

The Effects of Parenting and Religiosity on Deviance in Slovene Adolescents

by

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Abstract

The current investigation studied the relations between positive parenting (parental warmth and monitoring), adolescent religiosity, low self-control, and deviance among Slovenian adolescents ($N = 816$). The study sought to test whether low self-control mediated the link between parental warmth and monitoring, adolescent religiosity, and deviance; it also explored how family structure moderated these relationships. The first hypothesis explored the relationships within the model among both family types combined. Based on regression analyses, positive parenting was negatively associated with adolescent deviance. In addition, low self-control was positively related to deviance. Adolescent religiosity was negatively related to deviance as expected, but was not significant. Contrary to expectations for the mediation model parental warmth, monitoring, and adolescent religiosity did not have a significant effect on low self-control. Because the direct effects of these predictor variables on low self-control were not significant, they did not meet the requirements for mediation testing. The second hypothesis utilized a multi-group model test in AMOS to evaluate the moderation model comparing single parent versus two parent families. No differences were found between the two family types within the model. In conclusion, these findings confirm the link between low self-control and deviance, but also bring to light the possibility of contextual differences in religiosity's influence on adolescent self-control and deviance in different cultures.

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Chapter 1: Introduction

The current study examines the relationships between parenting and religiosity (as a social control agent) and adolescent deviance, as mediated by low self-control, in a cultural developmental context, Slovenia, that is characterized by comparatively high levels of religious beliefs on the European continent. In many ways, the study re-examines the controversy surrounding findings by Hirschi and Stark (1969) almost half a century ago of null effects by religion, which were later tempered by Stark (1996) as well as a number of other researchers who did find support for buffering effect by religion (Baier & Wright, 2001; Barton et al., 2014; McCullough & Willoughby, 2009). The study also examines the extent to which these hypothesized links are moderated by family structure, namely two-parent versus single parent families.

According to the Organization for Economic Cooperation and Development family database 12.5 percent of households in Slovenia were single parent families in 2010. Of these single parent families, 87 percent were single mothers and 14 percent were single fathers. Evidence suggests that “adolescents in married, two parent families generally fare better than children in... single-mother, cohabitating stepfather, and married stepfather families” (Manning & Lamb, 2003, p. 890). Family structure has been linked to adolescent behavioral outcomes including: Substance use (Flewelling & Bauman, 1990; Hoffman & Johnson, 1998), deviance (Apel & Kaukinen, 2008; Dunifon & Kowaleski-Jones, 2002), problem behaviors including teen pregnancy (Carlson & Corcoran, 2001; Dunifon & Kowaleski-Jones, 2002; McLanahan & Sandefur, 1994), as well as low levels of self-control (Buker, 2011; Perrone, Sullivan, Pratt, & Margaryan, 2004; Vaughn, DeLisi, Beaver, & Wright, 2009). Family structure has also been associated with deviance through various pathways including parental socialization processes

(Amato, 1987; Conger et al., 1991; Hoffmann, 1995), economic strain (Hoffmann & Johnson, 1998), residential mobility (Astone & McLanahan, 1991), and a lack of parental support and monitoring of adolescents (Amato, 1987; Dunifon & Kowaleski-Jones, 2002; Hoffmann, 1995; Johnson, Su, Gerstein, Shin, & Hoffmann, 1995; Pettit, Laird, Dodge, Bates, & Criss, 2001).

A significant portion of individuals who exhibit externalizing problems during childhood and adolescence demonstrate persistent life-course conduct problems including further criminal and delinquent behaviors that persist into adulthood (Moffitt, 1993; Moffitt, Caspi, Harrington, & Milne, 2002). Thus, understanding the relationships among family structure, parenting behaviors, and low self-control, and how these affect deviance is important if we are to learn how to protect youth from engaging in deviant behaviors through family programming and school-based interventions.

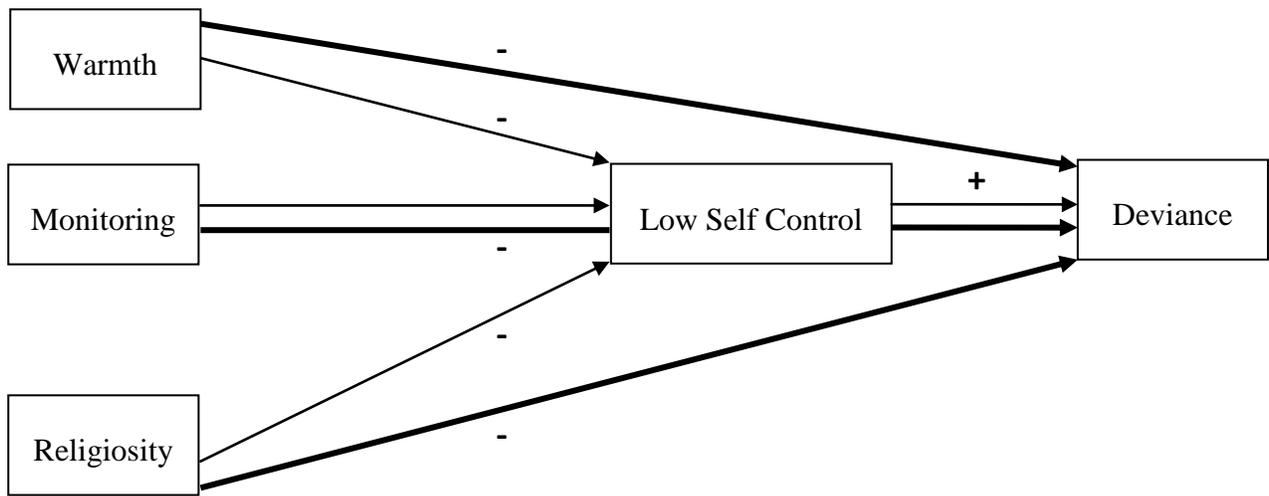
The present study is framed by two control theories. Social control theory suggests that deviance results from weak or broken bonds to society (Hirschi, 1969). It focuses on the etiology of conformity rather than the developmental course of pathology or deviance. This focus emphasizes involvement in conventional activities (including but not limited to religious services and functions) that bind individuals to institutions and reinforce social as well as prosocial norms, thus decreasing the likelihood of involvement in delinquent activities (Hirschi, 1969; Toby, 1957). Social control theory explores the reasons why one does not engage in deviant behaviors instead of why one does choose to engage in deviant behaviors. The second control theory is self-control theory (Gottfredson & Hirschi, 1990) which is based on the concept that the driving forces of behaviors, either positive or negative, are the same. According to theory, people are motivated by self interest, the pursuit of pleasure, and the avoidance of pain (Gottfredson, 2007). These motivations for human behavior are rooted in the attachments formed in early

childhood, which then influence one's regulation of behavior, or self-control (Gottfredson, 2007). This perspective highlights the importance of studying the parent-child relationship when considering self-control in relation to deviant outcomes. Since its debut in 1990, Gottfredson and Hirschi's concept of the role of low self-control has been informing the study of problem behaviors. Over the years, the low self-control/crime relationship has been widely supported (Benda, 2005; Boisvert, Wright, Knopik, & Vaske, 2012; Duckworth, 2011; Duckworth & Kern, 2011; Turner & Piquero, 2002; Vazsonyi & Crosswhite, 2004; Vazsonyi & Huang, 2010), but Gottfredson and Hirschi's assertion that effective parenting is the primary socializing influence in the development of self-control has been questioned by some scholars (Bradley & Corwyn, 2013; Buker, 2011; Jackson & Beaver, 2013). This study sought to examine tenets of social and self-control theory that describe how religiosity, self-control, and positive parenting are associated with adolescent deviance. Using the theoretical framework provided by social and self-control theories, it sought to disentangle some of the influential factors outlined by these theories. The inclusion of social control theory is relevant to the etiology of conformity and the kind of conventional activities (including but not limited to religious services and functions) that foster self-control. Adolescent religiosity was included in this study to allow for an exploration of whether the bonds and prosocial norms provided by one's personal religiosity and the association with a religious community may protect against deviance as well as influence self-control. This study used McCullough and Willoughby's (2009) definition of religiosity as "cognition, affect, and behavior that arises from awareness of, or perceived interaction with, supernatural entities that are presumed to play an important role in human affairs" (p. 71) as well as one's outwards expression of these internalized beliefs in the form of church attendance, reading of religious literature, and prayer. Empirical support for religiosity's influence on self-

control and deviance exists (Barton et al., 2014); but the majority of current studies focus on the relationship between religiosity and problem behavior in the developed countries (mainly in the U.S.). Stark (1996) stressed the important role that the religiosity of a community has on the function of one's personal religiosity in guiding behaviors, yet only a few of studies have tried to examine these relationships in different cultures and contexts (cross-nationally, e.g. Botchkovar, Tittle, & Antonaccio, 2009; Klanjsek, Vazsonyi, & Trejos, 2012; Sisask et al., 2010; Stack & Kposowa, 2008). The aim of the current study was to contribute to the understanding of the possible contextual differences in religiosity's influence on adolescent self-control and deviance in Slovenia.

This study seeks to add to the literature by also examining how adolescent religiosity and parenting function in the development of self-control and the extent to which it buffers against deviance when considered in the same model. In other words, the present study examines potentially protective effects of religiosity and positive parenting (warmth and monitoring) on the adolescent's self-control in explaining deviant behaviors in a sample of single parent and two parent families in Slovenia. Utilizing a mediation model, it is expected that higher rates of parental warmth and monitoring will be negatively associated with adolescent deviant behaviors, mediated by low self-control. Secondly, it is expected that higher rates of adolescent religiosity will be negatively associated with adolescent deviant behaviors. In addition, it is expected that adolescent religiosity will be negatively associated with low self-control. It is expected that low self-control will mediate the relationship between adolescent religiosity and adolescent deviant behavior. Finally, a moderation model will test whether the observed relationships vary as a function of family structure (single parent vs. two parent families).

Figure 1. *Hypothesized Model*



Chapter 2: Literature Review

Social Control Theory

Hirschi's social control theory asserts that deviance results from weak or broken bonds to society (Hirschi, 1969). More specifically, if adolescents enjoy strong social bonds to individuals who are positive influences, deviant behaviors are less likely to occur than for adolescents who do not maintain positive bonds with family members, friends, or their community. Social control theory focuses on the etiology of conformity rather than the developmental course of pathology or deviance. In other words, a focus on what propels a person to follow social norms, rather than a focus on why one violates them. According to Hirschi, social bonds protect individuals from deviance. He proposes four specific elements that make up these social bonds: 1) attachments to conventional individuals and societal norms, which focus one's attention on what others think of them and the value of maintaining those relationships; 2) commitment to conventional goals; 3) involvements in conventional activities; and 4) beliefs in conventional values, which work to inform one's commitments and involvement in conventional activities (Hirschi, 1969).

Commitment and involvement develop through secure attachment and result in the internalization of social norms. *Commitment* can be understood as the degree to which one holds existing values and norms as legitimate and worthy. *Involvement* refers to one's level of interaction with "proper" socializing agents based on the understanding that idle time provides greater time for delinquency. The involvement in conventional activities (including but not limited to religious services and functions) bonds individuals to institutions, reinforces social and prosocial norms, and occupies one's time thus buffering against involvement in delinquent activities (Hirschi, 1969; Toby, 1957). Increasing the levels of attachment to individuals and

commitment to norms are also expected to strengthen beliefs in moral order and decrease the frequency in delinquency (Laundra, Kiger, & Bahr, 2002). Whether administered by a warm parent or other positive socializing agent (e.g., a teacher at school), monitoring a child's behavior, applying consistent discipline, and developing strong parent-child attachments have been found to generally encourage youth to conform to conventional standards (e.g., Demuth & Brown, 2004; Vazsonyi & Huang, 2010).

Empirical Tests of Social Control Theory

Leiber, Mack, and Featherstone (2009) examined the relationships among family structure, family processes, economic factors, and delinquency in a sample of 9,636 seventh to twelfth grade students using Hirschi's social control theory to inform their research. In addition, they examined the importance of maternal attachment as an inhibitor of delinquency independent of family structure. They found overwhelming support for Hirschi's (1969) original interpretation of social control theory, as maternal attachment was consistently an important predictor of delinquency in both types of households (i.e., traditional two parent and single parent). These results added to a growing body of research which suggests that parent-child attachment has a strong influence on delinquency which exceeds the role of family structure and economic circumstances of the household (e.g., Cernkovich & Giordano, 1987; Demuth & Brown, 2004; Mack, Leiber, Featherstone, & Monserud, 2007).

Similarly, Booth, Farrell, and Varano (2008) used social control theory to frame their examination of attachment, community involvement, and school and community environment influence on serious delinquency and risk behaviors. They examined the effects of social bonds on serious delinquency and risky behavior in a sample of 1,366 upper-middle-class high school students. They measured problem behaviors (tobacco use, alcohol and other drug use, risky sex,

excessive dieting and physical activity, and self-harm), parental attachment (a scale including three indicators regarding parental monitoring and limit setting), involvement (involvement in school non-sport activities or groups, sports, and church involvement), school climate, and community involvement. They found that children who reported they were supervised and communicated closely with a parent reported lower levels of delinquency regardless of race. Again, their findings are consistent with similar work which has established that parental monitoring and communication lower risks of delinquent behaviors (Erickson & Crosnoe, 2000; Miller, Esbensen, & Freng, 1999). In addition, they found that each of the involvement measures (school non-sports activities, school sports activities, community non-sports activities, and church involvement) had a significant individual and negative effect on serious delinquency, indicating that they function as a protective factor against serious delinquency.

