Parents, Peers and Self-Control: What is the role of culture in explaining youth delinquency?

MSc Sociology: Contemporary Social Problems

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Abstract

This study explores the influence of parental attachment, peer delinquency, and self-control on youth delinquency, and examines how these relationships vary between individualistic and collectivistic cultures. Utilising data from the Second International Self-Reported Delinquency Study, 2005-2007 (IRSD-2) with a sample of N=42586 from 27 different countries, several multiple-regression analyses were conducted to explore these dynamics. Findings revealed that parental attachment, peer delinquency, and self-control each have significant direct effects on youth delinquency, consistent with theoretical expectations. However, contrary to expectations, the negative effect of parental attachment on youth delinquency is weaker in collectivistic cultures. Additionally, no significant cultural effect was found on the positive relationship between peer delinquency and youth delinquency. As predicted, the negative influence of self-control on youth delinquency is weaker in collectivistic cultures. This study emphasises the complex interplay between cultural contexts and the factors influencing youth delinquency. It highlights the need for culturally adapted approaches in addressing youth delinquency. Based on the findings, policy recommendations are given.

Ethical statement

This study has received approval from the ethical board under FETC registration number 24-1872.

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Introduction

Youth delinquency has declined substantially over the past few decades, a trend that is apparent across many different countries (Baumer et al., 2020; Blumstein & Wallman, 2005; Elonheimo, 2014; Van Der Laan et al., 2019), yet the topic remains of great interest to the social sciences. While fewer adolescents are engaging in delinquent behaviour, it appears that those who remain delinquent, despite being exposed to fewer risk-factors, have become proportionately more serious and violent (Carrington, 2013; Van Der Laan et al., 2019). This persistent group of delinquents warrants continuing studies into understanding delinquent behaviour in order to best implement prevention measures. It is a well-known phenomenon that delinquent behaviour piques during adolescence (Sampson & Laub, 1992), making adolescents a particularly interesting group. While most antisocial children do not become antisocial adults (Gove, 2018; Robins, 1978), childhood delinquency is one of the best predictors of adult delinquency. Those who start early have a high chance of reoffending during adulthood (Colman et al., 2008; Loeber & Farrington, 2011; Scott & Brown, 2018). Delinquency early in life also has negative impacts throughout the life-course, for example, delinquent youth are at a higher risk of reduced job quality and unemployment later in life (Carter, 2018).

Social controls, such as the parent-child bond, are often regarded as one of the most important predictors of delinquent behaviour among youth. Studies have shown that having a good relationship with at least one parent and spending time with one's family is a protective factor against delinquency (Lösel & Farrington, 2012), whereas neglectful parenting styles and poor supervision cause an increased risk in youth delinquency (Hoeve et al., 2012). Family bonding provides a supportive environment which prevents delinquency, ensuring children will spend more time with family than peers (Hoeve et al., 2009; Kierkus & Baer, 2002). Family attachment can reduce criminogenic factors such as susceptibility to deviant peers and unstructured socialising (Crosnoe et al., 2002; Dong & Krohn, 2016; Griffin et al., 2000). Positive family environments, which promote family activities, increase the ability for parents to monitor and provide the children with incentives to refrain from engaging in risky behaviour (Higgings & Albrecht, 1977). Moreover, family attachment can reduce the motivation to offend (Unnever et al., 2006) and can equip adolescence with a better ability to resist temptations of crime (Hirschi, 2017; Tilley, 2017).

That being said, adolescents spend much of their time with their peers, attribute considerable importance to these relationships, and are more strongly influenced by them during this period than at any other period in their life (Brown, 1990). For this reason, the social control aspect of peer attachment is also seen as an important predictor of delinquent behaviour among youth. In the literature, support has been found for the effect that peers have on delinquent behaviour (Haynie & Osgood, 2005) as well as delinquent individuals being more likely to associate with other delinquent individuals (Agnew, 1991; Matsueda & Anderson, 1998).

These external social controls are not the only types of control popular in criminological literature. Low self-control has been found to be one of the biggest predictors for delinquent behaviour (Huijsmans et al., 2019; Pratt & Cullen,2000). Individuals with low self-control are less likely to succeed in life; they have worse outcomes in regard to their health (H. V. Miller et al., 2011), studies (Job et al., 2015), wealth (Moffitt et al., 2011), and job and life satisfaction (Dou et al., 2016).

Both social control and self-control have been widely studied, however as far as I am aware, few studies have been done with the context of culture. The vast majority of studies have taken place in Western and Asian countries. This leaves a gap of knowledge on the effect of culture on both social- and self-control in collectivistic cultures that are not situated in Asia. Norms, values, and expectations may differ between European and South American collectivistic cultures compared to those in Asia due to historical contexts. For example, national identity is tied to Christianity in many European countries (Kunovich, 2006) whereas Confucianism has greatly influenced norms and values in Asian countries such as China, Korea and Japan (Zhang et al., 2005).

Most studies focus on parental or peer effects, and self-control in isolation, despite signs of these effects interacting with each other (Huijsmans et al., 2019). While Kotlaja (2018) studied the relationship between family bonding and deviance in the context of culture, they did not take self-control into account. As mentioned, self-control is one of the best predictors of deviance in western study samples. However, there is reason to believe social control could potentially play a more important role in collectivist cultures, due to the higher degree of social cohesion, and according to Triandis (2001), individuals from collectivist countries pay less attention to internal than to external processes as determinants of social behaviour. Additionally, parents from individualistic cultures are typically more concerned

with a child's individual identity, whereas parents from collectivistic cultures place a stronger emphasis on proper behaviour, obedience, and group achievement (Junger-Tas et al., 2012). This suggests that self-control may play a more important role in individualistic cultures compared to collectivist cultures. Therefore, the main focus of this study will be on the effects of parental attachment, peer delinquency and self-control on adolescent delinquency, and specifically if these effects differ between individualistic and collectivist cultures. This study will connect the literature of both Social Control Theory and Self Control Theory, and the possibly moderating effect of culture type (individualistic or collectivistic) on youth delinquency. This study aims to answer the following research question:

> *"What are the effects of parental attachment, peer delinquency and self-control on youth delinquency and to what extent do these effects differ between individualistic and collectivistic cultures?"*

To translate the results of the current study into policy advice, a policy question is formulated. Policy implications should provide guidance for institutions that are concerned with adolescent crime prevention, this may be especially helpful for countries with collectivist cultures where research on these theories may have been limited. The following policy question has been formulated:

> *"How can parental attachment, peer delinquency and Self-Control be incorporated in institutional policy aiming to reduce adolescent delinquency in individualistic and collectivistic cultures?"*

In the following sections existing literature will be reviewed on parental attachment, peer delinquency, self-control, and cultural collectivism and individualism. This study uses cross-national data from the Second International Self-Reported Delinquency Study 2005-2007 (ISRD2). Multilevel analyses were conducted with self-reported data from 42.586 adolescents across 27 different countries.

Theory

Social Control Theory

Hirschi's (1969) control theory has been one of the most dominant theories on delinquency since it was first published. The theory states that individuals are prevented from engaging in delinquency through four social bonds. If these bonds are weak, then the individual is free to engage in delinquent behaviour, and given the right motivation, will do so. The first bond is *attachment*, this refers to the affection and respect that the individual holds towards those in their social circle, such as parents, peers, and teachers. Individuals who have high affection and respect for the people in their social circle are less likely to engage in delinquent behaviour, as they do not want to cause harm or gain disapproval from their surroundings. The second bond, *commitment*, refers to the individual's actual or anticipated investment in conventional activities and their commitment to achieving conventional goals. Activities could include getting an education or employment (Hirschi, 2010). Those who have invested more in these conventional activities are less likely to engage in delinquency as they have more to lose. The third bond, *involvement*, refers to the amount of time spent engaged in conventional activities, such as doing homework or reading. The theory assumes that people who spend a lot of time engaged in these types of activities have less time for delinquency. Lastly, *belief* refers to the individual's commitment to the central value system of the society they are part of. Individuals who believe they should obey the rules of society are less likely to engage in delinquency (Agnew, 1985). Essentially, the bonds individuals have with society determine whether they will respect society's behavioural norms and values (Matza, 1964; Reckless, 1961).

Briar and Piviavin (1965) suggest that there are two pathways through which the social control process takes place, one is through rewarding conforming behaviour so that a child becomes committed to conformity, and the other is by sanctioning nonconforming behaviour (Costello & Laub, 2020). Therefore, social control can also have the opposite effect. Criminal behaviour can be learned from one's social group by learning definitions that favour crime (Costello & Laub, 2020). This study will focus mainly on social control through attachment to parents and delinquent peers, because as Hirschi (2010) stated: "the more closely a person is tied to conventional society in any of these ways, the more closely he is likely to be tied in the other ways".

Parental Attachment

Parents play an important role in the development of a child. They have an impact on educational attainment (Eccles, 2005), a child's physical activity level (Moore et al., 1991), and eating behaviour (Scaglioni et al., 2008) among many other aspects. Parental attachment has consistently been shown to be a protective factor against youth delinquency (Hoeve et al., 2012). Parents act as a buffer against deviant influences by providing a resource of basic ties and commitments to the conventional order of society, as a source of ongoing motivation to conform, through normative definitions of appropriate behaviours, and through the coercive function of supervision and punishment (Rankin & Kern, 1994). Parents can exert direct parental control through supervision and control (Laub & Sampson, 1988; Leibner & Wacker, 1997; Lerner et al., 2003; Wells & Rankin, 1988). Parenting and parental attachment mainly works through preventing association with delinquent peers (Warr, 1993), which is typically found to be a strong predictor of delinquent behaviour (Osgood & Anderson, 2004; Piquero et al., 2005). Important to note is that the impact of family is conditional on the level of affection between parent and child and the level of control the parents exert (Henggeler, 1989; Wilson & Herrnstein, 1985). Children who are strongly attached to both parents have a lower probability of self-reported delinquency than children who are strongly attached to only one parent (Rankin & Kern, 1994). The quality of parental attachment is strongly associated with child well-being (Greenberg et al., 1983), and is also found to have an indirect effect on serious delinquency (Ingram et al., 2007).

Alternatively, Gault-Sherman (2011) found that the effect between parental attachment and youth delinquency is bi-directional. Youth delinquency has a negative impact on parental attachment. However, he also found that high parental attachment reduces delinquency. This suggests that delinquent youth will likely have a lower attachment to their parents. Therefore, this thesis will only focus on the effect of parental attachment on youth delinquency rather than the other way around.

