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## Bringing Parental Subjectivity Back In: Examining the Impact of Parents' Family Experiences on Delinquency

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### ABSTRACT AND ARTICLE INFORMATION

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Using longitudinal data from the Iowa Youth and Families Project (IYFP), this study examines the role of the family in the generation of delinquency by overcoming two limitations: the prevalent use of the cross-sectional design in estimating the effect of family variables on delinquency and the neglect of incorporating parental subjective states of family life to the analysis. Due to advancements in theory and methods, those two limitations can now be overcome. The statistical limitation is overcome by using more sophisticated methods and the theoretical issue by considering parental subjective dimensions of family life. Results suggest that the change in subjective family experiences of both fathers and mothers is associated with the change in the risk of their children's delinquency; that is, the more satisfactory and easier parents are feeling about their family life over time, the less likely their children are to participate in delinquency. It is also found that the fathers' impact is larger than mothers'. Implications of this study for theory development and policy formulation are discussed.

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The intersection of the family and crime has long been a focal concern in criminological research (Fox, Benson, & Spohn, 2000). As society's most basic institution, the family is considered among the most important socialization agents for children and adolescents, and the family is the primary place where children and adolescents become adjusted to experience social interactions and navigate developmental life, thus exerting an influence on adolescent behavioral patterns and developmental outcomes (Cernkovich & Giordano, 1987; Mack, Leiber, Featherstone, & Monserud, 2007; Pratt, Turner, & Piquero, 2004; Simons, Simons, & Wallace,

2004). Because of the recognized importance of the family in shaping the socialization process and behavioral outcomes of children and adolescents over their life course, there is an extensive body of criminological literature examining whether and how the family is associated with adolescent delinquency (Farrington, 2011; Gorman-Smith, Tolan, Zelli, & Huesmann, 1996; Sampson & Laub, 1994). Prior research examining the familial sources of delinquency has identified and tested the influence of family structural characteristics and patterns of parent-child interactions on delinquency production, including the deprived and disadvantaged social

backgrounds of the family, criminal parents, inappropriate child-rearing and parenting practices, and criminogenic parental modeling processes (Loeber & Dishion, 1983; Murray, Loeber, & Pardini, 2012; Simons et al., 2004).

Although not particularly focused on the effect of the family on delinquency, some research has also suggested that African Americans are disproportionately represented as violent offenders partially because they tend to reside in urban communities with concentration of family disruption (Almgren, Guest, Immerwahr, & Spittel, 1998; Messner & Sampson, 1991; Sampson, 1987; Shihadeh & Steffensmeier, 1994; Sampson & Wilson, 1995). More notably, it is also observed that strong family attachment that delinquent adolescents have experienced could help shield them against the stigmatizing effect of criminal justice labels after release, thus preventing them from recidivism (Jackson & Hay, 2013). Moreover, research suggests that good parenting could derail the previously aggressive children from continuing the delinquent pathway by improving adolescent levels of school bonds, reducing susceptibility to deviant peer pressure, and enhancing self-control (Hay, Meldrum, Widdowson, & Piquero, 2016). Taken as a whole, research concerning the impact of the family on delinquency suggests that the well-functioned family environment and positive parenting inhibit adolescent delinquency, whereas the disruptive family condition and negative parenting practices foster delinquent adolescents (Sampson & Laub, 1993). This is also expressed in the conclusion by Smith and Stern (1997):

We know that children grow up in homes characterized by lack of warmth and support, whose parents lack behavior management skills, and whose lives are characterized by conflict or maltreatment will more likely be delinquent, whereas a supportive family can protect children even in a very hostile and damaging external environment. . . . Parental monitoring or supervision is the aspect of family management that is most consistently related to delinquency. (p. 382)

While the literature on the impact of family on pathways to delinquency has grown since the 1980s (Farrington, 2011), both the degree of the familial effect on delinquency and the underlying mechanism linking the family and delinquency are still subject to debate or inconsistency (Fox et al., 2000; Simons et al., 2004). For example, the family has been embraced as a robust, significant source of juvenile delinquency

(Farrington, 2011), but research on this topic has revealed exceptions, with findings that the impact of the family is not as powerful as the influence from deviant peer associations and residence in disadvantaged neighborhoods (Walters, 2015). Meanwhile, there are mixed, competing theoretical arguments regarding the pathways through which the family affects juvenile delinquency (Gove & Crutchfield, 1982; Le Blanc, 1994).

This lack of consensus on the influence of family on delinquency, I argue, could be produced by the theoretical and methodological weakness, thus posing barriers to fully understanding the workings of the family on delinquency. For advancing the understanding of the position of family on delinquency, this study seeks to address some uncertainties and gaps in the literature on the family and delinquency by utilizing more sophisticated research design and analysis and incorporating the under-researched dimension of parental subjectivity on family life into the study of delinquency causation. I argue that it is important to consider parental subjectivity because how parents perceive and interact with their children is a meaningful portion of children's family life, and the children's family process has been demonstrated to affect their behavioral outcomes (Sanders, 1999). With copious evidence of the effect of family structural characteristics on delinquency, past research has paid less attention to this meaningful social process in the family setting shaping adolescent life (Sampson, 2000). Thus, building upon previous research and theory regarding the familial effect on delinquency, this study empirically tests the impact of parental family experiences on delinquency using longitudinal design and analytical techniques and thus, sheds new light on the way in which the family life affects delinquency.

This paper is organized as follows. First, it reviews the empirical literature and theoretical background pertaining to the effect of the family on delinquency and identifies two limitations that are addressed in this study. The two limitations are the prevalent use of the cross-sectional design in estimating the effect of family variables on delinquency and the disregard of incorporating subjective parental experiences of family life in the analysis. After describing the data set and analytical approach that would be employed in the analysis, it then presents all models run in this study and reports the results of the impact of parental subjectivity of family life on delinquency. It concludes by discussing theory and policy implications of the findings and research limitations of the current study.

## Empirical Literature on the Family and Delinquency

Although a sizable body of literature documents that the ill functioning of the family contributes to delinquency, there are both empirical and theoretical questions that remain unclear with respect to the impact of families on delinquency. A review of this literature reveals a lack of consistency about both the effect size of family on delinquency and working mechanisms through which the family life influences juvenile delinquency. The first debate revolves around the extent to which family plays a role in generating juvenile delinquent behaviors. Research has demonstrated that intact family structure (i.e., non-divorced parents), appropriate parental discipline and monitoring, supportive and warm parenting practices, and positive parent-child relationships and interactions are predictors of a lower level of juvenile delinquency (Agnew, Rebellon, & Thaxton, 2000; Barnes, Hoffman, Welte, Farrell, & Dintcheff, 2006; Demuth & Brown, 2004; Juby & Farrington, 2001; Loeber & Dishion, 1983; Nettle, 2012; Unnever, Cullen, & Agnew, 2006; Wells & Rankin, 1991; Wright & Cullen, 2001). Yet, some research suggests the family has a weaker impact on delinquency than other social influences, notably, peer influence and neighborhood effects (Knoester & Haynie, 2005; Walters, 2015). Some research even shows that parents do not affect child development as much as was previously thought and that the adolescent affiliation with peers matters more (Harris, 1995), which is contradictory to the commonly held belief and prior research findings establishing the familial effect on delinquency (Wright & Cullen, 2001). In addition, the extent to which the family affects delinquency differs among racial and ethnic groups (Sampson, Morenoff, & Raudenbush, 2005). In their study comparing structural sources of violence among various racial and ethnic groups, Ulmer, Harris, and Steffensmeier (2012) report that the disruptive family plays a more important role in contributing to violence among African Americans, whereas poverty is the main factor leading Hispanic adolescents to engage in violent and other delinquent behaviors.