In a related effort, Barnes, Hoffman, Welte, Farrell, and Dintcheff (2007) examined the etiology of substance use, delinquency, and sexual activity in a sample of 606 adolescents using a combination of social control theory and the routine activity perspective. They examined the effects of adolescent time use on problem behaviors. Barnes et al.'s time use analysis examined theoretical constructs identified by Hirschi, namely conventional activities, which include homework and family activities that today could be labeled *protective factors*. They also utilized routine activity theory which extends social control theory by arguing that the trends in increased crime rates are related to a reallocation of time and activities away from families and increasing time spent with peers, particularly in unsupervised activities (Cohen & Felson, 1979; Felson & Gottfredson, 1984). Through this perspective, deviance is viewed as a byproduct of freedom. Barnes et al. (2007) found support for their hypothesis that time spent on homework is a significant negative predictor of cigarette smoking, illicit drug use, and delinquency. Moreover,

the more time spent doing homework, the fewer problem behaviors (cigarette smoking, illicit drug use, and delinquency), with the exception of heavy/binge drinking and sexual activity. Similarly, as hypothesized, the more time spent in family activities, the less likely youth were to engage in each of the five problem behaviors (Barnes et al., 2007). In addition, their findings illustrate that while some time use variables predicted selected problem behaviors, family time and peer time are the most consistent predictors of all five problem behaviors. Family time and peer time were found to be important aspects of socialization, to the extent that time spent with the family is a protective factor against the development of problem behaviors. Alternatively, they found the more time adolescents spend in unsupervised peer contexts, the more likely they are to develop substance use and other problem behaviors. In conclusion, “consistent with social control theory and routine activity theory, time spent with peers has a highly significant positive relationship to heavy drinking, cigarette smoking, illicit drug use, delinquency and sexual activity as hypothesized” (Barnes et al., 2007, p. 705).

Therefore, when examining deviant behaviors it is useful to consider protective factors consistent with Hirschi’s social control theory. Hirschi’s assertions draw attention to the attachment between parent and child as well as the individual’s commitment to conventional goals. This study seeks to examine both of these primary elements of social control theory by measuring parental warmth as an indicator of the attachment component as well as adolescent religiosity, a form of conventional goals and values, and their protective roles in explaining deviant behaviors.

Hirschi’s social control theory in many ways is the basis for the more recent self-control theory of Gottfredson and Hirschi (1990) and Gottfredson (2007), which also focuses on what produces conformity among youth and in turn reduces the likelihood of deviance. Self-control

theory moves a step further into understanding the influences on one's behaviors from the societal or social to self. Specifically, this theory examines how self-control is developed in children and how it is associated with behavioral outcomes.

Self-Control Theory

In the field of criminology, self-control theory is useful in understanding deviant or criminal behavior. Control theory is built on the fundamental idea that the driving forces of behaviors, either positive or negative, are the same: All people are motivated by self-interest, the pursuit of pleasure, and the avoidance of pain (Gottfredson, 2007). The motivations for human behavior are said to be rooted in the attachments formed in early childhood, which then inform one's regulation of behavior, or self-control. In other words, attachment and socialization early in life fosters an individual's ability to delay gratification and to consider the long-term detrimental consequences of many problem behaviors despite their short-term rewards (Gottfredson, 2007). In turn, according to the General Theory of Crime, low self-control is a key cause of criminality; self-control only develops through effective parenting or other socializing influences.

Gottfredson (2007) succinctly defines the concept of self-control as "the tendency to delay short-term personal gain for long-term personal and collective interests" (p. 537). Moreover, McCullough and Willoughby (2009) note that "people differ in the efficiency with which the mechanisms of governing self-control operate, and in turn people also differ in self-control" (p. 72). Therefore, as crime and problem behaviors jeopardize long-term interests and goals, self-control acts as protective factors against these behaviors. McCullough and Willoughby (2009) elaborate on self-control as a term for situations, "in which people engage in behaviors designed to counteract or override a proponent response (e.g., a behavioral tendency,

an emotion, or a motivation)” (p. 72). Self-control functions to modify one’s response tendencies in a way that promotes goals that are judged to have long-term benefits and coincide with societal norms. For example, an individual may choose to pursue higher education as a means to garner more income over choosing to pursue selling illegal drugs as a more immediate means to earning money. It requires self-control to choose higher education, which will require more time before providing an income than selling drugs, but will provide greater long term benefits, and is in line with societal norms, whereas selling drugs provides a quicker monetary gain but yields potentially serious negative consequences. In other words, “When the process of socialization during the early years of life establishes a tendency to be concerned about others and about the long-term costs of behaviors, this tendency is referred to as self-control” (Gottfredson, 2007, p. 537).

Self-control is generated through socialization (parenting) in four steps, according to Gottfredson (2007) and Gottfredson and Hirschi (1990). Socialization during early childhood establishes the child’s internal control, or self-control, the child’s tendency to be concerned about others’ well being and opinions as well as the understanding of the long term costs of behaviors. By considering Gottfredson’s four steps, one can begin to understand the foundation supporting self-control. The sequence of steps begins with (1) parental affection and the establishment of long term interest in the success of their child, which motivates (2) parental efforts to monitor conduct and appropriately sanction deviance. As a result of positive monitoring and sanctions (3) self-control is developed. This is further nurtured by the child through (4) affection for parents and “by logical extension to other socializing institutions like schools and friends” (Gottfredson, 2007, p. 538). Gottfredson stresses the importance of parental affection for the child as being key in the creation of self-control. Understanding these building blocks in the

development of self-control helps to inform how one's religiosity might foster the strengthening self-control. No indication for the possible effects of religion on the development of self-control was provided in self control theory by Gottfredson and Hirschi. Yet, Buker's (2011) systematic review of 44 studies of self-control calls for future studies to "seriously consider how to operationalize the religion-related variables in criminology framework to clarify how religiosity-self-control-delinquency relation is operating" (p. 274). Gottfredson and Hirschi (1990) did address a variety of socialization pressures including "sanctions" inspired by Bentham. Bentham (1970) describes four general sources of sanction systems that foster the establishment of self-control by imposing consequences for one's actions: physical, political, moral, and religious. Physical sanctions are consequences that inevitably follow a behavior without active interventions by others, for example an individual's use of an intravenous drug can cause a variety of infections or death by accidental overdose. Political sanctions are simply those of criminal law. Moral, or popular, sanctions are the reactions of neighbors and an individual's community to a behavior that can be a great source of pleasure or pain. Bentham described religious sanctions as influencing restraint through the individual's belief in religious sanctions promised in this life or in a life to come. A succinct understanding of deviant behavior and the low level of self-control that propels individuals to engage in deviant behaviors can be understood by the fact that deviant acts are sometimes easier, simpler, faster, more exhilarating, and more certain than other means of attaining goals. "A major characteristic of people with low self-control is a tendency to respond to tangible stimuli in the immediate environment, to have a concrete 'here and now' orientation" (Gottfredson & Hirschi, 1990, p. 89).

Empirical Tests of Self-Control Theory

The validity of self-control theory has been tested and supported many times over. Pratt and Cullen (2000) used a meta-analytical strategy to assess the effect size between measures of self-control and crime/analogous behaviors to determine whether Gottfredson and Hirschi's general theory of crime should continue to be used as an important predictor of criminal behavior. They also sought to determine whether the effect size between self-control and crime across studies is influenced by methodological factors. Their sample included 21 empirical studies, which contained 126 effect size estimates. They found that low self-control is a consistent statistically significant predictor of crime. The behavioral measures of self control have a slightly larger effect size than do the attitudinal measures by .020, .065, and .016 for the unweighted, weighted, and independence-adjusted estimates, respectively (Pratt & Cullen, 2000).

Pratt and Cullen's findings support the idea that while low self-control is a strong predictor of deviant behavior it is unlikely that it is the sole cause of crime. They found that low self-control had a mean effect size of .27, rendering self-control one of the strongest known variables in accounting for criminality. Pratt and Cullen are careful to highlight that, contrary to Gottfredson and Hirschi's claim, variables from social learning theory (like differential association and antisocial values) significantly contributed to the amount of explained variation in crime after self-control was held constant. More specifically, Gottfredson and Hirschi's position that low self-control is the sole cause of crime seems to be overstated given the results of their study (Pratt & Cullen, 2000).

In a similar effort, Buker (2011) employed a narrative literature review method to review 44 studies from 1991 to 2010 to assess the general knowledge across several disciplines of the formation of self-control and the factors that have a significant role in the process of developing self-control. Buker reinforced self-control theory, finding that parenting is a key component to

the formation of self-control, but discovered that the formation of self-control is more complex than the original propositions of Gottfredson and Hirschi's general theory of crime. Studies in the disciplines of psychology, education, and criminology that examined the parenting/self-control relationship found extensive support for the idea that parenting practices are important in the development of self-control, regardless of methodological differences. Twelve parenting practices were found to positively relate to self-control. Parenting practices ranging from parental acceptance-involvement, providing learning resources at home, being demanding, modeling, and closeness and warmth were found to play a role in the development of self-control and to go beyond what Gottfredson and Hirschi proposed (monitoring, recognizing, and discipline). In terms of parental and family socialization's influence on the development of self-control, "there is not much difference between the psychology, education and criminology literature on the formation of self-control. Most studies in these disciplines agreeably state that parenting and family structure is crucial to the process of generating self-control" (Baker, 2011, p. 270).

Benda (2005) sought to determine whether two different measures of low self-control are inversely related to different forms of delinquent behaviors among a random sample of 3,335 high school students. Benda disentangled the specific connections between behavioral and cognitive measures of self-control and certain types of problem behaviors using both Grasmick, Tittle, Bursik, & Arneklev's (1993) cognitive scale and a 9 item risk taking behavior scale to measure self-control. Benda found that the association among measures of self-control and property offenses and crimes against persons remained significant when controlling for predictors such as age, sex, attachment, parental monitoring, and delinquent peers. Both the behavioral measure and Grasmick et al.'s (1993) cognitive scale were significantly related to

alcohol use, drug use, person offenses, and property offenses when simultaneously analyzed with other factors, yet results were mixed in regards to the differences between behavioral and cognitive measures of self-control in predicting deviance.

DeKemp et al. (2009) conducted a three-wave longitudinal study to investigate the relationship between self-control and aggressive and delinquent behaviors of 1,012 early adolescents in the Netherlands, using a self-control scale developed by Tangney, Baumeister, and Boone (2004). They found higher levels of self-control are associated with less antisocial behavior among early adolescents. In addition, they found higher levels of self-control are consistently associated with less aggressive and delinquent behaviors in subsequent six month intervals. Moreover, high levels of self-control appeared to play a role in a lower likelihood of future aggressive and delinquent behavior for boys and girls.

Competing Theories

While social control theory and self-control theory are important to understanding the development of self-control and its relationship to deviance, alternative theories and theoretical constructs exist to address the development deviant behaviors, including rational choice theory and social learning theory.

Rational choice theory is rooted in the idea that one makes a choice to commit a crime using all the same cognitive processes that would be used to engage in a non-criminal behavior. McCarthy (2002) wrote about rational choice theory in terms of deviance and its implications in the field of criminology. McCarthy (2002) describes that more often than not one makes the decision to commit a crime based on a consideration of the costs and benefits of both the crime and non-crime paths. This requires the collection and weighing of information about the costs and benefits of an action before making a decision. Paternoster & Pogarsky (2009) wrote, “To

act rationally means to act in a way that one's choices are harmonious with their preferences. Rational action occurs when persons adopt choice-making processes that best ensure the match between preferences and choices" (p. 107). In this way, rational choice theory relates to the link between one's self-imposed sanctions in relation to the magnitude of their religious commitment (Grasmick et al., 1991). This theory posits that individuals who identify as strongly religious have increased chances of experiencing shame for deviant acts, thus the perceived severity of informal punishment by these religious individuals can influence their reasoning and act as a deterrent to deviant behavior.

Social learning theory incorporates the concepts of behavioral modeling and reinforcement in the explanation of problem behaviors. Social learning theory posits that the same process is involved in both conforming and deviant behaviors. This process is categorized into four mechanisms for learning behavior (Burgess & Akers, 1966; Akers, 1985; 1992; 1994): 1) differential association (direct and indirect interaction with others); 2) differential reinforcement (instrumental learning through rewards and punishments); 3) imitation (observational learning); and 4) cognitive definitions (attitudes) that work either in favor or against a particular behavior. More specifically, differential reinforcement is the concept that behaviors have consequences that effect the reoccurrence of that behavior, in turn both past and anticipated impending rewards or punishments influence behaviors and the probability of the behavior reoccurring. Differential association is the concept that through associations with family, peers, and other groups an individual is influenced by exposure to normative definitions, models, and reinforcement of deviance prior to the development of the deviant behaviors themselves (Akers & Lee, 1996).

