50 to \$100?
16. Have you stolen or tried to steal something worth \$100 or more?
17. Have you taken something from a store without paying for it?
18. Have you snatched someone's purse/wallet or picked someone's pocket?
19. Have you taken something from a car?
20. Have you bought/sold/held stolen goods?

21. Have you gone joyriding with someone's vehicle without permission?
22. Have you stolen or tried to steal a vehicle/motorcycle?
23. Have you used checks illegally?
24. Have you used other's credit card or money without their permission?
25. Cheated by selling something worthless?
26. Attacked someone with a weapon or with the idea to hurt them?
27. Hit someone to hurt?
28. Used a weapon/force/strong arm to get money or things from people?
29. Thrown objects such as rocks or bottles at people?
30. Have you been involved in gang fights?
31. Have you been paid for sex?
32. Have you physically hurt or threatened to hurt someone to have sex?
33. Have you tried to have sex with someone against their will?
34. Have you sold marijuana or hashish?
35. Have you sold hard drugs (heroin, cocaine, or LSD)?
36. Have you been arrested or picked up by police for other than minor traffic offenses?

APPENDIX C
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