The magnitude of family structural and process-relevant factors on delinquency is open to theoretical and empirical debates, but more significantly, the mechanism and process through which the family operates to affect delinquency is contestable. The familial impact can be seen as a portion of the complex set of social sources on juvenile delinquent behaviors, including individual, situational, structural, environmental, and cultural forces (Fagan & Wexler, 1987; 1988). Within the familial setting, familial

effects can be divided into two broad categories of mechanisms through which parents affect juvenile delinquency: direct and indirect (Walters, 2015, p. 2). Direct effects include parental supervision, discipline, and sanctioning deviance of adolescents (if any), whereas indirect effects come from the emotional attachment that is formed between a parent and a child (Dishion & McMahon, 1998). Direct effects can be conceptualized as a method of exerting control on adolescent deviant behaviors, and indirect effects are viewed as a process of offering support and warmth, forming the parental attachment to children (Schroeder & Mowen, 2014). Long ago, Nye (1958) argued that the family structure does not exert a direct effect on adolescent delinquency but rather an indirect effect through the social controls provided by family relationships. He suggested that the actual attitudes and relationships affecting social control are considered as crucial factors, but these are found more concentrated in families with a loss of direct parental control and a decreased child-parent attachment. Among studies of the effect of parental attachment, however, there was ambiguity and disagreement over how the concept of family attachment should be operationalized. Some measures of attachment focused on how children feel about their parents, others examined the extent to which parents are warm and supportive to their children, and still others assessed parental supervision and control. Therefore, while it is vastly observed that the structure and process of family life that children have experienced could be effective in shaping delinquency (Stattin & Kerr, 2000), it remains unresolved in terms of the mechanism by which those aspects of family life affect delinquency and the conceptualizations and measures of those family factors.

The underlying mechanism linking the family and crime and delinquency is further complicated when the family can be a moderator or mediator through which other social influences work to affect adolescent delinquency, such as social structure, neighborhood characteristics, and peer and school effects. The process through which the family affects delinquency becomes less recognizable when factors outside the family environment have demonstrable effects on delinquency (Beyers, Bates, Pettit, & Dodge, 2003; Chung & Steinberg, 2006; Gorman-Smith, Tolan, & Henry, 2000; Patterson & Dishion, 1985; Simons, Simons, Burt, Brody, & Cutrona, 2005; Slocum, Rengifo, Choi, & Herrmann, 2013). For example, research has revealed that supportive parenting reduces the probability that discrimination will lead to violence because it can diminish anger and hostile views of relationships triggered by discrimination (Burt, Simons, & Gibbons, 2012; Simons, Johnson, Beaman, Conger, & Whitbeck, 1996; Simons, Simons,

Burt, Drummund, Stewart, Brody, & Cutrona, 2006). Likewise, the competing effect between families and peers has been documented in a number of studies (Agnew, 1991; Jang & Thornberry, 1998). For instance, in researching the interaction of parental effect and peer influence on the likelihood of delinquency, Walters (2015) found that positive parenting has a small but potentially important impact on preventing the proactive or instrumental criminality considered to be infected through the peer influence process, serving as a “buffer” against deviant peer influence. Likewise, among families in high-crime neighborhoods, tougher family socialization and disciplinary practices, including corporal punishment, may be needed to offset deviant peer influences and thus protect against the high-risk situations that children in high crime neighborhoods often encounter (Smith & McVie, 2003). Therefore, both the extent and the way in which family influences delinquency are uncertain.

### Theoretical Background

There is a wide spectrum of crime theories positing that the family reasonably impacts delinquency. Among them, control theories and learning theories of crime and delinquency have garnered most supportive evidence (Conger, 1976; Smith, Weiher, & Van Kammen, 1993). In light of control theory, there is a divergence between social control theory and self-control theory in explaining juvenile delinquency (Gottfredson & Hirschi, 1990; Hirschi, 1969). The central theme of social control theory is that youth commit delinquent behaviors because of the weakness or absence of bonds that can effectively prevent adolescents from involvement in delinquency (Hirschi, 1969). Hirschi’s (1969) social control theory asserted that people’s innate tendencies were controlled as they became bonded to society. Ineffective or “bad” parenting fails to form the functional bonds between parents and children that prevent adolescents from engaging in delinquency. The weakness or lack of parental attachment will increase the likelihood of juvenile delinquency. Nonetheless, the general theory of crime argues that children with low self-control will be more likely to commit delinquent acts, and any external influences will work through the low self-control to affect delinquency. Children with low self-control usually behave impulsively, enjoy taking risks, prefer physical activities to mental tasks, are short-tempered and self-centered, and choose simple tasks over complex ones (Gottfredson & Hirschi, 1990). Notably, Gottfredson and Hirschi (1990) argue that low self-control is a relatively persistent individual propensity after adolescence. Hence, the low self-control theory may

confront the argument that parenting practices could affect the adolescent predisposition to engage in delinquent acts over time. What distinguishes delinquents from non-delinquents is the individual personal capacity to exercise self-restraint when attracted to engage in crime (Turner & Piquero, 2002). To summarize, applying control theories of crime to the familial effect on delinquency underscores the importance of family as an agent of exerting social control on adolescents and engendering children’s self-control, which results from appropriate parenting practices and developing family attachment, thus contributing to the prevention and reduction of delinquency.

Another theoretical perspective underpinning the impact of the family on delinquency is concerned with differential associations and social learning theory of crime, which posit that children and adolescents learn to engage in delinquent behavior through the process of social interactions with parents by associating with more definitions favorable to delinquency. For example, parents may serve as a model of aggressive and violent acts when they impose sanctions on their children in a coercive manner (Akers, 1977; 2011; Unnever et al, 2006). Parents may reinforce definitions favorable to crime when interacting with their children. Research has indicated that “bad” parenting practices can infuse the child’s cognitive and attitude development with criminal elements, thus promoting and encouraging anti-social thinking and acting (Akers, Krohn, Lanza-Kaduce, & Radosevich, 1979; Conger, 1976). Notably, emphasizing how early parent-child interactions shape delinquency and anti-social behaviors later in a child’s life or in adolescence, numerous studies have empirically demonstrated that children from families that are involved in coercive, aggressive, and negatively reinforcing behaviors in the home are at increased risk of engaging in delinquent behaviors in adolescence (Patterson & Yoerger, 1997). In sum, learning theories of the family and delinquency argue that family conditions may affect children’s learning process and motivate learning values that are conducive to delinquent behaviors (Hoffmann, 2011, p. 123-144).