While these competing theories have their place in the study of criminology, self-control, religiosity, and parenting's influence on problem behaviors, they do not have the best fit for the current study. First, rational choice theory relates the influence of religiosity on problem behaviors through the social control component of punishments but does not fully address how self-control or parenting are related to problem behaviors. Differential association theory address the role of peer association in deviance; however, peer association is not within the purview of this study. In addition, both theories have garnered criticism for the following reasons. Social learning theory is criticized by Gottfredson and Hirschi, who argue that contrary to the theory, differential association with deviant peers is almost always a consequence rather than a cause of one's own deviant behavior (1990). Moreover, others have criticized social learning theory for a singular or one-way causal effect of peer association on deviance, with a lack of attention to the reciprocal effects of deviance on social learning variables (Stafford & Ekland-Olson, 1982; Strickland, 1982; Thornberry, Lizotte, Krohn, Farnworth, & Jang, 1991).

This study will utilize the theoretical frameworks of social control theory and self-control theory to explore the ways that parenting factors, adolescent religiosity, and adolescent self-control, influence deviant behavioral outcomes among single parent and two parent families. It is necessary to include both theories to encompass both the social bonds described by Hirschi (1969) and the forms of control developed through socialization as suggested by self-control theory (Hirschi & Gottfredson 1990) when considering religiosity's role in the development of self-control and protection against deviance. The forms of control part of self-control theory (internal and external) help to explain the role that religiosity may play in self-control. Similar to Gottfredson's position, one's religiosity can act as an external control influencing one's decisions to engage in problem behaviors. We consider the social bonds that Hirschi outlined to

be embedded in religious practices, although Hirschi himself once wrote that religion is unimportant in protecting against delinquency (Hirschi & Stark, 1969). These conclusions along with Stark's (1996) contradictory findings and conclusions are described in the literature review of main study constructs. This study posits that individuals who become attached to a church and the people they associate with in the church will seek to foster those attachments or bonds by maintaining conventional goals and activities. Furthermore, a commitment to a religious organization and its goals may provide another set of external controls through the fear of the supernatural sanctions or punishment for non-conventional or problem behaviors. Most religious belief systems deplore deviant behavior. All of the aforementioned bonds occur as a result of involvement in a religious community and may have the utility to foster or strengthen an adolescent's self-control, in addition to the primary parental effects on self-control as previously outlined. In addition, the bonds and attachments facilitated by an association with a religious community might also buffer the challenges faced in single parent homes by providing additional supervision and controlled activities for adolescents within the religious community.

Literature Review of Main Study Constructs

The goal of the current study is to examine the extent to which the relationship between parental warmth/monitoring and deviance, adolescent religiosity and deviance, are mediated by self-control. The following section will provide a review of the previous empirical findings regarding parental warmth and monitoring, religiosity, self-control, and deviance. First, an examination of findings related to Gottfredson and Hirschi's self-control theory, and the relationship between parenting, specifically warmth and monitoring, and deviance will be examined. Next, a review of empirical work on warm parenting and self control, followed by a review of work concerning warm parenting and social control. Next, religiosity's influence on

self-control and adolescent deviant behavior is examined. Finally, the literature examining the links among all three areas are considered in relation to family structure.

Parenting and Deviance

A link between parenting characteristics and adolescent deviance has been established (Hoeve et al., 2009; Vazsonyi, 2003). Yet, when attempting to consider the role of parenting in accounting for adolescent delinquency, it's important to move past this simple link toward understanding exactly how parenting might foster the elements that protect adolescents against deviant behaviors, which is addressed specifically by Gottfredson and Hirschi's self-control theory. In their own words, Gottfredson and Hirschi (1990) state that "the connection between social control and self-control could not be more direct than in the case of parental supervision of the child" (p. 99). The link lies within the connection between supervision and delinquency, because there is a strong tendency for the poorly supervised child to engage in deviant behaviors (Forehand, Miller, Durta, & Chance, 1997). Thus, parents who fail to monitor their children, recognize deviant behaviors, and address those behaviors are expected to produce children who exhibit more deviant behavior. Parental warmth and monitoring have empirical support as primary protective elements against adolescents' deviance (Hoeve et al., 2009; Parker & Benson, 2004).

For our purposes, parental monitoring will be defined as how knowledgeable a parent is about their child's behaviors, whereabouts, and companions. Vazsonyi, Hibbert, and Snider, (2003) validated a measure of six separate dimensions of parenting processes, namely closeness, support, monitoring, communication, conflict, and approval. Their study found that each of the six dimensions were predictive of both internalizing and externalizing behaviors in a cross-national sample of adolescents. Similarly to the current study, Parker and Benson (2004)

examined parental support and monitoring as they related to behavior problems during adolescence. They studied 16,749 adolescents from the National Educational Longitudinal Study, including 8,320 males and 8,429 females from the tenth grade from the 1990/1992 assessments and found correlations between parental monitoring and parental support to be positive. Parental support was associated most strongly with higher self-esteem and lower misconduct (Parker & Benson, 2004). They found that high parental support was associated with less substance use and a lower incidence of misconduct. In addition, high parental monitoring was related to higher self-esteem and lower alcohol use. In a related effort, Forehand et al. (1997) found an association between parental monitoring and lower levels of adolescent deviant behaviors in a sample of 907 fourteen to sixteen year olds. Parental warmth and monitoring have been found to be the most influential of all parenting behaviors in protecting against deviance. Hoeve et al. (2009) conducted a meta-analysis of 161 published and unpublished manuscripts that focused on whether an association between parenting and delinquency exists, and to determine what the magnitude of the link. Similarly to the previously outlined studies, they found the strongest links to delinquency were between low levels of parental monitoring, the use of psychological control, and negative aspects of parental support such as rejection and hostility which together, accounted for up to 11% of the variance in delinquency. Support for the predictive strength of parental support and monitoring in adolescent problem behaviors has also been established across cultures. Vazsonyi (2003) found that each family process dimension (closeness, support, and monitoring) was negatively associated with problem behaviors across samples from Hungary, the Netherlands, Switzerland, and the United States. He found the effect of family processes on total deviance ranged from .07 to .13. In sum, research has shown that both parental warmth and monitoring decrease the likelihood of adolescent deviance; in addition,

and consistent with self-control theory, the current study will also consider self-control in understanding deviance. Gottfredson and Hirschi (1990) stress that parental affection is key in the development of self-control. Self-control theory provides a road map to understanding adolescent deviant behaviors. It is expected that adolescent self-control will mediate the relationship between adolescent religiosity and parental warmth and monitoring and adolescent deviance. It is expected that warmth and monitoring will be negatively related to low self-control, and in turn will be negatively associated with deviant behaviors.

Parenting and Self-Control

Based on self-control theory, effective parenting (monitoring, recognition of deviance, and willingness to discipline deviance) should be positively related to self-control. Hay (2001) studied a (non-representative and non-random) sample of 197 adolescents from an urban area and used measures of parental monitoring and discipline (also used to also create an authoritative parenting score), low self-control, and delinquency. Consistent with self-control theory, Hay found that a combined measure of parental monitoring and discipline was negatively related to low self-control. Hay also found that with the addition of other parenting constructs (parental acceptance-involvement, psychological autonomy, use of fair discipline, and use of non-physical discipline), additional unique variance was explained in self-control. In a related effort, Vazsonyi and Belliston (2007) found that the combined direct and indirect effects of parental support and monitoring in addition to a measure of low self-control explained more than 25% of the variance in deviance. Vazsonyi (2003) found that self-control contributed to delinquent behavior above and beyond the influence of parenting in a sample of over 6,900 middle to late adolescents from Hungary, the Netherlands, Switzerland, and the United States (see also Vazsonyi, Pickering, Junger, & Hessing, 2001). These studies establish parental support and

monitoring link to self-control and work to explain a great deal of variance in deviance.

Furthermore, positive parenting efforts have continued to be found influential in fostering self-control and protecting against deviance even when combined with other contributing variables.

Pratt, Turner, and Piquero (2004) used longitudinal data to examine parental socialization and self-control in a sample of 463 ten year olds. Their measures included maternal supervision, maternal monitoring, adverse neighborhood conditions, and maternal reports of children's self-control. They found poor parental supervision was associated with lower self-control; however, higher levels of parental monitoring/discipline also were associated with lower self-control, contrary to Gottfredson and Hirschi's predictions (Pratt, Turner, & Piquero, 2004). This seemingly contradictory finding suggests that both extremely low and extremely high levels of parental monitoring/supervision/discipline can foster low self-control. Their findings could represent the detriments of a lack of parenting (monitoring/supervision/discipline) and an extreme amount of parenting (overbearing or authoritarian style parenting) which could cause rebellion and disillusionment in adolescents resulting in lower self-control.

Vazsonyi and Huang (2010) studied a sample of 1,155 children from preschool (4 ½ years old) into fifth grade (10 ½ years old) over a 6-year period from the National Institute of Child Health and Human Development (NICHD) Early Child Care Research Network Study of Early Child Care (2001) to assesses how deviance co-evolves with parent-child relationship quality and self-control over time. They used measures of parent-child relationship quality (15-item short form of the Child-Parent Relationship Scale), three original subscales (warmth/security, anger/dependence, and anxiety/insecurity), self-control (maternal report of the Social Skills Rating System), and deviance (The Child Behavior Checklist). They found the self-control construct was stable over their six year study period. Secondly, they found that

children's self-control increased in a positive developmental trajectory over the same time period. Moreover, they discovered that an effectively positive parent-child relationship at four and a half years old accounted for a moderate amount of variance of the self-control score. Thus, their findings indicate that positive parenting (supporting socialization) may explain the variations in measures of self-control when children enter preschool (Vazsonyi & Huang, 2010). In summary, Vazsonyi and Huang found that the quality of parent-child relationship was positively associated with the development of self-control and negatively associated with the development of deviance.

Perrone et al. (2004) studied parental efficacy, self-control, and delinquency using data from a nationally representative stratified random sample from the National Longitudinal Study of Adolescent Health (Add Health). Utilizing the first wave of data ($N = 13,536$), they set out to examine whether parental efficacy is a predictor of children's levels of self-control and whether self-control mediates the relationship between parental efficacy and delinquency. They used measures of delinquency (including lifetime use of cigarettes, alcohol, and marijuana), self-control (informed by the six dimensions of self-control described by Gottfredson & Hirschi, 1990), and parental efficacy (four items assessing mother's attachment, effectiveness in recognizing and responding to their child's behaviors). They found parental efficacy was a significant predictor of self-control maintaining the strongest relationship with self-control ($\beta = -.26$). Moreover, when considered together, parental efficacy and self-control remain statistically significant and independently related to delinquency ($\beta = -.101$, $\beta = .253$, respectively). However, their initial analysis revealed the parental efficacy-delinquency relationship to be statistically significant ($p < .001$); yet, when the final model included the measure of self-control, the magnitude drops from Model 1 to Model 4 ($\beta = -.152$, $\beta = -.101$, respectively). In

conclusion, they found that at most, self-control only partially mediates the relationship between parental efficacy and delinquency.

Parenting and Social Control

Pratt, Turner, and Piquero (2004) propose that the development of self-control is important to the role of collective socialization or, in other words, community level social control in terms of neighborhood conditions. The collective socialization model focuses on the importance of how collective monitoring, supervising, and role modeling within a community, influence children's development within a neighborhood, particularly their levels of self-control (Morenoff, Sampson, & Raudenbush, 2001; Sampson, Morenoff, & Earls, 1999; Sampson, Raudenbush, & Earls, 1997). Pratt et al. (2004) found that parental supervision and neighborhood conditions predicted self-control. In addition they found that associations between adverse neighborhood conditions and less parental supervision varied by race. Interestingly, religiosity's role in the life of parents and their children could function as form of collective socialization. Gottfredson & Hirschi also conjectured that "socialization pressures" imposed by parents and caretakers could account for the variation among children in the degree to which they manifest self-control (Gottfredson & Hirschi, 1990). The authors avoided discussions about pre-existing individual differences because of their position that effective socialization can occur independently of initial levels of self-control. Specifically, they explained, "Effective socialization, however, is always possible whatever the configuration of individual traits" (Gottfredson & Hirschi, 1990, p. 96). In effect, they acknowledge initial individual differences, perhaps including predispositions, but chose to focus on the effects of positive socialization processes (as noted by Vazsonyi & Huang, 2010) in determining an individual's level of self-control.

Tying together the support for positive parenting's influence on the development of self-control and religiosity's influence in promoting self-control through collective socialization illustrates the full picture of how the current study conceptualizes how self-control might mediate the relationships between positive parenting (parental warmth/monitoring), adolescent religiosity, and deviant behaviors. It is expected that higher levels of adolescent religiosity will be negatively associated with adolescent deviant behavior, and that adolescent religiosity will be negatively associated with adolescent low self-control. Specifically, we are interested in if adolescent religiosity will have a negative effect on deviance and to test if self-control mediates the relationship. It is expected that a negative relationship between adolescent religiosity and deviant behaviors will differ by family structure, that perhaps a stronger negative relationship will emerge between adolescent religiosity and deviance for adolescents from single parent families versus two parent families, thus compensating for any low or missing positive parenting from single parents. Positive parenting might be related to social control elements provided by religiosity's influence on the family and the community to which the child and parents are bonded or adolescent religiosity could be a reflection of a collective socialization influence on the adolescent filling in the gaps for single parents (e.g. supervision, monitoring, support within the religious community). The current study has two main goals, namely to examine the link between religiosity and deviance in different family structures as well as examine the link between religiosity and self-control (religiosity's implied influence on the development of self-control). In the following section, the second link between religiosity and self-control is addressed.