For this reason, the following hypothesis is formulated, presented in Figure 1 as arrow *a* (H1):

> *"Adolescents with high parental attachment are less likely to engage in delinquent behaviour."*

Peer delinquency

Research has shown that peers exert influence over juveniles across various domains, such as the way youth view their body (Dohnt & Tiggemann, 2006), and their physical activity level (Fitzgerald et al., 2012). While parents play an important role in a child's development, adolescence is the time in which individuals try to detach from their parental control and seek to form their own personalities. During this time attachment to conventional others may weaken (Brown, 1990). For this reason, peer context is regarded as a prime instigator for new behaviours and lifestyles. The important aspect of Social Control Theory regarding attachments is the attachment to *conventional* others. Conventional friends who follow the rules and share the values of the society they live in have a positive effect on prosocial behaviour and reduce the chance of delinquency (Burt et al., 2006; Huang et al., 2023). However, the opposite is also true. When adolescents associate with deviant peers, there are strong associations to deviant behaviours such as smoking, delinquency, drinking and drug use (Lerner et al., 2003), and carrying a weapon (Wojciechowski, 2023). Delinquent peers were found to be the most important variable in explaining delinquency among adolescents in Hong Kong (Cheung & Cheung, 2007), and were also found to be the primary source of influence of teens' behaviour in the United States (Aseltine, 1995).The effect of peer influence differs per gender, with boys being more susceptible than girls (Piquero et al., 2005), and delinquency types, with a stronger positive effect on more serious types of delinquency than minor delinquency (Agnew, 1991).

However, it is important to recognize that some studies show that adolescents with delinquent peers are more likely to be delinquent themselves (Agnew, 1991). They are likely to associate with peers of a similar level of criminal propensity (Kim & Lee, 2021), and tend to choose peers who are attitudinally and behaviourally similar to themselves (Dishion et al., 1994; Kandel, 1978; Laursen, 2017; Poulin et al., 1997). The relationship between peer associations and delinquency has been found to be reciprocal. Matsueda and Anderson (1998) found that the effect of delinquency on peer associations is larger than that of peer associations on delinquency. This suggests that delinquent youth will seek out delinquent peers, rather than be converted into delinquency through their friend group. Which theory is more important, selection or peer influence, is still up for debate in the social sciences. However, a study done by Gallupe et al. (2018) found that the relationship between peer delinquency and individual behaviour is related to both people choosing to befriend others with similar criminal propensity (selection) as well as adjusting their delinquent behaviour to

more closely match that of their friends (peer influence). Indicating the robustness of both dynamics. For this reason, this study will only focus on the effect of delinquent peers on peer delinquency as opposed to the reverse.

Because of this, I formulate the second hypothesis, presented in Figure 1 as arrow *b* (H2):

> *"Adolescents with more delinquent peers are more likely to engage in delinquent behaviour."*

Self-Control Theory

Proposed by Gottfredson and Hirschi (1990), self-control theory has received much attention in the field of criminology (Akers, 1991; Hay, 2001; Tittle et al., 2003). Rather than question what causes crime, this theory aims to explain what constrains crime through self-control. The theory proposes that those with low self-control are more likely to engage in deviant behaviour, if given the chance, than those with high self-control. Self-control is measured across six different dimensions. Individuals with low self-control prefer simple tasks, are impulsive, prefer physical activities, are risk-seeking and insensitive to the needs of others, self-centred, and have a temper (Grasmick et al., 1993). Individuals who have these traits are more likely to act on criminal impulses, and pursue immediate pleasures (Hay, 2001).

Self-control theory suggests that individuals are socialised to internalise societal norms and values. These serve as guidelines for behaviour. Self-control plays a role in enabling individuals to regulate impulses to follow said norms. It is needed to follow norms, and self-control resources are needed to abide by social and conventional norms (DeBono et al., 2010). Low self-control is a consistent predictor of criminal and deviant behaviours (De Ridder et al., 2011; Vazsonyi et al., 2017), and based on a meta-analysis by Pratt and Cullen (2000) low self-control is one of the strongest known correlates of crime. Low self-control has negative effects on a range of dimensions. For instance, those with low self-control are more likely to have unstable personal relationships and select into similar peer groups. Moreover, it is related to diminished quality of interpersonal relationships with family and friends, low levels of educational and occupational attainment, and possibly poor marriage prospects. Individuals with low self-control also are more likely to reside in disorderly neighbourhoods (Chapple, 2005). Furthermore, persons with low self-control are more likely to have criminal associates (Evans et al., 1997).

When it comes to youth, children with low self-control are more likely to be rejected by their peers, reducing their choices in conventional others (Chapple, 2005). Rejection is known to be a starter pathway to antisocial behaviour and aggression for boys (Miller-Johnson et al., 1999). Additionally, peer behaviour is associated with subsequent self-control (Meldrum & Hay, 2011). Peers influence a child's perception of the consequences of their impulsive behaviour, such as aggressing against others or acting without regard for the costs. To those with prosocial peers, these acts can provoke peer rejection and isolation from groups. The opposite is the case for those with antisocial peers. They will anticipate fewer negative consequences and may even perceive positive ones (Meldrum & Hay, 2011). Gottfredson and Hirschi's Self-Control theory (1990) proposes that self-control is static. However, Na and Paternoster (2012) argued against this. They found that self-control is malleable and responsive to interventions aimed to increase it and that self-control continues to develop through social controls and social bonds up to at least 17 years of age. This indicates that social control, such as parental control, continues to exert influence on the behaviour of adolescents.

High self-control does not mean that individuals will not engage in delinquent behaviour. Those with high self-control are found to be more successful than low self-control individuals in evading punishment for activities such as reckless driving and cheating (Mathes et al., 2017). Hence, it can be used to achieve pro- as well as antisocial goals (Uziel & Hefetz, 2014).

It is important to note that parenting is considered important to the development of self-control in children (Eisenberg et al., 2003; Kopp, 1982). Good parenting plays an important role in self-control from early to late adolescence, an effect found to have cross-cultural validity (Li et al., 2019).

Here, I formulate the third hypothesis, presented in Figure 1 as arrow *c* (H3):

"Adolescents with high self-control are less likely to engage in delinquent behaviour."

Collectivism vs. Individualism

The concepts of individualism and collectivism have a long history, but the conceptualization that is most widely used in contemporary research is the one formulated by Hofstede (1980). It refers to the relationship between the individual and the collective that exists in a given

society. Hofstede (1980) defined individualism as a focus on rights above duties, an emphasis on personal identity, autonomy and self-fulfilment, and a concern for oneself and immediate family (Oysermann et al., 2002). Collectivism refers to an orientation where individuals see themselves as part of a group, such as their family or community. Group cohesion and cooperation are highly valued. It stresses obligations to others, relying on the group and interdependence on one another (Hui, 1988; Oysermann et al., 2002). Cross-cultural studies comparing delinquency between US (individualistic) and Korean (collectivistic) youth generally reveal that delinquency is less prevalent among Korean youth than their US counterparts (Kim et al., 2010; Yun & Cui, 2019).

Cultural differences in parent and peer effects

It is well established that there are cross-cultural differences in parenting styles (Kelley & Tseng, 1992; Lansford, 2022; Yaman et al., 2010), and that cultural aspects such as collectivism and individualism may play a role in this. In individualistic cultures, parents tend to employ a more authoritative parenting style (Smetana, 2017), with a focus on negotiation and responsivity to the child's input (Kelley and Tseng, 1992; Kotlaja, 2018). The goal is to promote autonomy and self-reliance (Rudy & Grusec, 2006). In contrast, in collectivist cultures, values such as conformity, obedience, interdependence and adherence to social convention are promoted (Greenfield et al., 2003).

Most research regarding the effect of parental attachment and peer delinquency has been done in western countries, and these findings may not always translate to other cultures. Mixed results have been found in Asian countries when it comes to the impact of parental attachment on delinquency. Le et al. (2005), for example, found that parental attachment is a nonsignificant predictor for youth delinquency among Chinese, Cambodian, Laotian, Mien, or Vietnamese youth, which contrasts findings from Western samples (Hoeve et al., 2012). And while Bao et al. (2016) found that parenting styles in China are associated with lower delinquent behaviour, they argue that parental influence is mostly mediated by social control variables which prevent exposure to delinquent peers. Cox et al. (2017) find that positive parenting has a much larger impact across externalising (deviant) behaviour than peers, and that peer deviance partially mediated the relationship between positive parenting and deviant behaviour. Parental attachment was found to have a stronger negative effect on deviance than peers have a positive effect in a Korean sample (Kim et al., 2010).

As for peer deviancy, findings from Kim and Goto (2000) suggest that parental support had no influence on delinquent behaviour among Asian Americans, and that peer delinquency was the strongest predictor. A meta-analysis by Liu et al. (2017) found that youth from collectivistic cultures are more likely to smoke if their friends do compared to youth from individualistic cultures, suggesting that peers have a stronger influence in collectivistic settings (Liu et al., 2017). In South-Korea, parental attachment was found to be a protective factor against internet delinquency (Cho et al., 2016), and a study done in Hong Kong and Macau found that those who have weak parental bonds are more likely to engage in delinquency (Chan & Chui, 2015). This is in line with findings from studies with mostly western samples, such as is found in the meta-analysis by Hoeve et al. (2012). On the other hand, (Davis et al., 2004) found that negative peer influence was the strongest predictor of delinquent behaviour among adolescents in Hong Kong when taken together with school environment, parent, and family effects.

Given these mixed findings, the hypothesis concerning parental attachment is aligned with the foundational expectations of Social Control Theory and cultural dimensions, rather than opposing them, as presented by arrow *d* in Figure 1 (H4):

> *"The relationship between parental attachment and youth delinquency is stronger in collectivist countries."*

And peer delinquency, presented in Figure 1 as arrow *e* (H5):

> *"The relationship between peer delinquency and youth delinquency is stronger in collectivist countries."*

Cultural differences in self-control

Findings on the strong effect of self-control theory may not translate to other cultures. Because, as Hofstede (1980) suggests, persons from collectivistic cultures value group cohesion and harmony, and feel a high degree of social responsibility (Watson et al., 1998) The effect of social control may be more important than self-control, especially compared to individualistic cultures. Behaviour regulation may come from external sources, as individuals can rely on others to correct and support their behaviour. In combination with the repression of personal desires and needs for the good of the group (Triandis et al., 1988), this may result in reduced need for self-control. This effect is highlighted by Cheung & Cheung (2007), who