Taken together, substantive and theoretical inconsistencies still exist with regard to the position of the family on juvenile delinquency and how family life influences delinquency (Rutter & Giller, 1983). There is copious evidence supporting the inverse relationship between “effective” parenting and adolescent delinquency. The working mechanism through which parenting influences delinquency is, however, less clear. There are a number of disparate findings about how the role of families interacts with or competes against other social institutions and settings in which adolescents experience development and

socialization, such as the neighborhoods and peers, thus diminishing the effect of familial life. These uncertainties, I argue, mainly come from two limitations of prior research. First, the vast majority of prior studies on the familial influence on juvenile delinquency used cross-sectional designs and attempted to incorporate as many variables and constructs as possible into the regression model. The remarkable drawback of this design is that it cannot adequately address the unobserved heterogeneity among the research subjects, regardless of numerous observables included in analysis. This will likely yield biased parameter estimates, making it difficult—if not impossible—to tease out the effect of family on juvenile delinquency (Paternoster, Bushway, Apel, & Brame, 2003). Because of both physical and psychological differences among children, they may have different responses toward similar parenting practices and develop differently within similar familial settings (Burt, Simons, & Simons, 2006; Tittle, Ward, & Grasmick, 2003). Failure to control for those potential child-specific effects may bias the estimate about the role of family on delinquency.

Second, past research has tended to focus largely on the role of objective familial characteristics such as family structures, family economic status, and parenting styles and practices. Nevertheless, research needs to examine the interaction processes between parents and children or capture the subjective domain of the parent-child relationship (Farrington, Barnes, & Lambert, 1996; Rankin & Wells, 1990). Again, the combination of the objective contexts and the subjective experiences of the familial life cannot even completely remove the specific-child effect that may contaminate the effect of other variables. If it is assumed that a child's behavior can be affected by perceptions of, and interactions with, their parents, it follows that how parents feel about and experience their family life can influence the likelihood of their child's delinquency. Specifically, when parents enjoy high degree of satisfaction about and hold positive attitudes towards their family life and children, parents will be more likely to produce strong family attachment with children and invest to establish and maintain more effective social controls of their children's behaviors (Smith & Krohn, 1995). Parents' endeavors to control their children and prevent them from engaging in delinquent behaviors are effective at impeding the breakdown of the family (Thornberry, 1987). Consequently, a more clarified understanding of the position of the family on delinquency entails a close examination of the subjectivity of family members about their family life that may have a supposed impact on the development of adolescent delinquency.

## The Current Study

This study aims to address the two aforementioned limitations in the literature concerning the impact of family on delinquency: the prevalent use of the cross-sectional design in estimating the effect of family variables on delinquency and the neglect of incorporating parental subjective experiences of family life to the analysis. For the substantive part, this study attempts to empirically test the effect of subjective parental feelings about their family life on juvenile delinquency, which is rarely addressed in previous family and delinquency research. To obtain results about this relationship with an enhanced level of confidence, I used a panel data set containing information about parental subjective experiences of their family life and their children's delinquency over years and advanced analytical techniques to test whether the parental subjectivity would influence adolescent delinquency. This analytical procedure is advantageous over traditional use of a cross-sectional data set because panel models (mainly, fixed effects model and random effects model) appropriately address those unobserved individual-specific differences among adolescents, which may bias estimates of the parental effect (see Hsiao, 2014). Also, the longitudinal design helps to establish the temporal order of the dependent and the independent variables because this design captures the change within observed variables (Menard, 2002). Although there are other potential familial factors that can affect delinquency, the focal interest of the analysis is on parental subjective feelings about their family life, that is, whether their satisfaction and happiness about their family life and children reduces the likelihood of their children's engagement in delinquency. The more satisfaction and ease parents experience about their family life and children, the more willingness they have to prevent and control their children from delinquency and enhance their children's conformity to social norms (Hoeve et al., 2012). Accordingly, I hypothesize that the relationship between parental subjective experience of family life and adolescent delinquency—net of other factors—will be negative. After describing data and methods used for testing the impact of the parental subjectivity on delinquency, I report the findings in the Results section and then conclude by discussing their policy implications and research limitations.

## Data and Methods

### Data and Sample

The data utilized in this study come from the Iowa Youth and Families Project (IYFP). IYFP is a

longitudinal survey conducted in 1989, 1990, 1991, and 1992.<sup>1</sup> The project was developed from an initial sample of 451 7th graders from two-parent families of European heritage in rural Iowa (N = 451). The study was merged with the Iowa Single Parent Project (ISPP) to form the Iowa Family Transitions Project in 1994 when the target youth were seniors in high school. Survey data were collected from the target children (7th graders), a sibling within four years of age of the target child, and both parents. Field interviewers visited families at their homes on several occasions to administer questionnaires. The whole data sets used in the final analysis contained four parts about family and delinquency information. The Household data sets contain information about the family's financial situation, involvement in farming, and demographic information about household members. The Parent and the Child Survey data sets contain responses to survey questions about the quality and stability of family relationships; emotional, physical, and behavioral problems of individual family members; parent-child conflict; family problem-solving skills; social and financial support from outside the home; traumatic life experiences; alcohol, drug, and tobacco use; and opinions on topics, such as abortion, parenting, and gender roles.

In addition, the Child Survey includes responses collected from the target child and his or her sibling in the study about experiences with puberty, dating, sexual activity, and risk-taking behavior. The Problem-Solving data sets contain survey data collected from respondents about the family interactions tasks. Finally, the Observational data sets contain the interviewers' observations collected during these tasks. Notably, demographic characteristics, such as gender, race, and socioeconomic status, are largely stable within the household and family members during the period of data collection, so removing them from the analysis will not affect the efficacy of a fixed effects modeling technique, the main approach to longitudinal data analysis. Also, the effect of demographic factors on delinquency is not the substantive interest of this study, so it will not negatively affect my capacity to answer the focal research question. Because only the last three waves of data (Year 1990, 1991, and 1992) measure and record information about parental subjective states about their families and children, these three waves were utilized in the final analysis.

### Measures

**Dependent variable.** A self-report instrument adapted from the IYPF was used to generate a scale measuring delinquent involvement. This scale contains 22 items ranging from minor delinquent acts (i.e., running away from home, sneaking into a movie

without paying, joyriding, use of illicit drugs and alcohol) to serious violent behaviors (e.g., participate in group fights, carry a hidden weapon, and robbery; see Appendix for the description of study variables). Descriptive statistics for the 22 items and the delinquency scale are presented in Table 1. To ensure a clear reference period, the target children were asked to indicate whether and how often (if any) they have ever engaged in the acts listed. To respond to the self-report items, the target children used a scale ranging from 1 (never) to 5 (six or more times). To calculate the child's delinquency score, I counted the total number of delinquent acts across 22 items to construct a summed delinquency index, which was transformed into its natural logarithmic value to correct for skewness (Jang & Thornberry, 1998; Unnever et al., 2006). The natural log of delinquency was used for model estimation. The alpha coefficients for each year of delinquency score are .75 (1990), .79 (1991), and .95 (1992). The higher score indicates more delinquent involvement.