Religiosity and Self-Control

Self-control is rooted in secure attachments and warm parent-adolescent relationships; in turn, these buffer youth from engaging in deviant behaviors. Could religiosity promote attachment and warm parenting, and, if so, do they contribute to the development of self-control? McCullough and Willoughby (2009) reviewed twelve studies that examined the associations between religiosity and self-control and found that in 11 of 12 studies, significant positive associations were found (correlation coefficients or standardized regression coefficients ranged from .21 to .38). Moreover, studies provide evidence that religious families in the United States tend to raise children and adolescents with higher levels of self-control (Brody & Flor, 1998; Brody, Stoneman, & Flor, 1996; Lindner-Gunnoe et al., 1999).

McCullough and Willoughby (2009) also propose that religion affects health, well-being, and social behavior through self-regulation and self-control. This proposition is informed by research that found religiousness to be associated with a variety of health-promoting behaviors (Hill, Burdette, Ellison, & Musick, 2006; Hill & McCullough, 2008; Merrill & Thygeson, 2001; Russell, Bullock, & Corenblum, 1977; Wallace & Forman, 1998) as well as a discovery of a negative association between self-control and criminality (Hirschi, 2004; Pratt & Cullen, 2000; Vazsonyi et al., 2001). McCullough and Willoughby identified studies addressing the proposition that religiousness's association with measures of health, well-being, and social behavior (including deviance or delinquency) were related to the influence that being religious has on the development of self-regulation or self-control (Desmond et al., 2008; Walker et al., 2007; Welch et al., 2006; Wills et al., 2003). McCullough and Willoughby discovered that in four of the five data sets, self-control appeared to partially mediate the associations between religiousness and the measures of problem behaviors or deviance. Similarly, Desmond et al. (2008) focused on religiosity's possible indirect effect on delinquency through self-control.

They found self-control partially mediated the links between religiousness (the mean of self-rated importance of religion, frequency of church attendance, and frequency of prayer) and measures of alcohol use and marijuana use based on the Add Health data set.

Buker (2011) employed a narrative literature review method across several disciplines to review 44 studies from 1991 to 2010 to assess the general knowledge of the formation of self-control and the factors that have a significant role in the process of creating self-control. He found that among studies concentrating on the relationship between the indicators of religiousness and levels of self-control, general religiosity is positively related to the level of self-control, meaning the higher the religiosity the higher the self-control of a person (Desmond, Ulmer, & Bader, 2008; Walker et al., 2007; Welch, Tittle, & Grasmick, 2006). Moreover, Walker et al. (2007) found that self-control mediates the religiosity-deviance relationship. However, Welch et al. (2006) and Desmond et al. (2008) concluded that both religiosity and self-control have independent effects on delinquent involvements.

In addition, Buker (2011) highlights that Gottfredson and Hirschi included schooling as having the potential to affect the formation of self-control secondary to parenting. Buker's review indicates that school socialization does in fact aid the formation of self-control through fair and balanced monitoring/disciplining (Sartori, Bauske, & Lunenburge, 2000), teachers' closeness and support, and class robustness and manageability (Bennett, Elliot, & Peters, 2005; Sartori et al., 2000). Turner, Piquero, and Pratt (2005), specifically, found that higher school socialization was related to higher levels of self-control among youth that came from neighborhoods with fewer problems (e.g. high neighborhood socialization scores, a reflection of greater problems associated with informal social control, crime, and disorder). The example of the influence of school socialization is noted as there are perhaps parallels between the school

setting and one's involvement with a religious community that could similarly foster self-control through positive socialization.

Religiosity and Deviance

The previous sections have outlined how warm parenting, parental monitoring, and self-control protect against deviance. This section will examine findings on adolescent personal religiosity's protective influences against deviance. It is important to begin this section by discussing Hirschi and Stark's (1969) Hellfire and Delinquency which concluded that religious practice (church attendance) and beliefs had little or no impact on deviance. Hirschi's theory of social control informs this study and describes social bonds that we interpret to possibly include elements of religious involvement, beliefs, and community. Hirschi and Stark (1969) had a hypothesis similar to this study when they tests their hellfire and delinquency theory rooted in social control theory. They posited that church attendance would: Promote the internalization of moral values (the belief that everyone deserves fair treatment, encourage the acceptance of the validity of legal authority (respect for the law and those who enforce it), and foster a belief in the existence of a supernatural world with punishments for violations in the physical world. Hirschi and Stark (1969) found that students who attended church were just as likely as students who do not attend to agree that "To get ahead, you have to do some things that are not right. (And) Suckers deserve to be taken advantage of" (p.207). They concluded, with these two items, that church attendance does not affect acceptance of the moral values assumed to buffer against deviance. They found that students who attended church frequently were slightly more likely than those who less frequently attended church to express respect for the police and were slightly less likely to agree that breaking the law is okay if you don't get caught, concluding that church attendance had some weak effect on positive attitudes of obeying the law. In addition, church

attendance was strongly related to the students' beliefs in a life beyond death and the existence of the devil. Finally, they found that acceptance of moral values and respect for the law (and law enforcement) were related to deviance, but they discovered that a belief in the devil and a life after death was unrelated to deviance. Hirschi and Stark concluded that, "The beliefs and attitudes the church has been traditionally assumed to affect are in fact strongly related to delinquency, but, alas for the church, it does not influence these beliefs and attitudes" (p. 210). Stark (1996) later changed his position.

Since then, the hellfire hypothesis has been supported by other studies of religion's significant effect on deterrence of crime and problem behaviors (Burkett & White, 1974; Cochran & Akers, 1989; Grasmick, Bursik, & Cochran, 1991; Higgins, Albrecht, & Albrecht, 1977; Powell, 1997; Stark, 1996). The weak or non-existent relationships between Hirschi and Stark's (1969) religiosity, attitudes about morality, and deviance measures have been called into question. The attitudinal measures were implied to indicate one's motivations regarding engaging in deviance but self-control was not clearly measured or addressed. In addition, religiosity extends beyond simple church attendance (measures of prayer, reading of religious literature, and the priority of religion in one's life were not included) and self-control is a complex construct which requires a comparably concentrated measure, two issues that Hirschi and Stark's (1969) original study suffer from. This study has similar assumptions about religiosity but more specific measures and a detailed road map of religiosity's path through self-control to buffer against deviance.

Stark (1996) revisited the hellfire hypothesis to address the contradictory findings following the results of his study with Hirschi (Hirschi & Stark, 1969). Stark (1996) states, "Hirschi and I misled everyone about there being no relationship between religion and

delinquency” (p. 172), but stresses that this misrepresentation lead to a body of research and heated discussion that brought us to a greater understanding of religiosity and delinquency. Stark (1969) posits religion is a social structure, or “group property”, defined as a proportion of people in a specific ecological setting who are actively religious, that together (the combination of individual religiosity and the religiosity of the group collectively) ratify norms and produce conformity by creating their own social environment. “The idea here is that religion is empowered to produce conformity to the norms only as it is sustained through interaction and is accepted by the majority as a valid basis for actions” (p. 164). That is to say, the context of one’s religiosity can either bolster or hinder the strength of one’s personal religiosity, “The effect of the religiousness of some individuals will be smothered by group indifference to religion” (p. 164). Stark found that based on the religious “climate” of major U.S. regions church attendance and getting in trouble with the law were correlated according to the regional fluctuations of overall church membership in a compelling fashion. The higher the church attendance in one’s region, the more likely their church attendance was related to less trouble with the law. Our study draws on these assertions: First, that religiosity does in fact have an influence on deviance, and second, that the religious community can be a powerful form of social control within the lives of adolescents buffering against deviance (Bartkowski, Xu, & Levin, 2008; McCullough & Willoughby, 2009).

Moreover, Baier and Wright (2001) completed a meta-analysis which examined the magnitude and direction of the effect of religion on crime and what accounted for the differences of effect. They reviewed 60 articles that were published between 1969 and 1998, with 66% of the studies being based on high school samples. They concluded that “religious behaviors and

beliefs exert a significant, moderate deterrent effect on individuals' criminal behavior" (p. 13, mean effect size: $r = -.12$ ($SD = .09$)).

More specific to how religiosity might function as a protective mechanism against deviance, Schreck, Burek, and Clark-Miller (2007) analyzed two waves of data from the Add Health study, a nationally representative sample of adolescents between grades 7 and 12. They hypothesized that religiosity would be associated with adolescent's stronger bonds with their parents and school, less delinquency, and friends who are less deviant. They utilized measures of violent victimization, religiosity, peer deviance, parental attachment, binge drinking, school alienation, and self-reported delinquency (five items measured at Wave 1: participation in graffiti, vandalism, involvement in a serious physical fight, injuring someone in a fight, and participation in a group fight). They found that religiosity was significantly associated with less binge-drinking, stronger parental attachment, peers who were less deviant, as well as less involvement in delinquency and alienation from school.

Similarly, Walker, Ainette, Wills, and Mendoza (2007) studied samples of middle school ($n = 1,273$) and high school students ($n = 812$) to examine related questions. The studies included measures of parental support and conflict, academic and social competence, religious involvement, self-esteem and perceived control, self-control, problem solving, tolerance for deviance, risk taking tendency, negative life experiences, substance use motives and attitudes, friends' substance abuse, and adolescent substance use. The most frequently used substance was alcohol, tobacco was second, and marijuana was used the least, while a general increase in use was observed with age. The results of the analysis indicated that the personal aspect of religiosity (importance, value, spirituality, and forgiveness) had a significant and unique relationship with adolescent substance use, whereas the behavioral aspects of religiosity

(belonging and attendance) did not. They created the two factor model to distinguish between the two aspects of religiosity (personal and behavioral) by combining two behavioral indices into one factor and the four personal measures of religiosity into another. Because the behavioral factor did not have a significant unique relation to substance use, analyses for mediation effects focused on the personality religiosity factor. Mediation testing indicated inverse indirect effects of personal religiosity on substance use, mediated through more healthy self-control and less tolerance for deviance. Religiosity was correlated with fewer deviant peer affiliations and non-endorsement of coping motives for substance use but did not have direct effects on these variables. Moreover, the results were closely replicated across two samples, indicating that the processes involved in the relation of religiosity to substance use are similar in early and middle adolescence.

Wallace, Yamaguchi, Bachman, O'Malley, Schulenberg, and Johnston (2007) used a large nationally representative sample of American public high schools (16,595 twelfth grade students) in the Monitoring the Future (MTF) and Youth, Education, and Society (YES) studies to examine the relationships between individual- and school-level religiosity and adolescents' use of tobacco, alcohol, and marijuana. More specifically, their research questions sought to ascertain whether there is a statistically significant inverse relationship between individual-level religiosity and individual level alcohol, tobacco, and marijuana use across contexts, as well as whether the relationship that exists between individual-level substance use and individual level religiosity differs according to the religiosity of the context or community in which the individual is nested. They utilized measures of substance abuse (frequency of current cigarette use, prevalence of binge drinking, prevalence of marijuana use) and individual-level religiosity (service attendance and importance of religion in one's life). Consistent with previous findings,

they found that individual-level religiosity was negatively associated with individual level substance use. In terms of context, Wallace et al. (2007) concluded that individual-level religiosity helps to deter adolescent substance use. Moreover, as the level of religiosity in a school increases, adolescents' frequency of cigarette use, binge drinking, and marijuana use decreases. Furthermore, the religiosity of the school influences students' substance use, over and above their individual religiosity's influence on marijuana use. The results indicated that individual-level substance use varied by the religiosity of the context, for example they found that highly religious adolescents in highly religious contexts were less likely to engage in binge drinking or marijuana use than their equally religious peers embedded in a less religious context.

Sinha, Cnaan, and Gelles (2007) studied adolescent risk behaviors and religion in a national random sample of 2,004 teens (ages 11-18). Through the use of telephone interviews, they measured the role of religion in the lives of teenagers (adolescent report of the importance of religion in their life, parental reports of religious service attendance of the adolescent, and parental reports of adolescents' participation in organized religious programs) and risk behaviors (frequency of smoking, alcohol use, truancy, vandalism, sexual activity, marijuana use, feelings of depression, interpersonal violence, suicidal ideation, and carrying a weapon). The analysis revealed that of the ten risk behaviors, religiosity variables were significantly associated with reduced risk behaviors including smoking, alcohol use, truancy, sexual activity, marijuana use, and depression after controlling for family background variables and self-esteem.

To consider these relationships more carefully, the authors examined the association between each of the three religion measures and specific risk behaviors. Within their analysis only two risk behaviors were not significantly associated with the perceived importance of religion, namely vandalism and carrying a weapon. The remaining eight risk behaviors were

significantly negatively associated with the perceived importance of religion, confirming that those who perceived religion as important engaged in fewer risk behaviors. Attendance in organized worship, as reported by a parent or guardian, was significantly negatively associated with five risk behaviors: smoking, alcohol, truancy, sexual activity, and marijuana use. Finally, Sinha et al. (2007) found that participation in a religious youth group was significantly negatively associated with six risk behaviors: smoking, alcohol, truancy, sexual activity, marijuana use, and feelings of depression.

Family Structure

Overwhelmingly, empirical work reports a negative correlation between religiosity and measures of adolescent problem behaviors and deviance. However, there are certainly other contributing demographic or background factors to account for deviant outcomes in adolescence, including family structure. Family structure has been linked adolescent problem behavioral outcomes including: Substance use (Flewelling & Bauman, 1990; Hoffman & Johnson, 1998), deviance (Dunifon & Kowaleski-Jones, 2002), problem behaviors including teen pregnancy (Carlson & Corcoran, 2001; Dunifon & Kowaleski-Jones, 2002; McLanahan & Sandefur, 1994), as well as self-control (Buker, 2011; Perrone et al., 2004; Vaughn et al., 2009).