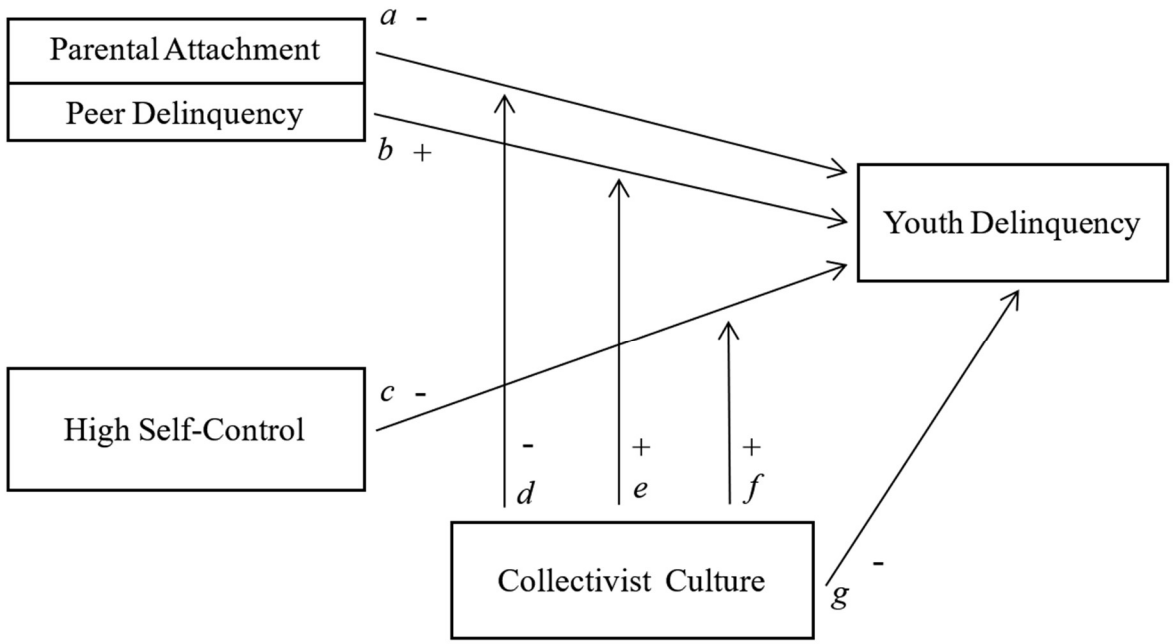
found that self-control theory does not predict delinquency when controlled for social variables among Chinese adolescents. In that cultural context, social control, or the lack thereof, may be a better explanation for youth delinquency. Individuals from collectivist cultures are sometimes assumed to possess more self-control than individuals from individualistic cultures, but there have been mixed findings (Delvecchio et al., 2014; Kacen & Lee, 2002). Notably, a study done in Russia found that a person's individualism is a risk factor for juvenile problem behaviour in regard to substance abuse and risky sexual behaviour (Pokhrel et al., 2017). Li et al., (2018) found that people in collectivistic cultures have less attitudinal self-control, but exhibit higher behavioural self-control, which suggests that social norms shape their behaviour rather than their internal beliefs.

The following hypothesis is formulated, presented in Figure 1 as arrow *f* (H6):

> *"The relationship between Self-Control and youth delinquency is weaker in collectivistic countries."*

Figure 1

Expected relationships between Parental Attachment, Peer Delinquency, Self-Control, Collectivism and Youth Delinquency



Methods

Data

To test whether delinquent peer associations, parental attachment and self-control have an effect on delinquent behaviour among youth, and whether this effect differs between those who have high control and those who do not, data from the Second International Self-Reported Delinquency Study (ISRD-2) was used. The IRSD-2 is a large international collaborative study of delinquency and victimisation of 12- to 15-year-old students. The aim of the IRSD-2 is to describe, explain and examine juvenile delinquency. It explores topics such as the prevalence and incidence of offending and victimisation among youths, the effect of minority status, and the importance of neighbourhood context. In total the survey contains 695 variables covering topics such as social demographics, delinquent acts, victimisation, lifestyle, attitudes toward violence, Grasmick self-control scale, school context, life events and information on neighbourhood. It is a school-based study that draws on random samples from either city level or national level. The survey was held between 2005 and 2007, and was conducted in 31, mostly European countries, the United States, Caribbean, and South American countries.

School classes were the primary sampling units, and the aim was to include about 2100 youths per participating country. The surveys were mostly conducted in a classroom setting and self-administered by the students on pencil-and-paper, with supervision by researchers or teachers. The sampling design involved two stages: selection of cities/towns and achievement of random sample of classrooms in the cities and towns. The response rate of the total IRSD-2 had a response rate ranging from 65% to 70% (Enzmann et al., 2015). The dataset has a total N of 68507. In the current study data from 27 countries is used, of which 7 are collectivistic and 20 individualistic. After listwise deletion with all variables included in this study, the final sample size comes to N = 42586.

Dependent variable

The measurement of delinquency is based on a total of twelve different questions about offences ranging from stealing and dealing drugs to assault and robbery, see appendix A for the full list of questions. Students were asked if they had ever committed the offence and whether they had committed the offence in the past year. For the analysis I used the ‘last year’ measure. The main dependent variable is “delinquency”, which is comprised of the sum-total

of number of "yes" responses to each of the twelve items, scores ranging from 0 (never committed an offence) to 12. This was then converted into percentage of max possible (POMP), ranging from 0 to 100, as is considered good practice with this dataset (Cohen et al., 1999; Steketee et al., 2013). Higher scores indicate a higher engagement in delinquent behaviour.

Independent variables

Social Control

According to Hirschi (2010) there are four elements to social control, namely attachment to conventional others, commitment to conventional goals, involvement in conventional activities and conventional beliefs. In this paper, I measure social control through parental attachment and the number of delinquent peers the respondent has.

Parental attachment is comprised of five questions about how well the child gets along with their mother and/or father, if they do activities together, if they eat meals together, if the parents know the child's friends, and whether the parent gives the child a curfew. The reliability is low with a Cronbach's Alpha of 0.54. This measurement was converted into POMP with a range of 0 to 100. The higher the score, the more attached the child is to their parents.

Peer delinquency is measured by creating a scale from 0 to 20 based on the answers the respondents gave to five questions about how many of their friends have used drugs, shoplifted, burglarized, threatened, or assaulted someone. The higher the score, the more friends the respondent has who engage in deviant behaviour.

Self-control

Self-control is measured with 12 items from the Grasmick (1993) Self-Control scale. The original scale is aimed to account for all six dimensions of self-control as identified by Gottfredson and Hirschi (1990). The ISRD-2 includes 12 of the total 24 items of the Grasmick (1993) scale and covers four of the six dimensions, this includes risk seeking, impulsiveness, self-control, self-centeredness, and temper. All twelve questions used to assess Self-Control can be found in Appendix A. A reliability test was done resulting in a Cronbach's Alpha of 0.83, indicating high reliability. The items were recoded to ensure that a higher score signifies a higher degree of self-control. The Percentage of Maximum Possible (POMP) scoring

method is used to rescale the 12-items from 0 to 100 to create an average score per respondent.

Moderator

Country scores are taken from The Culture Factor website (2023) to reflect the latest developments in cross-cultural research and overall cultural changes since the original study conducted by Hofstede within IBM in the 1960's and 70s. As of the writing of this thesis, the latest update was on October 16, 2023. A score 50 or lower on the scale ranging from 0 to 100 is considered a collectivist culture (Kotlaja, 2018).

Country is recoded into a dummy variable 'collectivist' with the following group of countries considered collectivist as 1 (N=10066): Russia, Poland, Venezuela, Armenia, Bosnia and Herzegovina, Suriname, and Cyprus. The country score for Cyprus is not available on the Culture Factor website, however Zobra (2015) found that participants from Cyprus scored high on collectivism.

The other countries: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Ireland, Lithuania, Netherlands, Norway, Portugal, Slovenia, Spain, Sweden, Switzerland and United States were recoded as 0, indicating the individualistic countries (N=32520).

Control variables

Gender is controlled for as it is a well-known phenomenon that males are more likely to engage in deviant behaviour (Steketee et al., 2013). Respondents answered the question 'Are you male or female?', there were no non-binary options in this survey. Men were coded as 1, women as 0.

Grade level is used as a proxy for age. Grade level is commonly controlled for with this dataset (Cuervo et al., 2017; Berten et al., 2013). For privacy reasons, age was masked and therefore not available for analysis. The grades range from 7 to 9.

Family affluence is measured by making a mean score of four items: "Do you have your own room?", "Do you have a computer at home that you are allowed to use?", "Do you own a

mobile phone?", "Does your family own a car?". A Cronbach's Alpha reliability test shows low reliability (α = .48). The variable was transformed into POMP ranging from 0 to 100. If more than 1/3 of the measures were missing the resulting score was set to missing, as this would no longer measure family affluence. This variable is controlled for, because other studies show that children from families with low socioeconomic status are more likely to engage in delinquency (Agnew et al., 2008; Sampson & Laub, 1994).

Family disruption is measured by combining 3 questions that ask whether the child has experienced any of the following events: "Problems with one of your parents with alcohol or drugs", "repeated serious conflicts or physical fights between your parents", "separation/divorce of your parents", creating a mean score. The events are not expected to correlate, therefore α = .46 does not indicate unreliability. The variable was transformed into POMP ranging from 0 to 100, higher scores indicating having experienced more of these events. Studies show that children who experience family disruption are more likely to engage in deviant behaviour and are more likely to do more serious types of crime (Chilton & Markle, 1972; Juby & Farrington, 2001).

Attitudes measures a respondent's attitude towards violence. Respondents were asked to rate the following statements from "disagree fully" to "agree fully": "violence is part of the fun", "use of force is allowed to gain respect", "if I am attacked, I hit back", "everything is boring without violence", and "men prove themselves with violence". A mean score was created with a Cronbach's Alpha of 0.71. This was converted into POMP, with a range of 0 to 100. A higher score indicates a more positive attitude towards violence. Attitude towards violence is considered an important variable related to delinquency (Steketee et al., 2013).

Non-nativity uses information about the place of birth of the respondent and the parents' birthplace to measure if the respondent is native born or a first- or second-generation migrant. This information was used to create a dummy variable. Respondents who are first- or second-generation migrants were recoded as 1. Native born respondents are used as a reference group. Studies from several countries show that individuals with a migration background are more likely to engage in delinquent behaviour (Killias & Lukash, 2019; Svensson & Shannon, 2020).

GDP per Capita is added to ensure a more balanced comparison between the country groups, irrespective of their wealth. Research shows mixed results in regard to the effect of a

nation's wealth on delinquency. Some show increased delinquency in poorer nations (Savolainen et al., 2013), whereas others find increased delinquency when a country increases in wealth due to increased opportunity (Andresen, 2015). Two datasets are merged. The data on the GDP per Capita is taken from The World Bank, (n.d.). The GDP data from 2006 is used, as the majority (89,2%) of survey data was collected that year. POMP was used to standardise the scores, ranging from 0 to 100. A higher score indicates a higher GDP per capita. The data can be found in Appendix B.

Analytical strategy

To examine the effect of parental attachment, peer delinquency and self-control on youth delinquency, seven multivariate regression analysis will be conducted using IBM SPSS 29.