**Independent variable.** The focal independent variable in this study is parental subjective family experiences. The data contain 4-item measures of parental subjective experiences of family life and feelings about their children (see Appendix). Parents were asked to indicate how much they agree or disagree with the statements, including "being a parent to the target child has been an enjoyable experience," "I am satisfied with the relationship with my children," "I am happy with things between my children and me," and "The experience of raising my children is easy." Parents rated each statement in a scale from 1 (strongly agree) to 5 (strongly disagree). The 4-item self-report scale was used to form the index of parental subjective feelings of their family life. The scores were reverse coded, summed, and standardized. As parents were surveyed separately, it was possible to calculate the father's and the mother's family experiences respectively and obtain two indicators in each wave: father's family experiences and mother's family experiences. If parents get a higher score in this index, it suggests that parents enjoy more satisfaction, ease, and happiness with their family life and children.

**Control variables.** I control for a number of variables that may not only be related to parental family life but also have an impact on delinquent involvement, including parenting practices and styles, beliefs about parenting, family problem-solving skills, social life, family finances, and their health conditions. Those indicators were measured by asking them questions about how often they did the listed acts in the past 12 months or how much they agree or disagree with the listed statements. The description of those variables and their measurement are listed in the Appendix. The scores in each indicator were summed

across items and standardized with higher scores, indicating more demanding and responsive parenting practices, more positive beliefs and values about parenting, higher family problem-solving skills, active social life and wider social networks, healthier family finances, and better health conditions.

### Analytical Strategy

Because of the longitudinal structure of the data set, three observations from Year 1990, 1991, and 1992 are nested within each research subject (parents and target children). The nested structure of these data make standard regression analyses problematic because it violates the assumptions of independence between observations, thus biasing estimates of coefficient standard errors, and potentially reducing the precision of coefficient estimates (Allison, 2005). Further, the unmeasured heterogeneities among the target children may bias the estimate and confound the impact of the family and, thus, it is hard to establish that the variation of delinquency is due to the variation of variables associated with the family instead of the unobserved variables related to children's characteristics. In particular, as self-control theorists of crime (Gottfredson & Hirschi, 1990) argue that the most important cause of criminal behavior is personal low self-control, an individual characteristic persistent across the life span, inadequately addressing the difference of self-control among target children may undermine the capacity of establishing the relationship between the family and adolescent delinquency (see LaGrange & Silverman, 1999). Notably, the data set for this study provides no measure of the self-control of target children. However, panel data analytical techniques are able to deal with the problem.<sup>2</sup>

A fixed effects model and a random effects model are used to control for unobserved heterogeneity among those target children. These models "wash out" the unmeasured specific differences presumed to exist among target children, including the potential difference of self-control in children, by focusing solely on the within-child variation in delinquency over time rather than the average between-child differences (Allison, 2005). Moreover, estimates from a model with fixed effects are consistent, although in the particular case when unmeasured heterogeneity is statistically independent of included covariates, a model with random effects provides greater efficiency (Kreager, Matsueda, & Erosheva, 2010, p. 238). The model used for testing the impact of parental family experiences on delinquency is expressed in the following form:

$$\text{Delinquency}_{it} = \beta_0 + \beta_1 (\text{Parental Family Experiences}_{it}) \\ + \beta_2 X_{it} + \alpha_i + \varepsilon_{it}$$

Here,  $X_{it}$  represents the vector of control variables measured on the target child  $i$  and the Year  $t$  and the parameter  $\beta_2$  represents the set of coefficients of such control variables that have been measured in the data set. Note that in this case  $i = 1, 2, \dots, 451$  and  $t = 1990, 1991, 1992$ .  $\beta_1$  denotes the estimate representing the effect of parental subjective family experiences on delinquency, which is the focal concern of my analysis. Also note that  $\alpha_i$  is a set of fixed differences among the target children, and those differences are assumed to have stable effects on delinquency over time. The error term  $\varepsilon_{it}$  is assumed to have a normal distribution.

Following a summary of descriptive statistics of study variables, my multivariate analyses proceed as follows. First, before running the full model that incorporates all variables, I conducted the traditional analysis of variance (ANOVA) that was used as the baseline to evaluate the subsequent analyses. Then I ran a traditional standard regression model using the data set from the year 1992 only, incorporating the focal predictor variable. Furthermore, I conducted an analysis of pooled 3-year cross sections by introducing my focal variables and other control variables. In reducing the omitted variable bias, I used the fixed effects model and the random effects model to test the effect of parental subjective family experiences.<sup>3</sup> Obtaining descriptive statistics of variables in this study and estimating all those models were implemented in STATA/MP 14 (StataCorp, 2015).

### Results

This section presents the results of the analyses in two parts: The first part reports the descriptive statistics of key variables examined in the study, and the second presents various models that have been run to test the impact of parental subjectivity on delinquency. Table 1 lists the summary descriptive statistics for key variables by three years. The dependent variable of delinquency score that has been transformed decreases from 0.704 (Year 1990) to 0.566 (Year 1991) but increases to 0.628 (Year 1992). As for parental subjective family experiences, both the father's and the mother's increase across the three waves. Over the three years, the sampled parents report enjoying greater satisfaction, have more happiness in their family life, and experience increased ease of raising their children. Fathers report relatively higher levels of such enjoyable experiences than mothers do. Additionally, fathers report greater involvement in supervising and correcting children's undesirable behavior than do mothers. During the three years, mothers think parenting is increasingly important to them, as their belief score increases over time. However, fathers' values about parenting decline

from wave 1 to wave 2 but increase from wave 2 to wave 3. In terms of the trend of problem-solving skills between fathers and mothers, the skills of fathers to address familial problems keep increasing over three years, whereas those of mothers first decline and then increase a little. The frequency of parents' social life is relatively low in 1991 with comparison to 1990 and 1992, indicating that they spent relatively less time

with their friends and other non-family members in 1991. When it comes to parents' economic activities, fathers in the sample have more financial resources than mothers do in the family. However, the health condition goes in opposite directions between fathers and mothers in the sample. Over the three years, fathers feel increasingly healthier as their health scores go up constantly, whereas mothers feel the other way.

**Table 1 – Descriptive Statistics of Study Variables by Year (N=451)**

Variables	1990		1991		1992	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
<b>Dependent variable</b>						
Delinquency score	.704	.372	.566	.265	.628	.327
<b>Independent variables</b>						
Father family experiences	.174	.665	.266	.971	.289	.366
Mother family experiences	.058	.889	.098	.673	.103	.112
<b>Control variables</b>						
Parental supervision and punishment						
Father	.412	.334	.387	.244	.401	.334
Mother	.249	.256	.277	.993	.255	.478
Parenting beliefs						
Father	.501	.629	.479	.243	.505	.221
Mother	.467	.704	.534	.575	.558	.445
Family problem-solving skills						
Father	.554	.776	.662	.562	.677	.911
Mother	.679	.708	.499	.442	.787	.224
Parental social life						
Father	.779	.556	.669	.478	.837	.553
Mother	.561	.465	.533	.897	.583	.781
Family finances						
Father	.334	.337	.297	.367	.288	.126
Mother	.226	.341	.256	.891	.274	.893
Parental health conditions						
Father	.383	.551	.402	.223	.446	.376
Mother	.557	.632	.541	.549	.536	.282

Note: S.D. = standard deviation

Table 2 shows the results of all models that have been used for examining the effect of parental subjectivity on delinquency with estimates and the significance level. Model 1 is a one-way ANOVA that tests whether there is a significant variation of delinquency among the target children. Indeed, the target children vary significantly in their delinquent involvement ( $p < 0.05$ ). I calculate the intra-class

correlation coefficient, which is 0.643, meaning that 64.3% of the variance comes from between children differences. This analysis is preliminary, as it provides the baseline for the subsequent analyses. The second model in Table 2 employs standard ordinary least squares (OLS) regression using the Year 1992 cross sectional data. In Model 2, I found fathers' subjective family experiences are negatively and significantly

related to delinquency ( $b = -0.097$ ,  $s.e. = 0.059$ ,  $p < 0.05$ ) and mothers' are negative too but non-significant ( $b = -0.127$ ,  $s.e. = 0.045$ ). However, this estimate may be subject to bias because of the selection effect. Target children may differ in their interactions with parents. The target children may

react differently to fathers' emotions and mothers' emotions. Such differences may bias the estimate, so I cannot make the claim with strong confidence that fathers' enjoyable subjective family experiences will reduce the likelihood of delinquency, but mothers' do not have an effect on the reduction of delinquency.