The literature on family structure provides several hypotheses for explaining the effects of family structure on adolescent problem behaviors including: economic strain, parent-child socialization, and stress (Hoffman & Johnson, 1998). The economic strain on single parent families can contribute to, or result from, the disruption of family. This loss of income can make it more difficult for parents to monetarily support activities that benefit adolescents (McLanahan & Sandefur, 1994; Thomson, Hanson, & McLanahan, 1994). In addition, being the sole financial support of the family can limit the time available to monitor adolescents and make providing

parental support more difficult (Amato, 1987; Conger et al., 1991; Hoffmann, 1995; Johnson et al., 1995). Parent-child socialization and stress are also factors naturally embedded within economic strain. A lack of economic resources and family disruption are often conceptualized as stressful events for adolescents and stressful events in the lives of adolescents are related significantly to adolescent drug use (Conger et al., 1991; Hoffmann & Johnson, 1998; Hoffmann & Su, 1997). Moreover, research suggests that single parents make fewer demands, exert weaker control (Amato, 1987; Astone & McLanahan, 1991; Thomson, McLanahan, & Curtin, 1992), and display lower levels of parental control and warmth (Dunifon & Kowaleski-Jones, 2002) with their children than married parents such that “[a] mediational role for parenting could occur when linking family structure to child outcomes” (Dunifon & Kowaleski-Jones, 2002, p. 1251). This study will focus on single mother families because the composition of the sample (the number of single father families was too small to include). The use of maternal parenting scores was essential in order to represent parenting constructs for both single and two parent families. In addition, previous work has found that adolescent reports of maternal and paternal parenting scores are highly similar and often not significantly different (e.g., Claes, Lacourse, Ercolani, Pierro, Leone, & Presaghi, 2005).

Self-control theory informs our understanding of how the challenges noted above facing single parent families could directly influence adolescents’ self-control and deviance. Social control theory informs our interest in how adolescent religiosity could have a protective effect, or act as a buffer, by fostering self-control and discouraging deviance amidst the challenges of living in a single parent home. Not only could adolescent religiosity foster prosocial norms for adolescents, an adolescent’s involvement in a religious community could provide additional support and monitoring outside of the single parent home. Huesmann, Dubow, and Boxer (2010)

describe an avenue for religiosity's positive influence on child development through the support provided by religious establishments to help parents whose children are exhibiting problem behaviors to successfully deal with those problems. Smith (2003) also suggested that the religious community is a form of social capital that can support parental values and can provide cross generational relationships for the child and provides a dense network of people who know the child and the child's parents allowing for quick communication lines for information about any negative behaviors.

The positive influence of religiosity on adolescent outcomes has been reviewed in previous sections, and the next section will aim to explore how these positive influences might align with the special needs of single parent families. However, only a handful of studies have examined whether religiosity would be "most important for high-risk youth because religious support provides functional communities amid dysfunction" (Regnerus & Elder, 2003, p. 635). Regnerus & Elder found that children in grades 7-12 under conditions of higher poverty had a stronger relation between frequency of church attendance and "staying on track academically". Fowler, Ahmed, Tompsett, Jozefowicz-Simbeni and Toro (2008) studied a sample of 300 low income emerging adults and found public religious affiliation buffered the relation between exposure to community violence and substance use among African Americans. In this study, we were interested in exploring the postulated buffering effects that adolescent religiosity might have on low self-control and deviance among single parent versus two parent families. In other words, we are interested in whether religiosity can play a larger positive role for adolescents from single parent families, buffering against low self-control and deviance in a more substantial way versus adolescents from two parent families. The following model and study hypotheses illustrate the main research questions of the current investigation, namely does self-control

mediate the effects of warm parenting, parental monitoring, and religiosity on adolescent deviance and do these observed relationships differ by family structure?

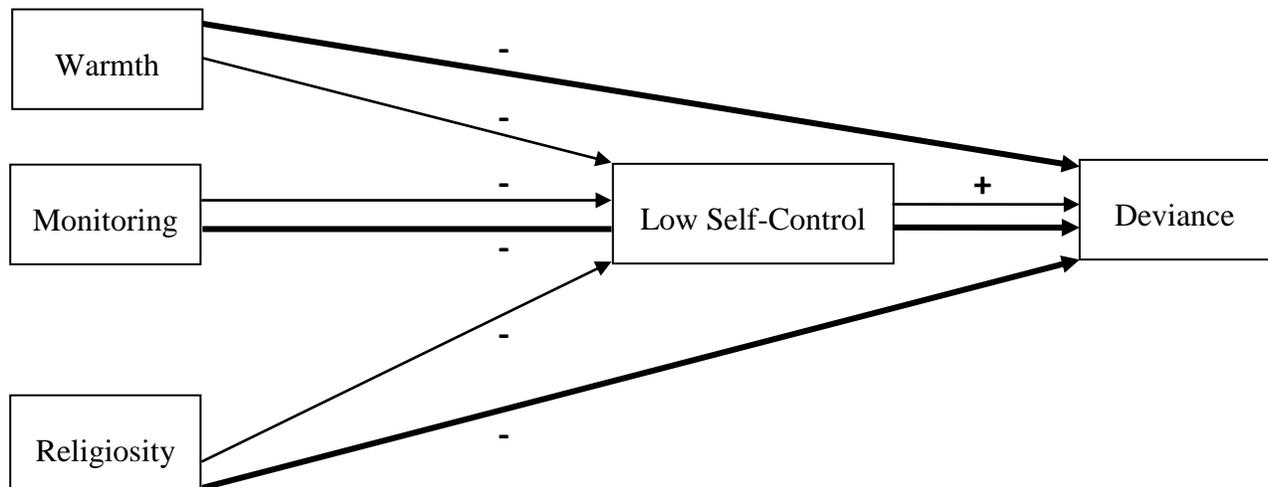
Chapter 3: Research Questions and Hypotheses

Hypothesis 1:

The current study examined the extent to which the relationships between parental warmth/monitoring and deviant behaviors as well as between adolescent religiosity and deviant behaviors were mediated by low self-control.

- a.) It was expected that positive parenting, as measured by parental warmth and monitoring would be negatively associated with adolescent deviant behaviors.
- b.) Similarly, it was expected that adolescent religiosity would be negatively associated with adolescent deviant behaviors.
- c.) It was expected that low self-control would mediate the relationships between positive parenting constructs (parental warmth and monitoring) and adolescent deviant behaviors.
- d.) It was expected that low self-control would mediate the relationship between adolescent religiosity and adolescent deviant behaviors.

Figure 1. *Hypothesized Model*



Hypothesis 2:

A second hypothesis focused on the extent to which observed relationships in the model would vary when considering two parent versus single parent families. Thus, to what extent does family structure moderate the hypothesized relationships?

- a.) It was expected that positive parenting (parental warmth and monitoring) would be negatively associated with adolescent deviant behaviors mediated by low self-control in both the two parent and single parent families.
- b.) It was expected that a stronger or larger negative relationship between adolescent religiosity and deviant behaviors would exist among single parent families in comparison to two parent families, in effect compensating for low or missing positive parenting effects among single parent families in comparison to two parent families.
- c.) It was expected that the mediation effect by low self-control between adolescent religiosity and adolescent deviant behaviors would be larger for youth from single parent families as compared to adolescents from two parent families.

Chapter 4: Methods

Participants

The current study uses data collected from late adolescents in Slovenia. Slovenia is a predominantly Christian country that is located in central Europe. In the most recent Census Catholics represented 57.8 % of the population, “Evangelicals” .8 %, “Other Protestant” .1%, “Orthodox” 2.3%, “Other Christian” .1%, and Islam 2.4% (SURs, 2002). The number of Slovenians that identify as Catholic has declined since WWII, many of Slovenians maintain the traditions and customs of Christian festivals, more than just Christian holidays, as main family holidays (Slovenian Tourist Board, 2013). Data were collected from adolescents in grades 9th through 12th who still lived at home and attended a technical secondary school located in a city in northern Slovenia. The sample was composed of $N = 1,086$ students (male youth: $n = 394$, 35.8%; female youth: $n = 692$, 62.9%). A decision was made to exclude a small number of outliers based on the age variable as these were assumed to be false reports ($n = 25$); this effectively limited the sample to cases reporting an age of 15 to 19 years old ($M = 16.91$) and a final sample size of $N = 816$.

Procedures

Data for this study were collected as part of the International Study of Adolescent Development (ISAD), a multi-national investigation. It was approved by a university International Review Board (IRB) and consisted of a self-report questionnaire that included instructions, a description of the ISAD project, and an anonymity statement. The questionnaires were administered in classrooms by project staff or teachers who were given extensive instructions in order to maintain a standardized protocol across all locations. The questionnaire

was carefully constructed with behavioral measures that could be used cross-culturally without losing nuances or changing meanings. For example, it may have been appropriate to ask Slovene youth about the theft of mopeds, while U.S. adolescents are generally unaware of this mode of transportation. Alternatively, while Americans use checks as a form of payment, most Slovenes have never written a check. The survey was translated from English into Slovene and back-translated by bilingual translators.

Measures

Sex. Participant's sex was assessed with a single question: 'What is your sex' (1) male or (2) female.

Age. Adolescents were asked to indicate their date of birth. Participants age was calculated according to their date of birth in relation to the testing date.

Family Structure. Participants family structure was assessed with a single item. "What is your family structure?" Responses were given as "1 = biological parents," "2 = biological mother only," "3 = biological father only," "4 = mother and step father," "5 = father and step mother," "6 = biological parent and significant other," "7 = other". As the hypothesis indicated the focus of this paper was on the differences between two parents and single parent families. After examining the frequencies of the family structure variable in the data set it was concluded that the number of "biological father only" families was too small to include ($n = 17$) in the analysis for single parent families. The decision was made to include "1 = biological parents" and "2 = biological mother only" for the purpose of comparing these single versus two parent families in the data set.

SES. A standardized composite score based on family income and the primary wage earner's occupation. Family Income (A14): 1="3 million SIT," 2="3 to 6 million SIT," 3="6 to 10.5 million SIT," 4="10.5 to 18 million SIT," 5="more than 18 million SIT." SIT is the Slovenian Tolar which no longer exists, the conversion at the time of data collection, which was just prior to the adoption of the EURO as the currency was approximately 1= "10,350 USD," 2= "10,350 to 20,700 USD," 3= "20,700 to 36,225 USD," 4= "36,225 to 62,100 USD," 5= "more than 62,100 USD." [According to the European Central Bank, On June 27, 2004, the central rate of the Slovenian tolar was set at 1 euro = 239.640 tolar (<http://www.ecb.int/press/pr/date/2004/html/pr040627.en.html>)]. In June of 2004 the EURO 1.21 to one US dollar (was <http://www.x-rates.com/average/?year=2004>). The primary wage earner variable included the following response options: 1= "executive or large business owner," 2 = "professional or small business owner," 3 = "Semi professional or craftsman," 4 = "Clerical staff sales rep artist," 5 = "semiskilled worker or laborer," and 6 = "other." This variable was reverse coded to match the direction of the family income variable. Finally, the two standardized variables were averaged to develop an SES composite score (see the distribution of SES variables and composite scores in Table 1).

Table 1.

Demographics

		% of sample	Total sample mean
Sex	Males (N = 293)	35.9	
	Females (N = 523)	64.1	
Age	Mean age (years)		16.91
Family structure	Two biological parents (N = 690)	82.8	
	Single parents (N = 126)	15.4	
SES*	Composite (N =816)		-.01
	Income (N=767)		2.00
	3 million SIT (N=268)	32.8	
	3 to 6 million SIT (N=317)	38.8	
	6 to 10.5 million SIT (N=121)	14.8	
	10.5 to 18 million SIT (N=38)	4.7	
	More than 18 million SIT (N=23)	2.8	
	Primary wage earner title (N = 789)		3.84
	Other (N =13)	1.6	
	Semiskilled worker or laborer (N =131)	16.1	
	Clerical staff sales rep artist (N= 155)	19.0	
	Semi professional or craftsman (N=230)	28.2	
	Professional or small business owner (N=193)	23.7	
	Executive or large business owner (N=67)	8.2	

(*SES composite scores were the mean of the standardized family income and primary wage earner title variables.)

Deviance Normative Deviance Scale (NDS) : Lifetime deviance was measured by the 55-item Normative Deviance Scale (NDS) developed for the ISAD project (Vazsonyi et al., 2001). The purpose of this scale was to measure adolescent deviance in a manner that would capture norm-violating conduct (norm-violating conduct that is independent of cultural definitions of crime and deviance), as well as in general adolescent populations, and to provide

etiological data. The NDS measures deviance and deviance subscales as trait-like constructs that area assessed by multiple, overlapping items. The NDS includes seven subscales of the NDS (vandalism, alcohol, drugs, school misconduct, general deviance, theft, and assault), as well as a total deviance measure (the mean of all 55-items) ($\alpha = .97$) in this sample; (see Appendix A). Responses for all items in the NDS were given on a 5-point Likert-type scale and identified lifetime frequency of specific behaviors (1 = *never*, 2 = *one time*, 3 = *two to three times*, 4 = *four to six times*, and 5 = *more than six times*). Past research has shown that the total deviance scale was reliable (alphas ranged from .91 to .96, Vazsonyi & Crosswite, 2004; Vazsonyi, Trejos, Young, 2008). Table 2 presents descriptive statistics of the deviance measure.