Social Control Model 1 will involve multivariate regression analysis to examine the direct effect of parental attachment, peer delinquency and collectivism on youth delinquency. Model 2 is a multivariate regression analysis which will include the control variables to address possible confounding factors. Model 3 will include all variables, including the interaction terms between parental attachment and collectivism, and peer delinquency and collectivism to assess the impact of culture on the relationship between social control and delinquency.

Self-Control Model 4 is a multivariate regression analysis to examine the direct effect of self-control and collectivism on delinquency. Model 5, a multivariate regression, will include the control variables, and Model 6 will include the interaction term between self-control and collectivism in order to assess the impact of culture on the relationship between self-control and delinquency.

Lastly, Model 7 will include a multivariate regression with all independent variables, control variables and all interaction terms. In addition to using GDP per Capita to ensure that this study does not measure the delinquency in richer versus poorer countries, another analysis was done in which all countries were converted into dummy variables to see the effects per country, see Table 4 in Appendix C. Moreover, in order to make more informed conclusions, extra analyses were run to assess the direct effects of collectivism on the independent variables, see Tables 5-7 in Appendix C.

Results

Descriptive statistics

Table 1 presents the means, standard deviation, and the range (min-max) of all variables included in the study. The average score of delinquency (M = 2.82; min = 0, max = 100) indicates a low engagement in delinquent behaviour. Respondents have a high attachment to their parents (M = 81.24; min = 0, max = 100), and few delinquent peers (M = 0.44; min = 0, max = 20). Self-control among the student is above average (M = 62.16; min = 0, max = 100). Most respondents come from individualistic countries (M = 0.24; min = 0, max = 1). Gender is close to evenly divided with 48% of respondents being male. Grade level (M = 8.04) is rather evenly divided (min = 7, max = 9), considering the standard deviation (0.81). Family affluence among the respondents is relatively high (M = 85.19; min = 0, max = 100), however the standard deviation is rather large (SD = 22.21) suggesting a high amount of variability or dispersion. Relatively few respondents have experienced family disruption (M = 11.51; min = 0, max = 100), and positive attitudes towards violence are relatively low (M = 32.07; min = 0, max = 100). Few respondents are first- or second-generation migrants (M = .21). There is a relatively low average when it comes to GPD per Capita (M = 37.16; min = 0, max = 100), with a high standard deviation (SD = 26.56).

Table 1

Descriptive statistics of the dependent variable, independent variables, moderator, and control variables (N=42586)

	M	SD	Range
Dependant variable			
Delinquency	2.82	7.72	0-100
Independent variables			
Parental attachment	81.24	15.34	0-100
Delinquent peers	0.44	1.08	0-20
Self-Control	62.16	19.65	0-100

Table 1 (continued)

Descriptive statistics of the dependent variable, independent variables, moderator, and control variables (N=42586)

	M	SD	Range
Moderator			
Collectivism	.24		0-1
Control variables			
Male	0.48		0-1
Grade level	8.02	0.82	7-9
Family affluence	85.19	22.21	0-100
Family disruption	11.51	21.92	0-100
Attitudes	32.07	21.31	0-100
Non-native	.21		0-1
GDP per Capita	37.16	26.56	0-100

To test the hypotheses, a total of seven linear regression models were run. Table 2 presents the results of these models. First, I will discuss the Social Control models.

Model 1 shows the effect of parental attachment, peer delinquency and collectivism on adolescent delinquency, this model was significant ($R2 = .255$, $F (3, 42852) = 4849.52$, $p < .001$) and explained 25,5% of the variance in youth delinquency. Parental attachment is significant ($B = -.054$, $p < .001$), indicating that higher levels of parental attachment result in lower levels of youth delinquency. Peer delinquency is also significant ($B = 3.34$, $p < .001$), demonstrating that having more delinquent peers results in more youth delinquency. In this model collectivism does not have a significant effect on delinquency. These findings are in line with hypothesis 1 and 2: adolescents with higher parental attachment are indeed less likely to engage in delinquent behaviour (H1), and adolescents with more delinquent peers are more likely to engage in delinquent behaviour (H2).

In Model 2, I include the control variables gender, grade level, family affluence, family disruption, attitudes, non-nativity, and GDP per Capita to control for confounding factors that might cause spurious association. Model 2 was significant ($R2 = .309$, $F(10,$

42575) =1906.68, p < .001) and explained 30,9% of the variance in youth delinquency. Model 2 provided a better fit and explained a larger proportion of the variance in youth delinquency compared to Model 1 (R2-Change = 0.055, F-Change = 481.35). The effects of parental attachment (B = .040, p < .001) and peer delinquency (B = 2.79, p < .001) remained significant, indicating a robust relationship between parental attachment, peer delinquency and youth delinquency. In Model 2, collectivism has a positive and significant effect (B = .578, p < .001) on delinquency. This indicates that when controlled and in the context of the Social Control variables, youth in collectivistic cultures engage more in delinquent behaviour. Which is contrary to findings from (Yun & Cui, 2019). In line with previous research (Steketee et al., 2013), males are more likely to engage in delinquent behaviour (B = 1.61, p <.001). Grade level is significant and negative (B = -.252, p <.001). In contrast to other findings that highlight low SES as a risk factor (D'Onofrio et al., 2008; Hao & Matsueda, 2006), family affluence slightly increases delinquency (B = .008, p < .001). While this is surprising, this effect could be present due to the generally high family affluence in this dataset. The effect of family disruption on delinquency is positive and significant (B = .010, p < .001). This suggests that experiencing family disruptions, like divorce, slightly increases delinquency, which is in line with previous research (Chilton & Markle, 1972; Juby & Farrington, 2001). Positive attitudes towards violence have a positive and significant effect (B = .068, p < .001). Those who hold more positive views towards violence, engage in more delinquency, as has been well established in the literature (Nunes et al., 2022; Zhang et al., 1997). Non-nativity is also significant (B = .190, p < .05), meaning that first or second-generation migrant youth is more likely to engage in delinquent behaviour as previously found (Svensson & Shannon, 2020). Model 2 also includes GDP per Capita; this is positive and significant (B = .012 , p <.001). This is in line with findings from Andreson (2015).

Model 3 includes the interaction terms between parental attachment and collectivism, and peer delinquency and collectivism. This model (R2 = .310, F(12, 42573) = 1596.74, p < .001) is significant and explains 31% of the variance in youth delinquency. The variance of Model 3 is only slightly higher than Model 2 (R2-change = .001, F-Change = 32,79). This suggests that adding the interaction terms contributed only slightly to the overall variance explained by Model 2. The main findings of Model 3 is that the interaction term of parental attachment and collectivism was positive and significant (B = .037, p < .001) indicating that the negative impact of parental attachment on delinquency is weaker in collectivistic cultures. These findings somewhat resemble findings from Bao and colleagues (2016). No significant

interaction was found between peer delinquency and collectivism, suggesting that there is no significant difference between the two culture groups when it comes to the negative influence of delinquent peers on the personal delinquency of adolescents. Because of this our fourth hypothesis is refuted, the relationship between parental attachment is weaker in collectivist countries (H4), and there is no significant difference in the relationship between delinquent peers and youth delinquency (H5). Apart from the main finding of this model, the only noteworthy difference compared to Model 2 is that collectivism is significant in this model, but negative rather than positive (B = -2.48, p < .001). This result underscores the importance of including moderating variables in analyses, otherwise one might come to the wrong conclusions.

Continuing on with the Self-Control models, Model 4 is significant (R2 = .111, F(2, 42583) = 2646.24, p < .001) and explains 11,1% of the variance in youth delinquency. In line with previous findings about self-control (Chapple, 2005; Cheung & Cheung, 2008), high self-control was significantly and negatively associated with delinquency (B = -.128, p < .001), signifying that higher levels of self-control result in less delinquency. This confirms our third hypothesis, adolescents with high self-control are less likely to engage in delinquent behaviour (H3).

In Model 5 the control variables are added. The model is significant (R2 = .170, F(9, 42576) = 966.60, p < .001) and explains 17% of the variance in delinquency. Model 5 provides a better fit compared to Model 4 and explains a larger proportion of variance in delinquency (R2-change = .059, F-change = 433). Self-Control remained negative and significant (B = -.079, p < .001). Compared to the Social Control models there are only a few noteworthy differences concerning the control variables. Grade level is still significant, but positive rather than negative (B = .396, p < .001) indicating that in the context of self-control higher grade levels are associated with more delinquency. Non-nativity is still significant, but more strongly than in the Social Control models (B = .375, p < .001). Additionally, collectivism is no longer significant.

Model 6 is significant (R2 = .175, F(10, 42575) = 905.24, p < .001) and explains 17,5% of the variance in delinquency. Compared to Model 5, Model 6 explains only marginally more (R2-change = .006, F-change = 293.32). The interaction term between self-control and collectivism is significant and positive (B = .069, p < .001). The moderating variable collectivism is negative and significant (B = - 4.25, p < .001), which implies that in

the context of self-control, youth delinquency is significantly lower in collectivistic cultures. These results suggest that while self-control is associated with lower delinquency, this effect is weaker in collectivistic cultures. With this our fifth hypothesis is confirmed, the relationship between self-control and youth delinquency is weaker in collectivistic cultures (H5).

Lastly, in order to present a more holistic view of the factors that may influence delinquency and the way they interact with each other, a seventh model was created in which all variables are presented. Model 7 is significant ($R2 = .320$, $F(14, 42471) = 1432.74$, $p < .001$) and explains 32% of the variance in delinquency. The most important findings from this model are that the interaction terms for parental attachment and self-control remain consistent in terms of significance and direction, and the interaction between peer delinquency and collectivism remains nonsignificant. The interaction term between parents and collectivism remains positively significant ($B = .027$, $p < .001$), and self-control remains positively significant ($B = .032$, $p < .001$). This ensures the robustness of the findings. The findings from Model 7 are presented in Figure 2.