**Table 2 – Regressions of Delinquency on Parental Family Subjective Experiences (N=451)**

Variables	Model 1		Model 2		Model 3		Model 4		Model 5	
	ANOVA		Cross-Section (1992)		Pooled OLS		Fixed Effects		Random Effects	
	<i>B</i>	<i>S.E.</i>	<i>b</i>	<i>S.E.</i>	<i>b</i>	<i>S.E.</i>	<i>b</i>	<i>S.E.</i>	<i>b</i>	<i>S.E.</i>
<b>Constant</b>	.635*	.055	.622*	.049	.617*	.052	.619*	.033	.616*	.051
<b>Father family experiences</b>			-.097*	.059	-.105*	.037	-.108*	.031	-.102*	.034
<b>Mother family experiences</b>			-.127	.045	-.087*	.042	-.089*	.039	-.086*	.033
<b>Year</b>										
1991					.021	.071	.017	.047	.019	.047
1992					.046	.072	.037	.048	.039	.048
<b>Parental supervision and punishment</b>										
Father					-.033**	.091	-.053**	.088	-.051**	.089
Mother					-.043**	.122	-.024**	.108	-.026**	.105
<b>Parenting beliefs</b>										
Father					-.044*	.086	-.049*	.081	-.047*	.091
Mother					-.035*	.103	-.042*	.078	-.051*	.082
<b>Family problem-solving skills</b>										
Father					-.012	.061	-.022*	.056	-.024*	.068
Mother					-.023	.127	-.029	.117	-.035	.099
<b>Parental social life</b>										
Father					.019	.033	.033	.028	.029	.031
Mother					.011	.041	.031	.033	.042	.037
<b>Family finances</b>										
Father					-.034	.031	-.065	.022	-.069	.027
Mother					-.022	.091	-.051	.083	-.052	.094
<b>Parental health conditions</b>										
Father					-.055	.074	-.076	.058	-.068	.066
Mother					-.079	.032	-.081	.029	-.087	.037
<b>Rho</b>	.643									

Notes: *S.E.* = standard error; \*  $p < .05$ ; \*\*  $p < .01$

Notably, when changing from a single cross-sectional (Year 1992) to panel data sets, I found that mothers' subjective family experiences that were originally not significant in Model 2 have become significant and have a negative impact on the target children's delinquent involvement. The shift of

mothers' subjectivity variable in the significance from Model 2 to Model 3 is attributed to the repressing effect of mothers' individual heterogeneity in delinquency. When pooling the three cross-sectional data sets, Model 3 could wash out the confounding influence on the relationship between mothers'

subjectivity and their children's delinquency. In contrast, the effect of fathers' subjective experiences still holds significance on delinquency with a negative direction. Model 3 reports the pooled cross-sectional model of three years' observations using the estimation of ordinary least squares (OLS). One important concern about running the pooled cross-sectional model is the problem of non-independence of the three observations in each child, which violates the standard regression principle of independence and identity of the error term, so I used robust standard errors adjusting for clustering when running Model 3. Compared with the estimates in Model 2, estimates of fathers' subjective experiences and mothers' subjective experiences have relatively lower standard errors. The standard errors of fathers' subjective experiences and mothers' subjective experiences in Model 2 are, respectively, 0.059 and 0.045, whereas those of Model 3 are 0.037 and 0.042. Although the subjective family experiences of both fathers and mothers are significant predictors of delinquency, this model may not produce convincing results in that it still fails to adequately deal with the unmeasured differences among the target children and thus estimates likely suffer from omitted variable bias.

Model 4 and Model 5 in Table 2 control for the unobserved heterogeneity among the target children and address the clustering problem within each individual by using fixed effects model and random effects model. Indeed, the results did not change dramatically from the pooled OLS model. In Model 4 and Model 5, I obtained slightly reduced estimates of my two focal variables, and the standard errors are smaller compared with the pooled OLS method. Specifically, when fathers' enjoyable family experiences increase 1 unit, there will be an about 0.1-unit reduction in the likelihood of delinquent involvement. A 1-unit increase in mothers' enjoyable family experiences will contribute to an about 0.09-unit decline in delinquency. In terms of the effect size, the fathers' subjective experiences are greater than those of the mothers; that is, fathers and mothers differ in the role of their subjectivity about family life on delinquency. When fathers enjoy more satisfaction and have more enjoyment of raising their children, the likelihood of their children's delinquent involvement will be reduced. Mothers' subjective experiences achieve a similar effect, but the influence is relatively less strong than fathers'. Overall, this finding corroborated my expectation that parents' subjective experiences are significant predictors of delinquency.

In addition to the impact of parental subjective family experiences, the focal concern of this study, I found other control variables have constant significant effects on delinquency, including parental supervision and punishment and beliefs and values about

parenting. The results are consistent with previous literature holding that parental control reduces the likelihood of delinquency. Also, it was reported that the stronger the parents' beliefs and values about parenting practices, the less there is delinquent involvement of the target children, as expected. As parents highly value their parenting process, they are more likely to provide the positive quality of parenting practices that are evidenced constantly to have a reduction on delinquency. Additionally, there are some surprising findings. In both Model 4 and Model 5, fathers' problem-solving skills are a significant predictor of adolescent delinquency, whereas mothers' are not. The relationship between fathers' problem-solving skills and delinquency is negative, suggesting that the fathers' strong problem-solving skills will diminish the child's involvement in delinquency. This is possible when fathers are more likely to view the child's delinquency as problematic and part of the family problem, and thus are motivated to endeavor to solve this problem. Notably, however, parental social life, parental financial resources, and their health conditions are not significant predictors of adolescent delinquency.

## Discussion and Conclusion

The extant study about the family and delinquency is fraught with theoretical debates and inconsistent and somewhat contradictory findings. For example, the evidence of the extent to which the family affects delinquency is equivocal. Although the vast majority of research indicates that family processes have an impact on delinquency, there is still other literature indicating that familial effect is rather minimal compared with other social sources, such as peer associations, neighborhood effects, and a subculture of violence (Thornberry, Lizotte, Krohn, Farnworth, & Jang, 1991). Meanwhile, the mechanism by which families affect adolescents' pathways to delinquency is subject to debate. Some literature suggests that parents will have direct effects on delinquency by exercising control or forming attachment with children, both of which will prevent children from delinquent involvement (Wright, Cullen, & Miller, 2001). Other literature shows that family is the moderator or mediator through which neighborhood conditions and deviant peer affiliations work to affect delinquency. Therefore, the understanding of the relationship between the family and delinquency is inconsistent and contestable.