Positive Parenting. Participants responded to survey question that asked them about their mother and their father separately using the Adolescent Family Process Measure (AFP, Vazsonyi, Hibbert, & Snider, 2003). The small number of “biological father only” cases in the sample ($n = 17$) limited the analysis to the use of “1 = biological parents” and “2 = biological mother only.” For the purpose of comparing single versus two parent families parenting scores, only maternal parenting scores were used. The AFP is a 25-item measure that assesses closeness (6 items), support (4 items, reverse coded; e.g., “My mother sometimes puts me down in front of other people”), monitoring (4 items e.g., “In my free time away from home, my mother knows who I’m with and where I am”), conflict (3 items), communication (5 items: e.g., “How often do you talk to your mother about major personal decisions?”), and peer approval (3 items). The current study focused on two of the subscales, namely maternal closeness and monitoring. These two subscales were used to compute two positive parenting construct scores, monitoring (monitoring subscale) and parental warmth (closeness subscale). The monitoring and closeness subscales of the AFP response were (1) strongly disagree, (2) disagree, (3) neither disagree nor

agree, (4) agree, or (5) strongly agree. The maternal monitoring and closeness subscales were $\alpha = .73$ and $\alpha = .81$, respectively in this sample (see Appendix B). Table 2 presents descriptive statistics of the warmth and monitoring subscales.

Low self-control. The Grasmick et al. (1993) self-control measure consists of 24 items and 6 subscales (impulsivity, simple tasks, risk seeking, physical activities, self-centeredness, and temper). Items were worded in the same manner as in the original measure. However, instead of the 4-point Likert scale, the measure was used with a 5-point Likert scale ranging from (1) *strongly disagree* to (5) *strongly agree*, revised from (1) *strongly disagree*, (2) *disagree somewhat*, (3) *agree somewhat*, (4) *strongly agree* (Vazsonyi et al., 2001). Vazsonyi et al. (2001) dropped two items and found it reliable for the total sample ($\alpha = .92$) and by sex (males, $\alpha = .93$, females, $\alpha = .92$). A decision was made to drop the same two items in the current study; the 22 item low self-control measure was reliable $\alpha = .85$ in this sample (see Appendix C). Table 2 presents descriptive statistics of the low self-control measure.

Religiosity. A 5-item scale was used to assess religiosity; items included frequency of religious service attendance, prayer, reading of religious texts, and the importance of religion. Responses were given on 4 or 5 point likert-type scales. Items were standardized due to different response scales and averaged to produce a religiosity score (see Appendix D). Table 2 presents descriptive statistics of the religiosity measure.

Table 2.

Univariate Statistics for Warmth, Monitoring, Religiosity, Low Self-control, and Deviance

Scales	<i>N</i>	<i>M</i>	Alpha	<i>SD</i>	Skew	Range	Kurtosis
Warmth	816	3.95	.81	.79	-.77	1-5	.28
Monitoring	816	3.68	.73	.91	-.56	1-5	.03
Religiosity	816	0	.78	.73	.59	-.98 – 2.57*	-.03
Low self-control	816	2.92	.85	.53	-.44	1-5	1.68
Deviance	816	1.91	.97	.78	1.04	1-5	.69

* The range for religiosity appears in negative decimals because it has been standardized.

Chapter 5: Results

In an initial step of data analysis, the associations among demographic variables (age, sex, and socioeconomic status (SES)) and the main study constructs were examined (see Table 4). Age, sex, and SES were each significantly associated with most of the main study constructs (warmth, monitoring, and deviance) except with adolescent religiosity and low self-control. Sex was positively associated with both warmth and monitoring and significantly negatively related to deviance. Age was significantly negatively related to warmth and monitoring and significantly positively related to deviance. SES was significantly negatively related to monitoring, significantly positively related to deviance, but unrelated to warmth.

Table 3.

Comparison of Model With and Without Demographic Variables

			Model including Age, Sex, SES, and Family Structure				Hypothesized Model					
			b	β	p	Total Effects	Standard Total Effects	b	β	p	Total Effects	Standard Total Effects
warmth	→	deviance	-.15	-.15	***	-.16	-.16	-.16	-.16	***	-.17	-.17
monitor	→	deviance	-.12	-.13	***	-.12	-.14	-.19	-.22	***	-.19	-.22
religiosity	→	deviance	-.05	-.04	.17	-.05	-.05	-.04	-.04	.21	-.05	-.04
low self-control	→	deviance	.36	.25	***	.36	.25	.37	.25	***	.37	.25
age	→	deviance	.07	.11	***	.07	.11					
sex	→	deviance	-.37	-.24	***	-.37	-.24					
SES	→	deviance	.14	.16	***	.14	.16					
family structure	→	deviance	.01	.01	.22	.01	.01					

(*** Correlation is significant at the 0.001 level.)

Correlational Analyses

Correlations were computed to examine the relationships among the main study constructs, including family structure. As expected, correlations in Table 4 show that warmth, monitoring and religiosity were negatively correlated with low self-control; unexpectedly, these associations were not statistically significant. Also as expected, maternal warmth and monitoring and adolescent religiosity were significantly and negatively related to deviance, while low self-control was significantly and positively related to deviance. Finally, family structure was only significantly related to adolescent religiosity. Religiosity was significantly correlated with family structure, monitoring, and deviance (see Table 4).

Table 4.

Correlations of Main Study Constructs

	1	2	3	4	5	6	7	8
1. Sex								
2. Age	-.02							
3. SES	-.18**	-.02						
4. Family Structure	-.03	.02	-.08*					
5. Warmth	.14**	-.10**	-.01	-.01				
6. Monitoring	.25**	-.15**	-.09**	-.03	.41**			
7. Religiosity	-.02	-.03	-.06	-.11**	.04	.11**		
8. Low Self-Control	-.06	-.05	.02	-.06	-.06	-.05	-.02	
9. Deviance	-.33**	.13**	.21**	-.002	-.27**	-.30**	-.07*	.27**

(* Correlation is significant at the 0.05 level. ** Correlation is significant at the 0.01 level.)

Hypothesis 1:

First, AMOS was used to specify a path model; four demographic variables were added as predictors of deviance in the model and the regression weights among the main study

constructs were compared for differences between the model with and without demographic variables. The path loadings were highly similar, and thus a decision was made to omit demographic variables from the hypothesized model (see Table 3 for model comparison).

Next, a path model was specified to test direct and indirect effects of positive parenting, adolescent religiosity, and low self-control on deviant behaviors. Positive parenting, as measured by maternal warmth and monitoring, was negatively associated with adolescent deviant behaviors (see Table 5). The results indicate that parental warmth had a significant, negative relationship with deviance ($b = -.16$, $\beta = -.16$, $p < .001$). In addition, monitoring had a significant, negative relationship with deviance ($b = -.19$, $\beta = -.22$, $p < .001$). Adolescent religiosity was unrelated to deviant behaviors in the model tested based on the total sample ($b = -.04$, $\beta = -.04$, $p = .22$). Furthermore, neither of the two parenting measures, nor religiosity were significantly associated with low self-control based on the analysis with the total sample (see Table 5). Findings did provide evidence that low self-control was positively associated with deviance ($b = .37$, $\beta = .25$, $p < .001$). Since the direct effects were not significant, the Baron and Kenny (1986) approach for mediation testing could not be utilized, as it requires that the direct effects of the model are significant to test for mediation effects. The relationships between the parenting processes and adolescent deviant behaviors were not mediated by low self-control, as neither was the relationship between adolescent religiosity and adolescent deviant behaviors. A closer look at indirect effects in the model also revealed small but non-significant indirect effects (see Figure 2).

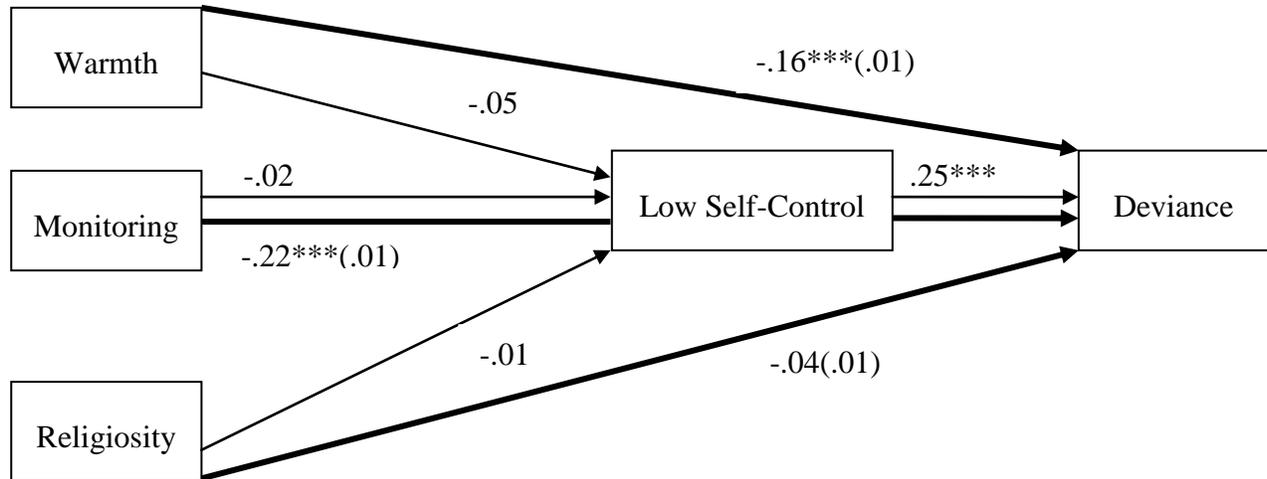
Table 5.

Total Sample Regression Weights

	b	β	S.E.	C.R.	p
Monitoring → low self-control	-.01	-.02	.02	-.62	.54
Warmth → low self-control	-.04	-.05	.03	-1.36	.18
Religiosity → low self-control	-.01	-.01	.03	-.32	.75
Warmth → deviance	-.16	-.16	.03	-4.55	***
Religiosity → deviance	-.04	-.04	.03	-1.26	.21
Low self-control → deviance	.37	.25	.05	7.85	***
Monitoring → deviance	-.19	-.22	.03	-6.24	***

*** Regression weight is significant at the .001 level (two-tailed).

Figure 2. *Direct and indirect effect of total sample(single parent and two parent families)*



Values reflect standardized path coefficients. The coefficients in parentheses represent the indirect relationships between warmth, monitoring, religiosity and deviance. Regression weight is significant at the $p < .001$ ***.

Hypothesis 2

Next, a moderation model was tested using path analysis to examine whether low self-control mediated the relationship between positive parenting and adolescent religiosity on deviant behaviors similarly or differently in two parent versus single parent families. Multi-group model tests in AMOS were used to assess potential similarities or differences in the same links as tested under hypothesis 1. A chi-square difference test was used to determine whether the models were different across the two family types. The chi-squares and degrees of freedom of the unconstrained ($\chi^2(6, N=816) = 168.10$) and fully constrained ($\chi^2(13, N = 816) = 176.90$) models were compared indicating that the models were not different ($\chi^2(7) = 8.81, p = .27$). Although the models were not significantly different, a path by path analysis was completed to be thorough. Thus, each path was constrained individually and compared for significant differences between the two samples; however, none were found (see Tables 7).

The following additional exploratory analyses were completed to further investigate potential similarities or differences. First, the expectation that positive parenting (maternal warmth and monitoring) would be negatively associated with adolescent deviant behaviors in both the two parent and single parent families was confirmed. Therefore maternal warmth and monitoring were significantly negatively related with deviance in the a similar way for both adolescents of two parent and single parent families (see Tables 7) however, low self-control did not mediate these relationships.

An independent sample *t*-test was used to compare the mean religiosity scores of single parent families and two parent families for differences. Since the samples sizes were unequal the *t* value for equal variances not assumed is reported ($t = 3.13, p = .002$), indicating that the mean religiosity scores of adolescents from the two types of families was significantly different.

Interestingly, adolescents from single parent families were significantly less religious (had lower mean religiosity scale scores) than adolescents of two parent families, yet the relationship between adolescent religiosity and deviant behaviors within the model was only significant among single parent families. The multi-group moderation tests revealed the path of adolescent religiosity on deviance was not statistically significant in both family types ($p = .10$). The hypothesis that the relationship between adolescent religiosity and deviant behaviors would be larger or stronger among single parent families in comparison to two parent families was not supported.

Unexpectedly, in posthoc comparisons, mean score comparisons show very few differences between the warmth and monitoring scores between two parent versus single parent families (warmth: $t = -.17, p = .87$, monitoring: $t = .77, p = .44$). The hypothesis that religiosity could compensate for low or missing positive parenting effects among single parent families in comparison to two parent families on deviant behaviors was not supported by the data because no significant differences were found by family structure on measures of warmth and monitoring.

The results described above indicate the varied significance of the direct effects of the predictors on deviance for both single parent and two parent family models. None of the predictors (maternal warmth, monitoring, or adolescent religiosity) were significantly associated with low self-control in either family type (see Table 7). The regression weights did provide evidence that low self-control was positively associated with deviance (single parent: $b = .30, \beta = .25, p < .001$; two parents: $b = .39, \beta = .25, p < .001$). In conclusion, the relationships between parenting processes and adolescent deviant behaviors were not mediated by low self-control in either family type; thus the hypothesis was not supported. The relationship between adolescent

religiosity and adolescent deviant behaviors was not mediated by low self-control in either family type. A closer look at the indirect effect within the model revealed small indirect effects that were non-significant in either family type (See Figure 3 and Table 7).