Table 2

Regression models predicting youth delinquency

DV Delinquency	Social Control			Self-Control			Full
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Independent							
Parental attachment	-.054***	-.040***	-.049***				-.038***
	(.002)	(.002)	(.003)				(.003)
Peer delinquency	3.34***	2.79***	2.97***				2.85***
	(.031)	(.031)	(.033)				(.033)
Self-Control				-.128***	-.079***	-.097***	-.055***
				(.002)	(.002)	(.002)	(.002)
Collectivistic	.025	.578***	-2.48***	-1.49***	-.078	-4.25***	-3.62***
	(.077)	(.095)	(.428)	(.083)	(.103)	(.264)	(.450)
Controls							
Male		1.61***	1.62***		1.65***	1.63***	1.67***
		(.064)	(.064)		(.071)	(.070)	(.064)
Grade level		-.252***	-.251***		.323***	.324***	-.251***
		(.039)	(.039)		(.042)	(.042)	(.039)
Family affluence		.008***	.008***		.009***	.009***	.007***
		(.002)	(.002)		(.002)	(.002)	(.002)
Family disruption		.010***	.010***		.028***	.028***	.008***
		(.001)	(.001)		(.002)	(.002)	(.001)
Attitudes		.068***	.068***		.070***	.069***	.046***
		(.002)	(.002)		(.002)	(.002)	(.002)
Non-native		.190*	.184*		.375***	.364***	.160*
		(.078)	(.079)		(.087)	(.086)	(.078)
GDP per Capita		.012***	.013***		.026***	.027***	.017***
		(.002)	(.002)		(.002)	(.002)	(.002)
Moderator							
Parental attachment			.037***				.027***
* Collectivism			(.005)				(.005)
Peers delinquency *			-.137				-.008
Collectivism			(.105)				(.106)
Self-Control *						.069***	.032***
Collectivism						(.004)	(.004)
Constant	5.89	2.29	2.95	11.11	.099	1.11	6.30
R^2	.255	.309	.310	.111	.169	.175	.320
F	4849.52	1906.68	1596.74	2646.24	966.60	905.24	1432.74

Note. $p < 0.001$ = ***, $p < .01$ = **, $p < .05$ = *. Standard error between brackets.

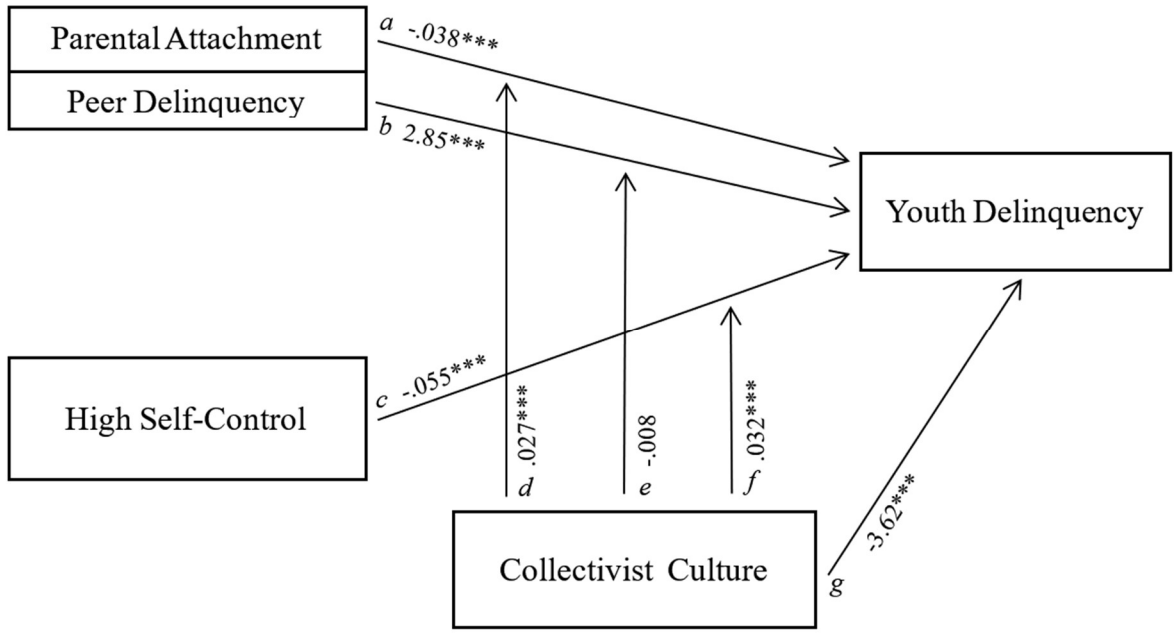
Extra analysis

The analysis in Table 4 shows that the direct and interaction effects remain significant and in the same direction when country dummy variables are added. Most countries have significantly less delinquency compared to Armenia (ref). No significant effect is found for France, Germany, Iceland, and The Netherlands. Ireland has significantly more delinquency compared to Armenia. This indicates that this study is not just comparing less wealthy countries to more wealthy countries when it comes to delinquency, but that there are other factors at play that contribute to the effects on delinquency.

Tables 5 to 7 show that youth from collectivistic cultures have higher parental attachment, fewer delinquent peers, and lower self-control.

Figure 2

Relationships between Parental Attachment, Peer Delinquency, Self-Control, Collectivism and Youth Delinquency



Note. p < 0.001 = ***, figure presents unstandardized coefficients from Model 7 in Table 2.

Conclusion & Discussion

The aim of this study was to investigate the effects of parental attachment, peer delinquency and self-control on youth delinquency and whether this effect differed between individualistic and collectivistic countries. A cross-national study sample of 42586 respondents between the ages of 12 and 15 from 27 different countries was used to test these hypotheses. The study includes self-reported data.

The most important conclusion of this study is that parental attachment and self-control significantly reduce youth delinquency, and that this relationship is weaker in collectivist countries. The lesser effect of parental attachment is an unexpected outcome as it was predicted through Social Control Theory that these social bonds would exert more influence in collectivist countries. The emphasis on societal expectations and group harmony was expected to strengthen social bonds, which should make Hirschi's social control theory more applicable in collectivistic cultures (Fukushima et al., 2009).

It could be speculated that this effect occurs due to the lower economic status of the collectivist countries in the dataset. However, the addition of the control variable of GDP per Capita shows that there is more self-reported delinquency in countries with a higher GDP per Capita. Additionally, as shown in Table 4, in comparison to Armenia (the country with the lowest GDP per Capita), most countries have significantly less self-reported youth delinquency, apart from France, Germany, Iceland, Ireland, and The Netherlands. Ireland even has significantly more youth delinquency. These are all countries that have a higher GDP per Capita than Armenia, suggesting that it is not just lack of wealth that predicts the prevalence of youth delinquency, but that there are likely other factors at play that are unexplored in this study. It is important to emphasise that there is not only less delinquency in collectivistic countries, as Table 5 also shows that parental attachment is higher in collectivistic countries. Therefore, it is possible that individuals who are delinquent in collectivistic cultures are more delinquent than their delinquent counterparts in individualistic countries. This may be the reason why the negative effect of the parental bond is weaker in these countries.

It is possible that differing parenting styles of parents from collectivistic and individualistic cultures affect the delinquent behaviour of adolescents, Bao and colleagues (2016) found that despite strong parental bonds, youth may still engage in delinquency due to

the influence of peer groups and social learning processes. Liu (2019) found that harsh parenting is associated with more delinquency. A study by Bradley and Corwyn (2002) found high variability in parenting styles within the US, which shows that parents from collectivistic cultures are more likely to utilise strict parenting styles compared to parents from individualistic cultures. Parents from collectivistic cultures often prioritise control, obedience and restraint during play or feeding and exercise authoritarian parenting styles (Grusec et al., 1997). More research needs to be done into *why* parental attachment has a weaker effect in collectivistic countries, and which mechanisms are behind this effect.

Alternatively, some studies show that individuals from collectivistic cultures are more likely to engage in deception or "impression management" to maintain a good and harmonious relationship with others (Lalwani et al., 2006), an effect that has also been found in paper surveys (Fang et al., 2016). This phenomenon is also called the desirability bias (Grimm, 2010). It is therefore possible that youth from collectivistic cultures answer more positively about their relationship with their parents because it is expected of them to have a good relationship with them. Additionally, due to the same desirability bias, they may not have answered the questions about delinquency truthfully.

That the effect of self-control is weaker in collectivist cultures is in line with our predictions based on the effect of social control. Additional analysis in Table 7 demonstrates that self-control is generally lower in collectivistic cultures compared to individualistic cultures. As argued, in collectivist cultures there is more emphasis on the group, and norms are more strongly enforced by the community, which discourages delinquent behaviour. This can lead to individuals not needing to rely as much on their self-control (Lu et al., 2012). Generally, most studies find that low self-control is a strong predictor of delinquent behaviour, regardless of culture or country (Cheung & Cheung, 2008; De Li, 2004; Jiang et al., 2020). However, within the context of delinquency, there has not yet been a study that examines the relationship between self-control, delinquency and the differing impact between collectivist or individualistic cultures. This study is a step to a broader understanding of the effects of culture on the relationship between peer delinquency and youth delinquency. Further research is needed to explore the underlying mechanisms behind this effect.

The last main conclusion is that having delinquent peers is strongly associated with youth delinquency. Those who have delinquent friends are more likely to be delinquent themselves, which is well established in the literature (Agnew, 1991; Aseltine, 1995; Cheung

& Cheung, 2007; Lerner et al., 2003). I had predicted that this effect would be stronger in collectivistic cultures, as youth may conform to the social norm within the peer group and be more strongly influenced by their peers, as found by Liu et al. (2017). However, the analysis revealed no significant difference between collectivistic or individualistic cultures concerning this relationship. Although these findings differ from my initial predictions, they are not surprising. The existing literature on the effects of peer delinquency (often in combination with parental attachment) in collectivistic countries show mixed results. Therefore, I formulated hypotheses that align more closely with the foundational theories on social control and cultural dimensions. The analysis in Table 6 shows that youth in collectivistic cultures have fewer delinquent peers on average. Which suggests that, despite the fact that youth from collectivistic cultures have fewer delinquent peers, the negative effect does not significantly differ between culture types. Thus, regardless of country or cultural context, peer delinquency is an important predictor of youth delinquency, underlining the importance of interventions that disrupt pro-criminal social networks.

It is important to acknowledge that this study is not without its limitations. First, parental attachment may vary across and within both individualistic and collectivistic cultures. This study has sorted 27 countries into two generalised groups, treating individualistic and collectivistic as two monolithic cultures. This study did not consider the cultural differences between countries within the same group. Furthermore, the questionnaire did not include questions that explicitly measure a person's individualism or collectivism, by using country averages we cannot be certain that there are no other factors that influence culture and delinquency. This study did not consider immigrants from collective cultures living in individualistic societies or individualistic individuals living in collectivistic countries, which may lead to differences in behaviour and findings. More research should be done with data from groups like this to accurately adapt interventions to migrants with a different culture type from the country majority. Moreover, this study included mostly European countries. Data from collectivistic cultures in South America, Africa and Asia might yield different results. The data used to categorise countries into collectivistic or individualistic is from 2023, because previous data was unavailable. Some of the countries may have scored differently in 2006 compared to how they do now.

This study used data which are collected from school-based samples. Samples like these often do not include youth who have learning problems, engage the most in delinquency or have a high degree of truancy. Lastly, the Cronbach's Alpha of parental attachment was low, indicating that it may not have been the best way to measure this social bond. Further studies should use different questions that more accurately measure the relationship between parents and children.

Policy Advice

Based on this study there are some implications for policy. However, it should be used within the appropriate perspective of a correlational study design and thus approached with care, as it does not eliminate the threat of confounding factors, influences and directional problems. The current study, as well as previous literature, provides support for the multidimensionality of youth delinquency and the factors that influence it. Peer delinquency, parental attachment and self-control all influence youth delinquency in its own way.