In this study, using the longitudinal data from the Iowa Youth and Families Project (IYFP), I re-examined the relationship between the family and delinquency by overcoming two shortcomings identified in previous research concerning the effect of

families on delinquency. The first is that traditional research design on the impact of family on delinquency drew largely upon cross sectional data sets, which cannot adequately address the unmeasured heterogeneity among adolescents and thus bias the estimate of the effect of family on delinquency. The conclusion drawn from that body of literature is easily attacked by low self-control theorists of crime who posit that criminal behavior is the outcome of individual low self-control, a durable adolescent characteristic distinguishing delinquents from non-delinquents (Burt, Sweeten, & Simons, 2014). Hence, lack of considerations about, and inadequacy of appropriately addressing, the unobserved individual heterogeneity that is related to delinquency could render the observed relationship of family and delinquency spurious.

Second, with a large focus on family structural characteristics, traditional research of the familial effect on delinquency nearly neglects the subjective dimension of parenting process and family life that is posited to be a significant predictor of adolescent delinquency. The working mechanism through which parental subjectivity affects delinquency can be understood from control and learning theories of crime and delinquency that serve as theoretical rationales for testing the effect of parental family experiences on delinquency (Hawkins & Weis, 1985). When parents have enjoyable and promising experiences of navigating family life, they are more likely to form strong bonds with their children that prevent children from engaging in delinquent involvement. Also, parents with a higher degree of satisfaction with their family life will be less likely to use violent methods to solve familial conflicts, through which children could learn those definitions favorable to violence in the family process. Parents who enjoy and hold the commitment to their familial life would act to affect delinquency that is commonly believed to go against sustainable and auspicious family life. In sum, in order to overcome the discussed theoretical and methodological pitfalls existing in the study of family and delinquency, this study employed longitudinal design and analytical techniques to test the effect of parental subjectivity in family life on delinquency with the hypothesized statement that parents' increased satisfaction experienced in their family life will be associated with a decreased level of their children's delinquency over time. In what follows, I summarize the key findings from this study and then discuss their implications for theory about the impact of the family on delinquency, policy efforts to prevent delinquency, and research limitations and future directions for the research of the familial effect on delinquency.

This study yielded several important findings about the relationship between family and

delinquency. First, as a critical, meaningful socialization site for children, the family does account for some variation in adolescent delinquency, albeit a small effect; that is, results suggest that the family plays a part in making juvenile delinquency. The denial of the familial effect on delinquency may be challenged and confronted by the results of this analysis. The discussion of why the effect size of family is fairly small in this analysis is beyond the scope of this study (as discussed earlier, the family effect may compete against other social sources of delinquency, such as deviant peer influence, community disorganization, and a subculture of violence), but the results show that family at least is an important factor contributing to delinquency. The observed significant impact of family on delinquency suggests that future research on delinquency should not overlook the familial resource of adolescent delinquent behavior and that a model of delinquency will suffer misspecification without incorporation of family characteristics into the equation. This finding also adds supportive evidence to the argument that family has been a robust, consistent predictor of adolescent violent behavior (see, e.g., Shihadeh & Steffensmeier, 1994).

Second, moving beyond the objective dimension of family processes that have been evidenced to show their effects on delinquency, my analysis demonstrates that subjective feelings of parents about their family life have an influence on the likelihood of adolescent delinquency over time. Prior research on family and delinquency has focused largely on various family characteristics, such as family structure, socioeconomic status, absence or existence of family control, and modes of parenting, which, I argue, are objective dimensions of the family process that adolescents have experienced. Nevertheless, little attention has been paid to the effect of parental emotional life in family on delinquency. Research has suggested that emotions have a contagious effect among frequently interacting family members, and individuals living in a negative emotional environment for a long time are more likely to have anti-social propensities (Gump & Kulik, 1997; Hatfield, Cacioppo, & Rapson, 1994). Following this logic and assuming that the family is a crucial site where adolescents have their majority of social life, I posit that parental emotional experiences about their family life play a role in shaping their children's delinquency, and the higher degree of their satisfaction about family is associated with a reduced possibility of their children's engagement in delinquent acts. My analysis supports this hypothesis. I found that both fathers' family experiences and mothers' are negatively associated with the likelihood of their children's delinquency. When parents have a higher degree of

satisfaction with their family life, their children have less probability to engage in delinquent acts over time. This result can be understood further in theoretical perspectives of control and learning. When parents have a positive view of their family and children and enjoy a high degree of satisfaction about their family life, they are more likely to intimately connect, establish, and maintain effective bonds with their children, thus serving as a form of social control to prevent their children's delinquency. Meanwhile, children who live a more pleasurable family life and have positive interactions with their parents may have a reduced likelihood of the association with definitions favorable to crime and delinquency, the learning experience of violent methods to resolve interpersonal conflicts, and the development of an anti-social predisposition. In addition, a high level of parental satisfaction and ease with their family life and children may embody a degree of family cohesion and solidarity that contributes to the prevention of family disruption and the well-functioning of the family, which has consistently been demonstrated as a robust protective factor of delinquency. Hence, the result suggests that parental positive subjectivity about family life may serve as a shield against their children's delinquency.

Third, due to separate measures of father's and mother's subjectivity about family life, it has been observed from the results throughout all models that the effect of fathers' subjective experiences of family life on generating delinquency is slightly larger than that of mothers', and fathers' subjectivity holds more weight than mothers' in affecting their children's delinquency. This finding is consistent with the increased recognition by developmental psychologists that paternal emotions play a large part on a wide range of children's behaviors (for a review, see Lamb, 1997). The interpretation of that finding entails considerations of the gender relationship in the family setting (Carlson, 2006). Nevertheless, because of limited information about parents' gender attitudes and relations in family in the data set, it is difficult to provide a reasonable explication of why the impact of fathers' subjectivity is stronger in influencing delinquency than mothers'. This pattern emerges perhaps because in the family of a patriarchal structure fathers hold more power than mothers in managing familial affairs and controlling and monitoring their children's behavior, through which fathers' subjectivity about family life exhibits a larger effect on delinquency than mothers' (Hadjar, Baier, Boehnke, & Hagan, 2007; Hagan, Gillis, & Simpson, 1990). It is also possible that in two-parent families, fathers with high degree of satisfaction with their family life are more willing to spend time with their children and convey positive attitudes and messages to their

children, thus reducing the possibility of their children's association with delinquent definitions (Lamb & Lewis, 2004).