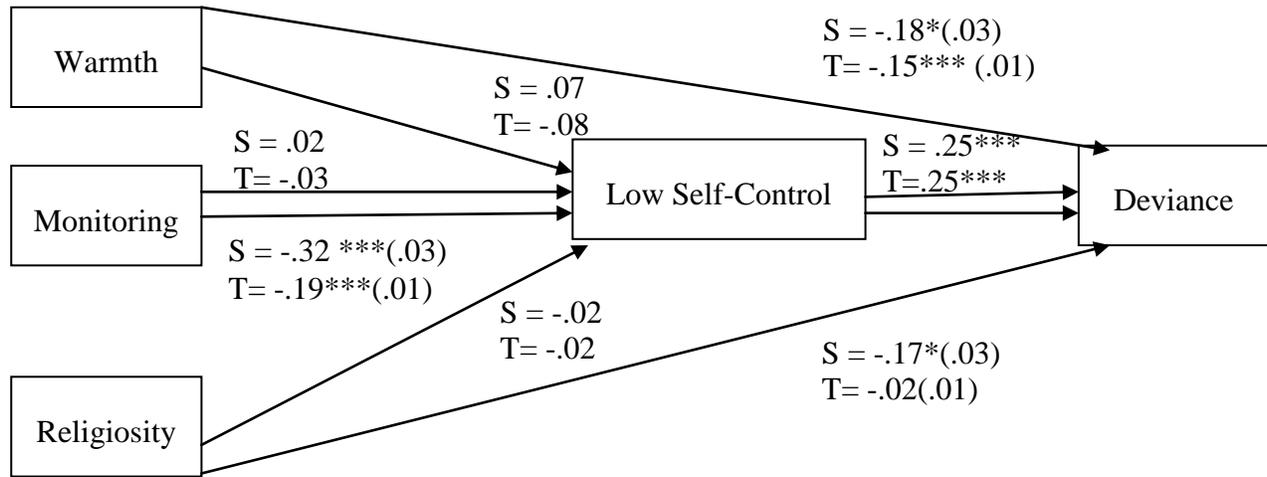
Table 6.

Correlations of Main Study Constructs of Single Parent (bottom left) and Two Parent Families (top right)

	1	2	3	4	5	6	7	8
1. Sex	---	-.03	-.18***	.15***	.27***	-.03	-.07	-.34***
2. Age	.06	---	-.02	-.09*	-.16***	-.02	-.02	.13***
3. SES	-.22*	-.01	---	-.01	-.08*	-.07	.03	.24***
4. Warmth	.09	-.14	-.03	---	.43***	.02	-.09*	-.26***
5. Monitoring	.13	-.13	-.16	.33***	---	.07	-.07	-.28***
6. Religiosity	-.01	-.07	-.08	.14	.29**	---	-.03	.04
7 Low Self-Control	.01	-.17	-.09	.07	.03	-.01	---	.28***
8. Deviance	-.23*	.11	.07	-.30**	-.42***	-.29**	.23*	---

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

Figure 3. Direct and indirect effect of parenting processes and low self-control on deviance



Values reflect standardized path coefficients. The coefficients in parentheses represent the indirect relationships between warmth, monitoring, religiosity and deviance (S = Single parents, T = Two parents). Regression weight is significant at the $p < .05^*$, $p < .001^{***}$.

Table 7.

Two Parents and Single Parent Families Standardized Regression Weight Comparison

		Two parents		Single parents	
		Direct effect	Indirect effect	Direct effect	Indirect effect
Monitoring	→ low self-control	-.03		.02	
Warmth	→ low self-control	-.08		.07	
Religiosity	→ low self-control	-.02		-.02	
Warmth	→ deviance	-.15***	.01	-.18*	.03
Religiosity	→ deviance	-.02	.01	-.17*	-.03
Low self-control	→ deviance	.25***		.25***	
Monitoring	→ deviance	-.19***	.01	-.32***	.03

*Regression weight is significant at the .05 level (two-tailed).*** Regression weight is significant at the .001 level (two-tailed).

Chapter 6: Discussion

Hypothesis 1: The current study examined the extent to which the relationships between parental warmth/monitoring and deviant behaviors as well as between adolescent religiosity and deviant behaviors were mediated by low self-control.

It was expected that positive parenting, as measured by higher rates of parental warmth and monitoring would be negatively associated with adolescent deviant behaviors.

Results from Model 1 indicate that this hypothesis was supported; maternal warmth and monitoring were negatively associated with adolescent deviance. These findings were expected as social control theory and self-control theory framed our expectation that positive parenting practices (indicators of strong social bond to parents with positive influence in deterring deviant behaviors and important components of the socialization process) would be negatively related to adolescent deviance (Hirschi, 1969). These results support previous empirical findings and conceptual work that have found positive parenting processes including warmth and monitoring to be negatively associated with adolescent deviance (Booth et al., 2008; Cernkovich & Giordano, 1987; Demuth & Brown, 2004; Erickson & Crosnoe, 2000; Leiber et al., 2009; Mack et al., 2007; Vazsonyi, 2003). In fact, parental warmth and monitoring have empirical support as primary protective factors against adolescent deviance (Hoeve et al., 2009; Parker & Benson, 2004).

Similarly, it was expected that higher rates of adolescent religiosity would be negatively associated with adolescent deviant behavior. Results from Model 1 indicate that this hypothesis was not supported. The regression weight of adolescent religiosity on adolescent deviance was not significant. This was unexpected because social control theory predicts that the bonds and prosocial norms provided by one's personal religiosity and the association with a

religious community could protect against deviance as well as influence self-control. Religiosity was expected to increase the levels of attachment to conventional individuals and commitment to conventional norms through beliefs in moral order, thereby decreasing the frequency in delinquency (Laundra, Kiger, & Bahr, 2002).

Our findings are different from research that found religiosity to have a protective or buffering effect on adolescent problem behaviors (crime (Baier & Wright, 2001), binge-drinking (Schreck et al., 2007), and substance use (Sinha et al., 2007; Wallace et al., 2007). Perhaps religion plays a different role in adolescent adjustment in Slovenian culture. For example, perhaps a Slovenian adolescent's religiosity doesn't necessarily represent the multifaceted association with a religious community or the bonds and procial norms implied within the hypotheses that protect against deviance. Perhaps the way religious communities function and the personal influence religiosity has in one's life aren't the same between Slovenian culture and the primarily U.S. samples in which relationships were found. In a cross- national study, Klanjsek, Vazsonyi, and Trejos (2012) found that a sample from the Unites States was significantly more religious (both intrinsic and extrinsic) than a Slovenian sample. Using a single measure of religiosity, ("How important is God in your life?" 1 = "not at all important"; 10 = "very important") from the World Value Survey, Klanjsek et al. (2012) found that mean level analyses (ANOVA) of the samples revealed that the Slovenian ($M = 5.02$, $SD = 3.20$) sample was on average significantly ($p < .05$) less religious than the U.S. sample ($M = 8.47$, $SD = 2.45$). Klanjsek et al. (2012) found that the buffering effects of intrinsic religiosity (religiosity that operates as an internal control mechanism) on deviance only existed in the two most religious samples of the study (Bosnia and Herzegovina and the United States). Their findings provide evidence that not every type of religiosity had a buffering effect on deviance, namely religiosity

that is primarily instrumental or social in nature has weak inhibiting effects on deviance. In addition, Stark (1969) explored the contextual influences of the rate of religiosity within a community, finding that the context of one's religiosity can either bolster or hinder the strength of one's personal religiosity. He found that based on the religious "climate" of major U.S. regions church attendance and getting in trouble with the law were correlated according to the regional fluctuations of overall church membership. The higher the church attendance in one's region the more likely their personal church attendance was related to less trouble with the law. More recently, Wallace et al. (2007) used a large nationally representative sample of American public high schools to examine the relationships between individual- and school-level religiosity and substance use. They investigated whether there is a relationship between individual-level religiosity and individual level alcohol, tobacco, and marijuana use across contexts (the religiosity of the context or community in which the individual is nested). They found that as the level of religiosity in a school increases, adolescents' frequency of substance use decreases. The strength of their relationship between individual-level religiosity and individual-level substance use varied depending upon the religiosity of the context. For example, adolescents who were highly religious and embedded in a highly religious community (or context) were less likely to engage in binge drinking or marijuana use than those who are equally religious in less religious contexts. Our findings could be a reflection of the lower rates of religiosity in Slovenia as well as a cultural difference of the function of religion in Slovenian culture. In the end, they are also consistent what Hirschi and Stark (1969) originally proposed that the church does not influence the beliefs and attitudes of its members in the traditional way protecting against deviance.

It was expected that low self-control would mediate the relationship between positive parenting constructs (parental warmth and monitoring) and adolescent deviant

behaviors. Results from Model 1 indicate that this hypothesis was not supported. The direct effects of the predictor variables on low self-control and deviance were not significant, which fail to meet the requirements for mediation testing using the Baron and Kenny (1986) approach with a follow-up Sobel Test. This was unexpected because self-control theory states that self-control is generated through socialization (parenting) (Gottfredson, 2007; Gottfredson & Hirschi, 1990) including parental affection and the establishment of long term interest in the success of their child and parental efforts to monitor conduct and appropriately sanction deviance (Gottfredson, 2007). The role of parenting in the fostering of self-control has been supported in multiple studies utilizing self-control theory framework (Baker, 2011; Hay, 2001; Vazsonyi & Belliston, 2007). In addition, the role of low self-control has long since been established in predicting deviance: Crime (Benda, 2005; Hay, 2001; Pratt & Cullen, 2000; Tittle, Ward, & Grasmick, 2003; Turner & Piquero, 2002; Vazsonyi & Crosswhite, 2004; Vazsonyi et al., 2001; Vazsonyi et al., 2004) and deviance (Perrone et al., 2004; Vazsonyi, 2003; Vazsonyi & Belliston, 2007). Our findings are in contrast with Perrone et al. (2004), who found self-control partially mediated the relationship between parental efficacy and delinquency in a sample from the National Longitudinal Study of Adolescent Health (Add Health).

Perhaps the lack of direct effects of warmth and monitoring on low self-control were a result of the specific way parenting was operationalized. It is possible that other parenting practices could contribute to low self-control and perhaps may function differently in Slovenian culture, like parental acceptance and involvement, parents giving psychological autonomy, parental modeling, or providing learning resources that were not included in our model. In addition, the age of participants could have played a role in the results of our investigation of low self-control, where these links are simply less or not salient during late adolescence as

conceptually predicted during childhood. Hoeve et al. (2009) reported, “The association between general parenting and delinquency was stronger in school age children and early adolescents compared to mid to late adolescents. The parenting-delinquency link may weaken as children mature with the influence of peers or other life events having more impact” (p. 764).

It was expected that low self-control would mediate the relationship between adolescent religiosity and adolescent deviant behaviors. Results from Model 1 indicate that this hypothesis was not supported. The direct effects of the religiosity on low self-control and deviance were not significant, which fails to meet the requirements for mediation testing using the Baron and Kenny (1986) approach and associated Sobel Test. While consistent with Hirschi and Stark’s (1969) original position that religiosity and deviance are unrelated, this was unexpected because the relationship between religiosity and self-control has been supported in similar studies (Barton et al., 2014; Brody et al., 1996; Brody & Flor, 1998; Desmond et al., 2008; Lidner-Gunnoe et al., 1999; McCullough & Willoughby, 2009; Walker et al., 2007; Welch et al., 2006; Wills et al., 2003). Our findings are in contrast to previous studies which found religiosity was mediated or partially mediated by self-control on delinquency, adolescent substance use, or adolescent sexual behavior (Desmond et al., 2008; Walker et al., 2007; Wills et al., 2003). Similar to the relationship differences between religiosity and deviance in Slovenian culture in comparison to the primarily American samples that support our hypotheses discussed previously, it is possible that religiosity’s role in fostering self-control is also different among Slovenian adolescents. Klanjsek et al. (2012) found that both extrinsic (positively related with low self-control) and intrinsic religiosity (negatively related with low self-control) were significant predictors of low self-control for three of the four countries they studied in their cross-national investigation. Perhaps it is not that religiosity and self-control are unrelated in our

sample of adolescents, but that the type of religiosity determines the relationship with low self-control. The religiosity scale used in the current study was not designed to distinguish between intrinsic and extrinsic religiosity but rather assessed an average of one's church attendance, church status, frequency of religious book reading, frequency of prayer, and the degree to which one used their religion in their day to day life.

Hypothesis 2:

To what extent do the observed relationships in the model vary between two parent versus single parent families. Thus, to what extent does family structure moderate the hypothesized relationships (a moderated mediation model)?