Parental attachment is a strong negative predictor of youth delinquency. The attachment youth have with their family members reduces the likelihood of engaging in delinquent behaviour. This study has reiterated the importance of the family in the prevention of youth delinquency. However, this study found that this relationship is weaker in collectivistic cultures. For this reason, interventions specifically geared towards the parental bond created in western cultures may not be as applicable in collectivistic cultures. This finding is not entirely surprising, as a meta-analysis into widely used family-based interventions like Multisystemic Therapy found that this intervention may not be as effective in countries outside the USA (Van Der Stouwe et al., 2014). It is therefore important that interventions are adjusted to the cultural context of the country, family, and individuals in question. In the conclusion it was speculated that because there is less delinquency in collectivistic countries, those who do engage in delinquency may be more delinquent than their individualistic counterparts. This may be the reason why the negative effect of parental attachment is weaker. Therefore, it is possible that these individuals need more intense interventions. The importance of measuring risks and adjusting interventions accordingly is one of the pillars of interventions based on the Risk-Need-Responsivity model by Andrews & Bonta (1990), a model that has found much empirical support (Latessa & Lowenkamp, 2004). Collectivistic countries may benefit from implementing interventions based on this model, as it allows for targeted, personalised interventions. An example of this is the Person Oriented Approach (*Dutch: Persoonsgerichte aanpak*) used in The Netherlands (Veiligheidscoalitie, n.d.).

Additionally, it is advisable for collectivist countries to invest in research on the interventions used to combat youth delinquency. This could be done by utilising universities and engaging in international partnerships, like with the ISRD-2, which could benefit resource-limited countries by providing them with pre-developed research tools and post-

survey processing. It is likely unnecessary to re-invent the wheel completely, but the interventions should be adjusted to better promote the protective effect of parental attachment on youth delinquency. Interventions geared towards balanced parenting practices, which combine warmth and discipline, or cultural adaptation programs that focus on respecting cultural values while integrating effective parenting practices may be useful to implement. First and foremost, we need to gain more understanding into the mechanisms that drive the relationship between parental bonds and youth delinquency in collectivistic cultures in order to adjust policies and interventions in an effective manner.

Peer delinquency has a strong positive effect on youth delinquency, and this effect does not differ between collectivistic and individualistic cultures. This means that interventions created in western cultures are likely applicable in collectivistic cultures as well. While personal and cultural factors, such as social norms and practices should be taken into account while implementing (new) interventions, collectivistic cultures can implement policies and interventions that have shown to be effective in western countries and are likely to achieve similar results. Peer group-based interventions, for example where one looks at the role of the individual and their position within the group may be helpful to pick out the most influential individual to target the interventions at. This intervention assumes that, once the most influential individuals engage in less delinquency, the others will follow (Dodge et al., 2006).

This study showed that having high self-control reduces delinquent behaviour, but that this effect was weaker in collectivistic cultures. Since youth in collectivistic cultures have lower self-control overall, and since self-control is regarded as an important predictor of delinquency it could be helpful to improve self-control among youth in collectivistic countries. Self-control training could be implemented at schools to improve self-control among students (Denson et al., 2011). However, it is important to note that most studies on self-control improvement are done in western countries. This means that they may not be as applicable in collectivistic countries. In order to combat this, trainings should be adjusted to the cultural context of the country. Extra research into self-control mechanisms and appropriate training may be needed to achieve the best results.

This study also demonstrated that delinquency rates are generally lower in collectivistic cultures. Although youth from collectivistic cultures exhibit lower self-control, they enjoy higher levels of parental attachment and fewer delinquent peers. Cultural norms

and practices in these societies may play an important role in deterring delinquent behaviour for the majority of collectivistic youth. Individualistic countries could benefit from fostering other forms of social control, such as social cohesion and emphasising social harmony as a way to prevent delinquency. This could be achieved through local initiatives, such as neighbourhood events and community centres, which promote community engagement and support.

It is essential to recognize that, despite the amount of research into Social Control Theory and Self-Control Theory, there are still many unknown and, underlying, factors that can influence their effects on delinquency. It is therefore important to keep investing time and money into developing research and fitting interventions, especially in countries that are not often present in study data. As mentioned, cross-national research partnerships may be beneficial to acquire more data from underrepresented countries. While interventions are often generalised across nations, this study shows the importance of a nuanced view of these theories and the importance of national, cultural, or personal adaptation to best fit the context and needs of the individual.

References

Agnew, R. (1985). SOCIAL CONTROL THEORY AND DELINQUENCY: a LONGITUDINAL TEST. *Criminology*, *23*(1), 47–61. https://doi.org/10.1111/j.1745-9125.1985.tb00325.x

Agnew, R. (1991). THE INTERACTIVE EFFECTS OF PEER VARIABLES ON DELINQUENCY. *Criminology*, *29*(1), 47–72. https://doi.org/10.1111/j.1745-9125.1991.tb01058.x

Agnew, R., Matthews, S. K., Bucher, J., Welcher, A. N., & Keyes, C. (2008). Socioeconomic status, economic problems, and delinquency. *Youth & Society*, *40*(2), 159–181. https://doi.org/10.1177/0044118x08318119

Akers, R. L. (1991). Self-control as a general theory of crime. *Journal of Quantitative Criminology*, *7*(2), 201–211. https://doi.org/10.1007/bf01268629

Andresen, M. A. (2015). Unemployment, GDP, and crime: The importance of multiple measurements of the economy. *Canadian Journal of Criminology and Criminal Justice*, *57*(1), 35–58. https://doi.org/10.3138/cjccj.2013.e37

Andrews, D. A., Zinger, I., Hoge, R. D., Bonta, J., Gendreau, P., & Cullen, F. T. (1990). Does correctional treatment work? A clinically relevant and psychologically informed meta-analysis. *Criminology*, *28*(3), 369–404. https://doi.org/10.1111/j.1745-9125.1990.tb01330.x

Aseltine, R. H. (1995). A reconsideration of parental and peer influences on adolescent deviance. *Journal of Health and Social Behavior/Journal of Health & Social Behavior*, *36*(2), 103. https://doi.org/10.2307/2137219

Bao, W., Haas, A., & Tao, L. (2016). Impact of Chinese Parenting on Adolescents' Social Bonding, Affiliation with Delinquent Peers, and Delinquent Behavior. *Asian Journal of Criminology*, *12*(2), 81–105. https://doi.org/10.1007/s11417-016-9239-0

Baumer, E. P., Cundiff, K., & Luo, L. (2020). The contemporary transformation of american youth: An analysis of change in the prevalence of delinquency, 1991–2015. *Criminology*, *59*(1), 109–136. https://doi.org/10.1111/1745-9125.12264

Berten, H., Cardoen, D., Van Rossem, R., Brondeel, R., & Vettenburg, N. (2013). Alcohol use among young adolescents in Belgium, the Netherlands, Germany and Austria: the effects of type of education. *Young*, *21*(4), 363–385. https://doi.org/10.1177/1103308813506308

Blumstein, A., & Wallman, J. (2005). *The crime drop in America*. http://ci.nii.ac.jp/ncid/BA76994174

Bradley, R. H., & Corwyn, R. F. (2002). Socioeconomic status and child development. *Annual Review of Psychology*, *53*(1), 371–399. https://doi.org/10.1146/annurev.psych.53.100901.135233

Burt, C. H., Simons, R. L., & Simons, L. G. (2006). A LONGITUDINAL TEST OF THE EFFECTS OF PARENTING AND THE STABILITY OF SELF-CONTROL: NEGATIVE EVIDENCE FOR THE GENERAL THEORY OF CRIME*. *Criminology (Beverly Hills)*, *44*(2), 353–396. https://doi.org/10.1111/j.1745-9125.2006.00052.x

Carrington, P. J. (2013). Trends in the Seriousness of Youth Crime in Canada, 1984–2011. *Canadian Journal of Criminology and Criminal Justice*, *55*(2), 293–314. https://doi.org/10.3138/cjccj.2012.e25

Carter, A. (2018). The consequences of adolescent delinquent Behavior for adult employment outcomes. *Journal of Youth and Adolescence*, *48*(1), 17–29. https://doi.org/10.1007/s10964-018-0934-2

Chan, H. C. O., & Chui, W. H. (2015). Social Bond and Self-Reported Nonviolent and Violent Delinquency: A study of traditional low risk, At-Risk, and adjudicated male

Chinese adolescents. *Child & Youth Care Forum*, *44*(5), 711–730. https://doi.org/10.1007/s10566-015-9303-4

Chapple, C. L. (2005). Self-control, peer relations, and delinquency. *Justice Quarterly*, *22*(1), 89–106. https://doi.org/10.1080/0741882042000333654

Cheung, N. W. T., & Cheung, Y. W. (2007). Self-Control, Social Factors, and Delinquency: A test of the general theory of crime among adolescents in Hong Kong. *Journal of Youth and Adolescence*, *37*(4), 412–430. https://doi.org/10.1007/s10964-007-9218-y

Chilton, R. J., & Markle, G. E. (1972). Family disruption, delinquent conduct and the effect of subclassification. *American Sociological Review*, *37*(1), 93. https://doi.org/10.2307/2093496

Cho, M., Kim, H., & Moon, S. S. (2016). The longitudinal effects of influence of parental attachment and emotion regulation on Internet delinquency in early adolescence. *Journal of Human Behavior in the Social Environment*, *26*(7–8), 587–596. https://doi.org/10.1080/10911359.2016.1238802

Cohen, P., Cohen, J., Aiken, L. S., & West, S. G. (1999). The problem of units and the circumstance for POMP. *Multivariate Behavioral Research*, *34*(3), 315–346. https://doi.org/10.1207/s15327906mbr3403_2

Colman, R. E., Kim, D. H., Mitchell-Herzfeld, S., & Shady, T. A. (2008). Long-term consequences of delinquency: Child maltreatment and crime in early adulthood [Dataset]. In *PsycEXTRA Dataset*. https://doi.org/10.1037/e544972009-001

Costello, B., & Laub, J. H. (2020). Social Control Theory: The Legacy of Travis Hirschi'sCauses of Delinquency. *Annual Review of Criminology*, *3*(1), 21–41. https://doi.org/10.1146/annurev-criminol-011419-041527

Cox, R. B., Criss, M. M., Harrist, A. W., & Roblyer, M. I. Z. (2017). Are negative peer influences domain specific? Examining the influence of peers and parents on

externalizing and drug use behaviors. *the Journal of Primary Prevention/the Journal of Primary Prevention*, *38*(5), 515–536. https://doi.org/10.1007/s10935-017-0488-1