The finding of the impact of parental subjectivity on their children's delinquency, especially the larger effect of fathers' experiences compared with mothers', contributes to theory development in criminological research and advances our understanding of the relationship between gender and crime. This finding suggests that the familial effect may not lie in the family structural characteristics but, more importantly, in how parents interpret their family life and children's behaviors and then react to their children's various behaviors. The control and learning theories of crime that are discussed in the study of the family and delinquency can be expanded when they consider and elaborate how parents' interpretation of their family life and interaction with their children are linked to how they exercise their parental control against delinquent behaviors and facilitate their children's associations with definitions of conformity. Further, the observed difference between paternal subjectivity about family life and maternal experiences shows that the gender effect on crime does not merely come from children's gender but also gender relationships and arrangements as well as subjective experiences in parents (Morash & Chesney-Lind, 1991).

Research findings derived from this study have some implications for future policy and programs on delinquency prevention and intervention. The findings of this study underscore the importance of the family in juvenile delinquency. Although recent years of criminological research has vastly examined the neighborhood effect and deviant peer influence on pathways to crime and delinquency, it should not be downplayed that the familial effect matters, particularly the observed impact of parental experiences and subjectivity in family life in this study. One direct policy implication of these findings is to call for the efforts to make investment in maintaining the integration and well-being of the family and improving family life experiences that have been demonstrated to prevent and reduce juvenile delinquency. The fairly straightforward policy suggestion is to enhance parental experiences and emotions about their family life by adding more confidence and satisfaction to parents' family life. Policies and programs that are designed to enhance parental satisfaction and ease with their family life and children should be formulated and implemented based upon sources of the variation in parental subjectivity about family life. The family does not exist in a social vacuum, as it has been intertwined with other contextual factors such as parents' routine activities, community and family socioeconomic characteristics, and cultural environments (Hay, Fortson, Hollist,

Altheimer, & Schaible, 2006). For example, family economic condition is a determinant of parents' satisfaction about their family life (Conger, Ge, Elder, Lorenz, & Simons, 1994). Parents of poor families have to work hard to support their families and usually live under economic pressure and marital conflict, thereby enjoying a lower level of positivity about family life (Conger, Conger, & Elder, 1997). Thus, policy efforts to improve parental experiences of family life would be more effective if they can be sensitive to various sources of parental subjectivity and background factors within which the family is embedded. In sum, while there is substantial evidence suggesting that parenting training programs and family policies reduce delinquency (Menting, de Castro, & Matthys, 2013; Piquero, Farrington, Welsh, Tremblay, & Jennings, 2009), future prevention and intervention of delinquency should give some weight to the enhancement of parents' positive family experiences.

This study has produced some important findings and provides policy implications for delinquency prevention. However, although the use of longitudinal design and analytical techniques have improved the precision of the estimate of the familial effect on delinquency, it should be acknowledged that there are some limitations in the current analysis, which future research can overcome in order to advance the understanding of the family-crime nexus, particularly the effect of subjective dimensions of family life on delinquency. First, the study was limited in some ways by restrictions inherently in secondary data analysis. The data were collected mainly from rural households in a Mid-west state. The crime landscape in urban areas is quite different from that in rural places, so there is a possible discount in the generality of the findings across geographic sites. As rural social life is associated with more close and frequent interactions among residents, the effect of emotional bonds in the countryside may be stronger than that in cities. It can be possible that the family effect can be drastically diminished or even disappear in the urban area because research has indicated that urban neighborhood social structure and processes consistently predict crime and delinquency (Sampson, 1997). As this study did not consider the community context within which the family is embedded, it is unclear about the extent to which parental subjectivity about family life competes against the community characteristics as the contributor of delinquency. Although this study underscores the position of the family on the generation of delinquency, it does not necessarily exclude or reject the neighborhood effect on adolescent pathways to delinquency. Also, without denying the importance of the context or contingency, I suggest future researchers of the family and crime

consider the racial and ethnic differences in the impact of parental family experiences on delinquency. Despite the implication for some gender differences in the familial effect on delinquency, this study did not consider the racial and ethnic patterns associated with this effect due to the lack of demographic information of research subjects (Smith & Krohn, 1995). For addressing this negligence, future research is needed to test racial and ethnic disparities in this effect and unearth what factors and mechanisms, if any, generate the differences. Moreover, to some extent, this data set suffers the problem of out-datedness, which may be subject to the critique that the findings coming from this data set may not illuminate the social fact of family and delinquency today. Indeed, despite this limitation, this study has played a pioneering role in introducing a new research avenue to the study of family and delinquency by proving the potential of parental subjectivity about family life to influence delinquency. Although this factor has been slimly discussed in literature, it has not systematically been examined in the study of the etiology of delinquency and the context within which this effect operates or varies. Thus, future researchers should gather more recent longitudinal data to replicate this study and test the generalizability of the effect of parental family experiences on delinquency in other contexts (Knoester & Haynie, 2005).

Second, there was a lack of consideration of the potential reciprocal effect between parental family experiences and delinquency in this study (Rebellion, Manasse, Gundy, & Cohn, 2014; Thornberry, 1987). The target child involvement in delinquency may, in turn, affect parental subjective family experiences (Coplan, Reichel, & Rowan, 2009). Research has documented the vicious cycle between delinquent children and their frustrated and violent parents (Meldrum, Young, Hay, & Flexon, 2012). It is highly possible that knowing about their children's delinquency may decrease parental satisfaction about family life and children because delinquent behaviors are disreputable deeds and may bring parents a sense of shame. The failure to disentangle the mutual effect between parental subjectivity and delinquency may undermine the validity of my claim for the causal effect of parental family experiences on delinquency. To bolster confidence in causal inference of the impact of parental subjectivity on delinquency, future researchers should be attentive to the scenario of reverse causation between parental positivity about family life and their children's participation in delinquency. This problem could be better addressed when researchers take advantage of longitudinal data sets and employ more sophisticated analytical techniques for establishing the relationship, such as the instrumental variable approach.

Third, this study has focused on establishing the association between the parental family experiences and their children's delinquency using more sophisticated research design and methods that boost the confidence in the finding. Yet, I have not closely examined the specific causal mechanisms and processes through which parental subjectivity about family life affects delinquency. One possible explanation for this operating relationship is that parents' quality family experiences reduce delinquency by forming effective emotional bonds with children and encouraging children's prosocial behavior. Because the data set does not contain this measure of parental control, I was unable to test this working mechanism. Future researchers should attempt to collect data to test the possible social control processes that link parental subjectivity about family life and children's behavior. Further, qualitative research, together with knowledge of social psychology of interactions, could provide some insights into the process at work linking these two variables. Future researchers could conduct in-depth interviews by asking detailed questions about parents' experiences of their family life, their emotional life with children, and perceptions of their children's delinquency. Such qualitative evidence could help clarify the nuanced process and mechanisms connecting parental family experiences and delinquency. Identifying the mechanisms would also have implications for delinquency prevention and intervention efforts in the family setting. Therefore, it is imperative to conduct qualitative research to make sense of the process and mechanism linking parental subjectivity about family life and delinquency when a full understanding of the familial effect on delinquency is needed.

In sum, despite the limitations discussed above, this study has taken the first step in exploring the impact of parents' subjectivity about their family life and children on the risk of their children's delinquency, therefore providing insights to the theoretical and policy discussions about the role of family on delinquency. Moving beyond the traditional focus on objective dimension of family life and the prevalent use of cross-sectional design to examine the familial effect on delinquency, this study has established the relationship between parental subjectivity about family life and delinquency using longitudinal data and analytical techniques. When parents enjoy a higher degree of satisfaction and ease with their family process and interactions with children, their children exhibit a reduced risk of participation in delinquent behavior over time. Based on this research finding, future delinquency prevention, attention, and efforts should be directed at the functioning of the family and investment in

improving parental family life experiences. Also, building upon and extending the extant theoretical perspectives of the family and crime, future researchers of the family and delinquency should consider uncovering and testing the mechanism and process through which parental subjectivity about family life affects the risk of their children's delinquency.