It was expected that positive parenting (parental warmth and monitoring) would be negatively associated with adolescent deviant behaviors mediated by low self-control in both the two parent and single parent families. Maternal warmth and monitoring were negatively associated with adolescent deviant behaviors in both family types. Model 2 illustrates the significant regression weights of the relationships between maternal warmth and monitoring and deviant outcomes among single parent and two parent families. Although, the direct effects of the other predictor variables on low self-control and deviance were not significant. They failed to meet the requirements for mediation testing in either single parent or two parent families. This was unexpected because self-control theory states that self-control is generated through socialization (parenting) (Gottfredson, 2007; Gottfredson & Hirschi, 1990). The role of parenting in the fostering of self-control has been supported in multiple studies utilizing self-control theory as framework (Baker, 2011; Hay, 2001; Vazsonyi and Belliston (2007). Our findings are in contrast with similar studies that found self-control partially mediated the relationship between parenting (parental efficacy, closeness, monitoring, and peer approval) and

deviance (delinquency and aggression (e.g. Ozdemir, Vazsonyi, & Cok, 2013; Perrone et al., 2004).

It was expected that a stronger or larger relationship between adolescent religiosity and deviant behaviors would exist among single parent families in comparison to two parent families, in effect compensating for low or missing positive parenting effects among single parent families in comparison to two parent families on deviant behaviors. Results from model 2 indicate that the hypothesis was not supported. Although the relationship between adolescent religiosity and deviance was significant among single parent families, but not significant for two parent families, multi-group moderation tests in AMOS revealed no statistically significant difference in the pathway.

In addition, the positive parenting scores for single parents and two parent families were not significantly different. This was unexpected as previous research has revealed that single parent families often face financial challenges that make finding time to supervise, monitor, and provide support for their adolescents difficult (e.g., Amato, 1987; Conger et al., 1991; Hoffmann, 1995; Johnson et al., 1995) which can result in lower levels of parental control and warmth with their children than married parents (Dunifon & Kowaleski-Jones, 2002). Perhaps our findings are related to the sample or perhaps adolescent religiosity's negative (buffering) effect on deviant outcomes in single parent families occurs independent of maternal warmth and monitoring, like through the adolescent's use of time (Barnes et al., 2007) or supplemental monitoring provided by religious community (Smith, 2003). Barnes et al. (2007) found that the more time adolescents spent in family activities, the less likely youth were to engage in each of the five problem behaviors studied. Their findings illustrate that while some time use variables predicted selected problem behaviors, family time and peer time are the most consistent predictors of problem

behaviors. Perhaps religiosity plays a role in guiding an adolescents use of time: Attending religious functions, youth group activities embedded in conventional norms, and or occupying time that would have been unsupervised otherwise.

Interestingly and unexpectedly, a *t* test comparison of the mean scores of religiosity revealed ($t = 3.13, p = .002$), that adolescents from single parent families were significantly less religious (had lower mean religiosity scale scores) than adolescents of two parent families. Perhaps this is a reflection of the time constraints that single parents face (Astone & McLanahan, 1991) and taking their children to church is difficult given their limited amount of free time together, resulting in lower religiosity scores for adolescents from single parent families. Curiously, the relationship (correlation) between adolescent religiosity and deviant behaviors was significant among single parent families, it was not significant for two parent families. In other words, even though the adolescents of single parents had lower mean religiosity scores, the religiosity they reported was significantly and negatively related to deviance. Despite the fact that adolescents of single parents reported being less religious, it appears that their religiosity did buffer against deviance in a unique way based on simple correlations. However, in the end, the results of path analysis which are a more sophisticated reflection that the relationships between religiosity, deviance, and warmth and monitoring, simply did not support the hypothesis.

It is possible that Slovenian adolescents' religiosity doesn't necessarily represent the multifaceted association with a religious community or the bonds and procial norms implied within the hypotheses. Perhaps the way religious communities function, the personal influence religiosity has in one's life, and different forms of religiosity (intrinsic and extrinsic) do not buffer against deviance in the same way in the Slovenian culture as found in the American culture.

It was expected that the mediation effect by low self-control between adolescent religiosity and adolescent deviant behaviors would be larger or stronger among single parent families compared to two parent families. Results from Model 2 indicate that this hypothesis was not supported. The direct effects of the adolescent religiosity on low self-control and deviance were not significant which failed to meet the requirements for mediation testing using the Baron and Kenny (1986) approach and the Sobel Test among both single parent and two parent families. This was unexpected as both of the theories that frame our study provide some rationale that religiosity could foster self-control and buffers against deviance through self-control. Other studies have found general religiosity is positively related to self-control, meaning the higher the religiosity the higher the self-control of a person (Desmond et al., 2008; Walker et al., 2007; Welch et al., 2006). Moreover, Walker et al. (2007) found that self-control mediates the religiosity-deviance relationship on substance use. However, Welch et al. (2006) and Desmond et al. (2008) concluded that both religiosity and self-control have independent effects (found no mediation) on delinquency.

Perhaps the cross-sectional nature of this study impeded our ability to explore the links between religiosity, low self-control, and deviance. Religiosity could act as an antecedent to positive choices, influences, and outcomes for some adolescents, while other adolescents are compelled to religiosity from the trouble caused by deviant behaviors. This study was unable to consider how religiosity might work over time within the lives of late adolescents. Moreover, as discussed previously, it is possible that religiosity, low self-control, and deviance are not completely unrelated, but that the type of religiosity (intrinsic and extrinsic religiosity), the rate of religiosity of the country, and the culture within which the adolescent is embedded contributed to our results. Although we did not find that low self-control mediated the relationship between

religiosity and deviance (Klanjsek et al., 2012), the study confirmed the link between low self-control and deviance.

Limitations

Although the current study adds to our understanding of the protective effects of religiosity and positive parenting (warmth and monitoring) on the Slovenian late adolescents' low self-control and deviant behaviors in single parent and two parent families, it is not without limitations. The cross-sectional nature of this study precludes any inference about causality. The common method variance of self-report measures used in the current study potentially biases the estimated and increases the likelihood of social desirability in responses. The unique sample used for this study cannot be easily generalized to all Slovene adolescents, nor to youth in other or different cultures. In addition, the self-report surveys were administered in a school setting, thus effectively eliminating youth who dropped out or were unable to attend.

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Appendix A. The Normative Deviance Scale (NDS)

Have you ever

Vandalism

1. Smashed bottles on the street, school grounds, or other areas?
2. Intentionally damaged or destroyed property belonging to your parents or other family members (e.g., brothers or sisters)?
3. Intentionally damaged or destroyed property belonging to a school, college, or university?
4. Intentionally damaged or destroyed other property (e.g., signs, windows, mailboxes, parking meter, etc.) that did not belong to you?
5. Intentionally damaged or destroyed property belonging to your employer or at your workplace?
6. Slashed or in any way damaged seats on a bus, in a movie theater, or something at another public place?
7. Written graffiti on a bus, on school walls, on rest room walls, or on anything else in a public place?
8. Committed acts of vandalism when coming or going to a football game or other sports event?

Alcohol use

1. Consumed hard liquor (e.g., tequila, whiskey, vodka, or gin) before you were 16?*
2. Consumed alcoholic beverages (e.g., beer, wine, or wine coolers) before you were 16?*
3. Got drunk (intentionally) just for the fun of it (at any age)?
4. Got drunk just to fit in and be part of the crowd (at any age)?

5. Lied about your age to buy alcohol before you turned 16?*
6. Had an older brother/sister or friend buy alcohol for you?
7. Bought alcohol for a brother/sister or friend?

Drug use

1. Used tobacco products regularly (e.g., cigarettes, chew, snuff, etc.)?
2. Used “soft” drugs such as marijuana (grass, pot)?
3. Used “hard” drugs such as crack, cocaine, or heroin?
4. Gone to school when you were drunk or high on drugs?
5. Gone to work when you were drunk or high on drugs?
6. Gone to a concert when you were drunk or high on drugs?
7. Gone to a club/dance/party when you were drunk or high on drugs?
8. Gone to a club/dance/party to get drunk or high on drugs?
9. Sold any drugs such as marijuana (grass, pot), cocaine, or heroin?

School misconduct

1. Cheated on school tests (e.g., cheat sheet, copy from neighbor, etc.)?
2. Been sent out of a classroom because of "bad" behavior (e.g., inappropriate behaviors, cheating etc.)?
3. Been suspended or expelled from school?
4. Stayed away from school/classes when your parent(s) thought you were there?
5. Intentionally missed classes over a number of days for "no reason," just for fun (e.g., there was no family emergency)?
6. Been in trouble at school so that your parents received a phone call about it?
7. Skipped school/work (pretending you are ill)?

General deviance

1. Intentionally disobeyed a stop sign or a red traffic light while driving a vehicle?
2. Been on someone else's property when you knew you were not supposed to be there?
3. Failed to return extra change that you knew a cashier gave you by mistake?
4. Tried to deceive a cashier to your advantage (e.g., flash a larger bill and give a smaller one)?
5. Let the air out of the tires of a car or bike?
6. Lied about your age to get into a nightclub/bar?
7. Made nuisance/obscene telephone calls?
8. Avoided paying for something (e.g., movies, bus or subway rides, food, etc.)?
9. Used fake money or other things in a candy, coke, or stamp machine?
10. Shaken/hit a parked car just to turn on the car's alarm?
11. Stayed out all night without informing your parents about your whereabouts?

Theft

1. Stolen, taken, or tried to take something from a family member or relative (e.g., personal items, money, etc.)?
2. Stolen, taken, or tried to take something worth \$10 or less (e.g., newspaper, pack of gum, mail, money, etc.)?***
3. Stolen, taken, or tried to take something worth between \$10 and \$100 (e.g., shirt, watch, cologne, video game cartridge, shoes, money)?***
4. Stolen, taken, or tried to take something worth more than \$100 (e.g., leather jacket, car stereo, bike, money, etc.)?***
5. Stolen, taken, or tried to take something that belonged to "the public" (e.g., street signs,

construction signs, etc.)?

6. Stolen or tried to steal a motor vehicle (e.g., car or motorcycle)?
7. Bought, sold, or held stolen goods or tried to do any of these things?

Assault

1. Hit or threatened to hit a person?
2. Hit or threatened to hit your parent(s)?
3. Hit or threatened to hit other students/peers or people?
4. Used force or threatened to beat someone up if they didn't give you money or something else you wanted?
5. Been involved in gang fights or other gang activities?
6. Beaten someone up so badly they required medical attention?

*The age of 16 was used in European version of the survey because this is the legal drinking age.

**Cultural-appropriate monetary values and symbols were used in Slovenian version of the survey.

Appendix B. The Adolescent Family Process Measure (AFP)

Included Subscales

Closeness

1. My mother often asks about what I am doing in school.
2. My mother gives me the right amount of affection.
3. One of the worst things that could happen to me would be to find out that I let my mother down.
4. My mother is usually proud of me when I finish something at which I've worked hard.
5. My mother trusts me.
6. I am closer to my mother than are a lot of kids my age.

Monitoring

11. My mother wants to know who I am with when I go out with friends or on a date.
12. In my free time away from home, my mother knows who I'm with and where I am.
13. My mother wants me to tell her where I am if I don't come home right after school.
14. When I am not at home, my mother knows my whereabouts.

APPENDIX C. Grasmick Low Self-Control Scale

Impulsiveness

1. I often act on the spur of the moment without stopping to think.
9. I often do whatever brings me pleasure here and now, even at the cost of some distant goal.
13. I'm more concerned with what happens to me in the short run than in the long run.
20. *I don't devote much thought and effort to preparing for the future.*

Simple Tasks

5. I frequently try to avoid projects that I know will be difficult.
7. I dislike really hard tasks that stretch my ability to the limit.
15. When things get complicated, I tend to quit or withdraw.
19. The things in life that are easiest to do bring me the most pleasure.

Risk Seeking

3. I like to test myself every now and then by doing something a little risky.
4. Sometimes I will take a risk just for the fun of it.
6. I sometimes find it exciting to do things for which I might get into trouble.
11. Excitement and adventure are more important to me than security.

Physical Activity

8. If I had a choice, I would almost always rather do something physical than something mental.
10. I almost always feel better when I am on the move than when I am sitting and thinking.
16. I like to get out and do things more than I like to read or contemplate ideas.

18. I seem to have more energy and a greater need for activity than most other people my age.

Self-Centeredness

2. *If things I do upset people, it's their problem, not mine.*

12. I try to look out for myself first, even if it means making things difficult for other people.

14. I will try to get things I want even when I know it's causing problems for other people.

17. I'm not very sympathetic to other people when they are having problems.

Temper

21. I lose my temper pretty easily.

22. Often, when I am angry at people, I feel more like hurting them than talking to them about why I am angry.

23. When I'm really angry, other people should stay away from me.

24. When I have a serious disagreement with someone, it's usually hard for me to talk calmly about it without getting upset.

Note. Items 2 and 20 are included here because they were part of the original low self-control scale; however, they are italicized to indicate that they were not included in their respective scales for analyses in this study.

APPENDIX D: Religiosity Measure

1. How often do you attend the regularly scheduled services of a church/place of worship (not including weddings, funerals, baptisms, or any other special occasions of a religious nature)?
 - a. practically never
 - b. only on holidays or holy days
 - c. only occasionally
 - d. one a week
 - e. more than once a week
2. What is your current status in relation to church/place of worship?
 - a. no association with church
 - b. attending nonmember
 - c. nonattending member
 - d. attending member
3. How often do you read a book of religious faith?
 - a. never
 - b. infrequently
 - c. sometimes
 - d. quite a bit
 - e. everyday
4. How often do you pray?
 - a. never
 - b. infrequently

- c. once a week
- d. once a day
- e. several times a day

5. I try hard to carry my religion over into all my other dealings in life?

- a. strongly disagree
- b. disagree
- c. agree
- d. strongly agree