Crosnoe, R., Erickson, K. G., & Dornbusch, S. M. (2002). Protective functions of family relationships and school factors on the deviant behavior of adolescent boys and girls. *Youth & Society*, *33*(4), 515–544. https://doi.org/10.1177/0044118x02033004002

Cuervo, K., Villanueva, L., Born, M., & Gavray, C. (2017). Analysis of violent and non-violent versatility in self-reported juvenile delinquency. *Psychiatry, Psychology, and Law*, *25*(1), 72–85. https://doi.org/10.1080/13218719.2017.1347935

Davis, C., Tang, C., & Ko, J. (2004). The impact of peer, family and school on delinquency. *International Social Work*, *47*(4), 489–502. https://doi.org/10.1177/0020872804046255

De Ridder, D. T. D., Lensvelt-Mulders, G., Finkenauer, C., Stok, F. M., & Baumeister, R. F. (2011). Taking stock of Self-Control. *Personality and Social Psychology Review*, *16*(1), 76–99. https://doi.org/10.1177/1088868311418749

DeBono, A., Shmueli, D., & Muraven, M. (2010). Rude and Inappropriate: The Role of Self-Control in Following Social Norms. *Personality and Social Psychology Bulletin*, *37*(1), 136–146. https://doi.org/10.1177/0146167210391478

Delvecchio, E., Mabilia, D., Miconi, D., Chirico, I., & Li, J. (2014). Self-Consciousness in Chinese and Italian adolescents: an Exploratory Cross-Cultural study using the ASC. *Current Psychology*, *34*(1), 140–153. https://doi.org/10.1007/s12144-014-9247-0

Denson, T. F., Capper, M. M., Oaten, M., Friese, M., & Schofield, T. P. (2011). Self-control training decreases aggression in response to provocation in aggressive individuals. *Journal of Research in Personality*, *45*(2), 252–256. https://doi.org/10.1016/j.jrp.2011.02.001

Dishion, T. J., Patterson, G. R., & Griesler, P. C. (1994). Peer adaptations in the development of antisocial behavior. In *The Plenum series in social/clinical psychology* (pp. 61–95). https://doi.org/10.1007/978-1-4757-9116-7_4

Dodge, K. A., Dishion, T. J., & Lansford, J. E. (2006). Deviant peer influences in programs for youth problems and solutions. *Guilford Publications*. http://ci.nii.ac.jp/ncid/BB01765081

Dohnt, H., & Tiggemann, M. (2006). Body image Concerns in Young Girls: The role of peers and media prior to Adolescence. *Journal of Youth and Adolescence*, *35*(2), 135–145. https://doi.org/10.1007/s10964-005-9020-7

Dong, B., & Krohn, M. D. (2016). The protective effects of family support on the relationship between official intervention and general delinquency across the life course. *Journal of Developmental and Life-course Criminology*, *3*(1), 39–61. https://doi.org/10.1007/s40865-016-0051-4

D'Onofrio, B. M., Goodnight, J. A., Van Hulle, C. A., Rodgers, J. L., Rathouz, P. J., Waldman, I. D., & Lahey, B. B. (2008). A Quasi-Experimental analysis of the association between family income and offspring conduct problems. *Journal of Abnormal Child Psychology*, *37*(3), 415–429. https://doi.org/10.1007/s10802-008-9280-2

Dou, K., Nie, Y., Wang, Y., & Liu, Y. (2016). The relationship between self-control, job satisfaction and life satisfaction in Chinese employees: A preliminary study. *Work*, *55*(4), 797–803. https://doi.org/10.3233/wor-162447

Eccles, J. S. (2005). Influences of parents' education on their children's educational attainments: the role of parent and child perceptions. *London Review of Education*, *3*(3). https://doi.org/10.1080/14748460500372309

Eisenberg, N., Zhou, Q., Losoya, S. H., Fabes, R. A., Shepard, S. A., Murphy, B. C., Reiser, M., Guthrie, I. K., & Cumberland, A. A. (2003). The relations of parenting, effortful control, and ego control to children's emotional expressivity. *Child Development*, *74*(3), 875–895. https://doi.org/10.1111/1467-8624.00573

Elonheimo, H. (2014). Evidence for the crime drop: survey findings from two Finnish cities between 1992 and 2013. *Journal of Scandinavian Studies in Criminology and Crime Prevention*, *15*(2), 209–217. https://doi.org/10.1080/14043858.2014.939458

Enzmann, D., Marshall, I. H., Killias, M., Junger-Tas, J., Steketee, M., & Gruszczynska, B. (2015, January 9). *Second International Self-Reported Delinquency Study, 2005-2007*. www.icpsr.edu. https://www.icpsr.umich.edu/web/NACJD/studies/34658/summary

Enzmann, Dirk, Ineke H. Marshall, Martin Killias, Josine Junger-Tas, Majone Steketee, and Beata Gruszczynska. Second International Self-Reported Delinquency Study, 2005-2007. ICPSR34658-v2. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2015-01-09. http://doi.org/10.3886/ICPSR34658.v2

Evans, T. D., Cullen, F. T., Burton, V. S., Dunaway, R. G., & Benson, M. L. (1997). THE SOCIAL CONSEQUENCES OF SELF-CONTROL: TESTING THE GENERAL THEORY OF CRIME*. *Criminology*, *35*(3), 475–504. https://doi.org/10.1111/j.1745-9125.1997.tb01226.x

Fang, J., Prybutok, V., & Wen, C. (2016). Shirking behavior and socially desirable responding in online surveys: A cross-cultural study comparing Chinese and American samples. *Computers in Human Behavior*, *54*, 310–317. https://doi.org/10.1016/j.chb.2015.08.019

Fitzgerald, A., Fitzgerald, N., & Aherne, C. (2012). Do peers matter? A review of peer and/or friends' influence on physical activity among American adolescents. *Journal of Adolescence*, *35*(4), 941–958. https://doi.org/10.1016/j.adolescence.2012.01.002

Gallupe, O., McLevey, J., & Brown, S. (2018). Selection and Influence: A Meta-Analysis of the association between peer and Personal Offending. *Journal of Quantitative Criminology*, *35*(2), 313–335. https://doi.org/10.1007/s10940-018-9384-y

Gault-Sherman, M. (2011). It's a Two-Way street: the bidirectional relationship between parenting and delinquency. *Journal of Youth and Adolescence*, *41*(2), 121–145. https://doi.org/10.1007/s10964-011-9656-4

Gottfredson, M. R., & Hirschi, T. (1990). A general theory of crime. In *Stanford University Press eBooks*. https://doi.org/10.1515/9781503621794

Gove, W. R. (2018). The Effect of Age and Gender on Deviant Behavior: A Biopsychosocial Perspective *. In *Routledge eBooks* (pp. 115–144). https://doi.org/10.4324/9781351329040-9

Grasmick, H. G., Tittle, C. R., Bursik, R. J., & Arneklev, B. J. (1993). Low Self-Control Measure [Dataset]. In *PsycTESTS Dataset*. https://doi.org/10.1037/t11580-000

Greenberg, M. T., Siegel, J. M., & Leitch, C. J. (1983). The nature and importance of attachment relationships to parents and peers during adolescence. *Journal of Youth and Adolescence*, *12*(5), 373–386. https://doi.org/10.1007/bf02088721

Greenfield, P. M., Keller, H., Fuligni, A. J., & Maynard, A. E. (2003). Cultural pathways through universal development. *Annual Review of Psychology*, *54*(1), 461–490. https://doi.org/10.1146/annurev.psych.54.101601.145221

Griffin, K. W., Botvin, G. J., Scheier, L. M., Diaz, T., & Miller, N. (2000). Parenting practices as predictors of substance use, delinquency, and aggression among urban

minority youth: Moderating effects of family structure and gender. *Psychology of Addictive Behaviors*, *14*(2), 174–184. https://doi.org/10.1037/0893-164x.14.2.174

Grimm, P. (2010). Social desirability bias. *Wiley International Encyclopedia of Marketing*. https://doi.org/10.1002/9781444316568.wiem02057

Grusec, J. E., Rudy, D., & Martini, T. (1997). Parenting cognitions and child outcomes: An overview and implications for children's internalization of values. *Parenting and Children's Internalization of Values: A Handbook of Contemporary Theory*, 259–282. https://psycnet.apa.org/record/1997-36410-009

Hao, L., & Matsueda, R. L. (2006). Family dynamics through childhood: A sibling model of behavior problems. *Social Science Research*, *35*(2), 500–524. https://doi.org/10.1016/j.ssresearch.2004.10.003

Hay, C. (2001). PARENTING, SELF-CONTROL, AND DELINQUENCY: a TEST OF SELF-CONTROL THEORY*. *Criminology (Beverly Hills)*, *39*(3), 707–736. https://doi.org/10.1111/j.1745-9125.2001.tb00938.x

Haynie, D. L., & Osgood, D. W. (2005). Reconsidering Peers and Delinquency: How do Peers Matter? *Social Forces*, *84*(2), 1109–1130. https://doi.org/10.1353/sof.2006.0018

Henggeler, S. W. (1989). *Delinquency in adolescence*. http://ci.nii.ac.jp/ncid/BA07781811

Higgins, P. C., & Albrecht, G. L. (1977). Hellfire and delinquency revisited. *Social Forces*, *55*(4), 952–958. https://doi.org/10.1093/sf/55.4.952

Hirschi, T. (2017). Causes of delinquency. In *Routledge eBooks*. https://doi.org/10.4324/9781315081649

Hoeve, M., Stams, G. J., Van Der Put, C. E., Dubas, J. S., Van Der Laan, P., & Gerris, J. (2012). A Meta-analysis of Attachment to Parents and Delinquency. *Journal of Abnormal Child Psychology*, *40*(5), 771–785. https://doi.org/10.1007/s10802-011-9608-1

Huang, C., Li, C., Zhao, F., Zhu, J., Wang, S., Yang, J., & Sun, G. (2023). Parental, teacher and peer effects on the social behaviors of Chinese adolescents: A structural equation modeling analysis. *Brain Sciences*, *13*(2), 191. https://doi.org/10.3390/brainsci13020191

Hui, C. H. (1988). Measurement of individualism-collectivism. *Journal of Research in Personality*, *22*(1), 17–36. https://doi.org/10.1016/0092-6566(88)90022-0

Huijsmans, T., Nivette, A., Eisner, M., & Ribeaud, D. (2019). Social influences, peer delinquency, and low self-control: An examination of time-varying and reciprocal effects on delinquency over adolescence. *European Journal of Criminology*, *18*(2), 192–212. https://doi.org/10.1177/1477370819838720

Ingram, J. R., Patchin, J. W., Huebner, B. M., McCluskey, J. D., & Bynum, T. S. (2007). Parents, friends, and serious delinquency. *Criminal Justice Review*, *32*(4), 380–400. https://doi.org/10.1177/0734016807311436