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**Appendix. Descriptions of Variables in The Study, Iowa Youth and Families Project**

Variables	Description
<i>Dependent variable</i>	
Delinquency index	<p>Target children were asked to self-report the following 22 behaviors during the past 12 months from 1 (never) to 5 (Six or more times):</p> <ol style="list-style-type: none"> <li>1. Stolen money or taken something that did not belong to you</li> <li>2. Beat up someone because you were mad at him/her</li> <li>3. Purposely damaged or destroyed property that did not belong to you</li> <li>4. Attacked or threatened to attack someone with a weapon like a knife, club, or gun</li> <li>5. Used a weapon, force, or strong arm methods to get money or something else you wanted from someone</li> <li>6. Running away from home</li> <li>7. Sneaking into a movie without paying</li> <li>8. Drove a car recklessly</li> <li>9. Drunk and drove</li> <li>10. Smoked or chew tobacco</li> <li>11. Smoked marijuana</li> <li>12. Used some other illegal drug</li> <li>13. Participated in group fights</li> <li>14. Participated in a robbery</li> <li>15. Been paid for having sexual relations with someone</li> <li>16. Set fires with the intention of causing serious damage</li> <li>17. Lied to obtain goods or favors or to avoid obligations</li> <li>18. Skipped school</li> <li>19. Sold cocaine or crack</li> <li>20. Sold hard drugs such as heroin or LSD</li> <li>21. Been loud, rowdy or unruly in a public place (disorderly conduct)</li> <li>22. Taken a vehicle for a ride (drive) without the owner's permission</li> </ol>
<i>Independent variable</i>	
Parental family experiences	<p>Both fathers and mothers were asked to indicate how much they agree or disagree with the following 4 statements during the past 12 months rating in a scale from 1 (Strongly agree) to 5 (Strongly disagree):</p> <ol style="list-style-type: none"> <li>1. Being a parent to the target child has been an enjoyable experience</li> <li>2. I am satisfied with the relationship with my children</li> <li>3. I am happy with things between my children and me</li> <li>4. The experience of raising my children is easy</li> </ol>

*Control variables*

Parental supervision and punishment	<p>Both fathers and mothers were asked to indicate how often they did the following 8 acts during the past 12 months rating in a scale from 1 (Never) to 5 (Always):</p> <ol style="list-style-type: none"> <li>1. How often do you know who the target child is with when he or she is away from home?</li> <li>2. How often do you talk with the target child about what is going on in his or her life?</li> <li>3. How often do you know if he or she came home or was in bed by the set time?</li> <li>4. How often are you too busy or unavailable to do things with the target child?</li> <li>5. When you tell the target child to stop doing something and he or she doesn't stop, how often do you punish him or her?</li> <li>6. How often do you punish the target child for something at one time, and then at other times not punish him or her for the same thing?</li> <li>7. When the target child does something wrong, how often do you ground him or her?</li> <li>8. When punishing the target child, how often do you hit him or her with a belt, paddle, or something else?</li> </ol>
Parenting beliefs	<p>Both fathers and mothers were asked to indicate how they did view about their parenting during the past 12 months rating in a scale from 1 (Strongly disagree) to 5 (Strongly agree):</p> <ol style="list-style-type: none"> <li>1. Is affectionate toward your children</li> <li>2. Acting as a role model for your children</li> <li>3. Spends time doing things with your children</li> <li>4. Lets your children know she is proud of the good things they do</li> <li>5. Lets your children do too many things they shouldn't do</li> <li>6. Is clear about what she expects the children to do</li> <li>7. Listens to what your children have to say</li> <li>8. Agrees with you about how children should be raised</li> <li>9. Helps your children understand the consequences of their behavior</li> <li>10. Encourages your children to be responsible in the things they do</li> </ol>
Family problem-solving skills	<p>Both fathers and mothers were asked to indicate how they solved problems faced during the past 12 months rating in a scale from 1 (Strongly disagree) to 5 (Strongly agree):</p> <ol style="list-style-type: none"> <li>1. I was able to immediately come up with solutions to problems of my family and children</li> <li>2. I was confident that I can mobilize resources and networks to solve my family problems</li> <li>3. I was satisfactory about the solutions to problems faced by my family and children</li> <li>4. I took active actions to participate in solutions to problems of my family and children</li> </ol>

Parental social life	Both fathers and mothers were asked to indicate how often they did the following 5 acts during the past 12 months rating in a scale from 1 (Never) to 5 (Always):
	<ol style="list-style-type: none"> <li>1. Other than my wife [partner] or children, there are several people that I trust to help solve my problems</li> <li>2. My friends really care about me</li> <li>3. I feel like I'm not always included by my circle of friends</li> <li>4. I have time to hang out with my good friends and enjoy the friendship</li> <li>5. My friends appreciate me</li> </ol>
Family finances	Both fathers and mothers were asked to indicate how they did feel about their financial conditions during the past 12 months rating in a scale from 1 (Strongly disagree) to 5 (Strongly agree):
	<ol style="list-style-type: none"> <li>1. My family [I] has enough money to afford the kind of home we [I] would like to have</li> <li>2. We [I] have enough money to afford the kind of clothing we [I] should have</li> <li>3. We [I] have enough money to afford the kind of furniture or household equipment we [I] should have</li> <li>4. We [I] have enough money to afford the kind of car we [I] need</li> <li>5. We [I] have enough money to afford the kind of food we [I] should have</li> <li>6. My family has [I have] enough money to afford the kind of leisure and recreational activities we [I] want to participate in</li> <li>7. Our [My] income never seems to catch up with our [my] expenses</li> </ol>
Parental health conditions	Both fathers and mothers were asked to indicate how they did feel about their health conditions during the past 12 months rating in a scale from 1 (Seriously poor) to 5 (Very healthy):
	<ol style="list-style-type: none"> <li>1. How much did you feel about your physical health condition?</li> <li>2. How much did you feel about your mental health condition?</li> </ol>

#### ENDNOTES

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- <sup>1</sup> Some may argue that this data set is too old to be applicable today, but it is particularly suitable and valuable for this research project because it is a longitudinal design and well documents and measures the familial experience and the subjectivity of both mothers and fathers. I acknowledge and discuss this data limitation in the Discussion and Conclusion section.
  - <sup>2</sup> It is appropriate to address the confounding influence of adolescents' self-control on their delinquency by incorporating the measure of self-control into the model as a control variable if the data set contains this information. Here, assuming the self-control of adolescents is a stable variable over the observed period of time, my analysis using fixed effects model is improved to test the impact of parental subjectivity about family life on delinquency by properly addressing the confounder of adolescents' self-control.
  - <sup>3</sup> For the differences between fixed effects modeling and random effects modeling, *see* Allison (2005) and Phillips & Greenberg (2008).