Job, V., Friese, M., & Bernecker, K. (2015). Effects of practicing self-control on academic performance. *Motivation Science*, *1*(4), 219–232. https://doi.org/10.1037/mot0000024

Juby, H., & Farrington, D. P. (2001). Disentangling the Link between Disrupted Families and Delinquency : Sociodemography, Ethnicity and Risk Behaviours. *British Journal of Criminology*, *41*(1), 22–40. https://doi.org/10.1093/bjc/41.1.22

Junger-Tas, J., Marshall, I. H., Enzmann, D., Killias, M., Steketee, M., & Gruszczyńska, B. (2012). The many faces of youth crime. In *Springer eBooks*. https://doi.org/10.1007/978-1-4419-9455-4

Kacen, J. J., & Lee, J. (2002). The influence of culture on consumer impulsive buying behavior. *Journal of Consumer Psychology*, *12*(2), 163–176. https://doi.org/10.1207/s15327663jcp1202_08

Kandel, D. B. (1978). Similarity in real-life adolescent friendship pairs. *Journal of Personality and Social Psychology*, *36*(3), 306–312. https://doi.org/10.1037/0022-3514.36.3.306

Kelley, M. L., & Tseng, H. (1992). Cultural differences in child rearing. *Journal of Cross-cultural Psychology*, *23*(4), 444–455. https://doi.org/10.1177/0022022192234002

Kierkus, C. A., & Baer, D. (2002). A social control explanation of the relationship between family structure and delinquent behaviour. *Canadian Journal of Criminology*, *44*(4), 425–458. https://doi.org/10.3138/cjcrim.44.4.425

Killias, M., & Lukash, A. (2019). Migration, not migrants, is the problem: Delinquency among migrants and non-migrants in Switzerland and ex-Yugoslavia. *European Journal of Criminology*, *17*(6), 896–917. https://doi.org/10.1177/1477370819828329

Kim, E., Kwak, D., & Yun, M. (2010). Investigating the effects of peer association and parental influence on adolescent substance use: A study of adolescents in South Korea. *Journal of Criminal Justice*, *38*(1), 17–24. https://doi.org/10.1016/j.jcrimjus.2009.11.003

Kim, J., & Lee, Y. (2021). Developmental trajectories and predictors of Delinquent peer Association. *Deviant Behavior*, *43*(12), 1523–1542. https://doi.org/10.1080/01639625.2021.1996214

Kim, T. E., & Goto, S. G. (2000). peer delinquency and parental social support as predictors of Asian American adolescent delinquency. *Deviant Behavior*, *21*(4), 331–347. https://doi.org/10.1080/016396200404122

Kopp, C. B. (1982). Antecedents of self-regulation: A developmental perspective. *Developmental Psychology*, *18*(2), 199–214. https://doi.org/10.1037/0012-1649.18.2.199

Kotlaja, M. (2018). Cultural contexts of individualism vs. collectivism: Exploring the relationships between family bonding, supervision and deviance. *Cultural Contexts of Individualism Vs. Collectivism: Exploring the Relationships Between Family Bonding, Supervision and Deviance*, *17*(3). https://doi.org/10.1177/1477370818792482

Kotlaja, M. M. (2018). Cultural contexts of individualism vs. collectivism: Exploring the relationships between family bonding, supervision and deviance. *European Journal of Criminology*, *17*(3), 288–305. https://doi.org/10.1177/1477370818792482

Kunovich, R. M. (2006). An exploration of the salience of Christianity for national identity in Europe. *Sociological Perspectives*, *49*(4), 435–460. https://doi.org/10.1525/sop.2006.49.4.435

Lalwani, A. K., Shavitt, S., & Johnson, T. (2006). What is the relation between cultural orientation and socially desirable responding? *Journal of Personality and Social Psychology*, *90*(1), 165–178. https://doi.org/10.1037/0022-3514.90.1.165

Lansford, J. E. (2022). Annual Research Review: Cross-cultural similarities and differences in parenting. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, *63*(4), 466–479. https://doi.org/10.1111/jcpp.13539

Latessa, E. J., & Lowenkamp, C. T. (2004). Understanding the risk principle: how and why correctional interventions can harm low-risk offenders. *Topics in Community Corrections*, 38–8. https://dvrisc.org/wp-content/uploads/2021/09/Understanding-the-Risk-Principle.pdf

Laub, J. H., & Sampson, R. J. (1988). UNRAVELING FAMILIES AND DELINQUENCY: A REANALYSIS OF THE GLUECKS' DATA*. *Criminology*, *26*(3), 355–380. https://doi.org/10.1111/j.1745-9125.1988.tb00846.x

Laursen, B. (2017). Making and keeping friends: the importance of being similar. *Child Development Perspectives*, *11*(4), 282–289. https://doi.org/10.1111/cdep.12246

Le, T., Monfared, G., & Stockdale, G. D. (2005). The Relationship of School, Parent, and Peer Contextual Factors with Self-Reported Delinquency for Chinese, Cambodian, Laotian or Mien, and Vietnamese Youth. *Crime and Delinquency*, *51*(2), 192–219. https://doi.org/10.1177/0011128704273472

Leiber, M. J., & Wacker, M. E. (1997). A theoretical and empirical assessment of Power-Control Theory and Single-Mother Families. *Youth & Society*, *28*(3), 317–350. https://doi.org/10.1177/0044118x97028003003

Lerner, R. M., Easterbrooks, M. A., & Mistry, J. (2003). *Handbook of Psychology, Developmental Psychology*. John Wiley & Sons.

Li, J., Vazsonyi, A. T., & Dou, K. (2018). Is individualism-collectivism associated with self-control? Evidence from Chinese and U.S. samples. *PloS One*, *13*(12), e0208541. https://doi.org/10.1371/journal.pone.0208541

Li, J., Willems, Y. E., Stok, F. M., Deković, M., Bartels, M., & Finkenauer, C. (2019). Parenting and Self-Control across Early to Late Adolescence: A Three-Level Meta-Analysis. *Perspectives on Psychological Science*, *14*(6), 967–1005. https://doi.org/10.1177/1745691619863046

Liu, J., Liu, J., Liu, J., Liu, J., & Liu, J. (2017). The influence of peer behavior as a function of social and cultural closeness: A meta-analysis of normative influence on adolescent smoking initiation and continuation. *Psychological Bulletin*, *143*(10), 1082–1115. https://doi.org/10.1037/bul0000113

Liu, R. X. (2019). Harsh parental discipline and delinquency in mainland China: The conditional influences of gender and bonding to paternal grandparents. *Sociological Focus*, *52*(4), 274–291. https://doi.org/10.1080/00380237.2019.1668320

Loeber, R., & Farrington, D. P. (2011). *Young Homicide Offenders and Victims: Risk Factors, Prediction, and Prevention from Childhood*. http://ci.nii.ac.jp/ncid/BB13271726

Lösel, F., & Farrington, D. P. (2012). Direct protective and buffering protective factors in the development of youth violence. *American Journal of Preventive Medicine*, *43*(2), S8–S23. https://doi.org/10.1016/j.amepre.2012.04.029

Lu, Y., Yu, Y., Ren, L., & Marshall, I. H. (2012). Exploring the utility of Self-Control Theory for risky behavior and minor delinquency among Chinese adolescents. *Journal of Contemporary Criminal Justice*, *29*(1), 32–52. https://doi.org/10.1177/1043986212471240

Mathes, E. W., Lane, D., Helmers, B. R., Jamnik, M. R., Hendrickson, M., & Aleshire, B. (2017). The dark side of self-control: High self-control leads to better outcomes when engaging in bad behaviors. *Personality and Individual Differences*, *105*, 326–329. https://doi.org/10.1016/j.paid.2016.10.005

Matsueda, R. L., & Anderson, K. (1998). THE DYNAMICS OF DELINQUENT PEERS AND DELINQUENT BEHAVIOR*. *Criminology*, *36*(2), 269–308. https://doi.org/10.1111/j.1745-9125.1998.tb01249.x

Meldrum, R. C., & Hay, C. (2011). Do Peers Matter in the Development of Self-Control? Evidence from a Longitudinal Study of Youth. *Journal of Youth and Adolescence*, *41*(6), 691–703. https://doi.org/10.1007/s10964-011-9692-0

Miller, H. V., Barnes, J. C., & Beaver, K. M. (2011). Self-control and health outcomes in a nationally representative sample. *American Journal of Health Behavior*, *35*(1). https://doi.org/10.5993/ajhb.35.1.2

Miller, K. E., Melnick, M. J., Barnes, G. M., Sabo, D., & Farrell, M. (2006). Athletic involvement and adolescent delinquency. *Journal of Youth and Adolescence*, *36*(5). https://doi.org/10.1007/s10964-006-9123-9

Miller-Johnson, S., Coie, J. D., Maumary-Gremaud, A., Lochman, J. E., & Terry, R. (1999). Relationship between childhood peer rejection and aggression and adolescent

delinquency Severity and type among African American youth. *Journal of Emotional and Behavioral Disorders*, *7*(3), 137–146. https://doi.org/10.1177/106342669900700302

Moffitt, T. E., Arseneault, L., Belsky, D. W., Dickson, N., Hancox, R. J., Harrington, H., Houts, R., Poulton, R., Roberts, B. W., Ross, S. L., Sears, M. R., Thomson, W. M., & Caspi, A. (2011). A gradient of childhood self-control predicts health, wealth, and public safety. *Proceedings of the National Academy of Sciences of the United States of America*, *108*(7), 2693–2698. https://doi.org/10.1073/pnas.1010076108

Moore, L. L., Lombardi, D. A., White, M. J., Campbell, J. L., Oliveria, S. A., & Ellison, R. C. (1991). Influence of parents' physical activity levels on activity levels of young children. *The Journal of Pediatrics*, *118*(2), 215–219. https://doi.org/10.1016/s0022-3476(05)80485-8

Na, C., & Paternoster, R. (2012). CAN SELF-CONTROL CHANGE SUBSTANTIALLY OVER TIME? RETHINKING THE RELATIONSHIP BETWEEN SELF- AND SOCIAL CONTROL*. *Criminology*, *50*(2), 427–462. https://doi.org/10.1111/j.1745-9125.2011.00269.x

Nagasawa, R. H., Qian, Z., & Wong, P. (2000). Social control theory as a theory of conformity: the case of Asian/Pacific drug and alcohol nonuse. *Sociological Perspectives*, *43*(4), 581–603. https://doi.org/10.2307/1389549

Nunes, K. L., Pedneault, C. I., & Hermann, C. A. (2022). Do attitudes toward violence affect violent behavior? *Journal of Aggression, Maltreatment & Trauma*, *31*(7), 835–850. https://doi.org/10.1080/10926771.2021.2019158

Osgood, D. W., & Anderson, A. C. (2004). UNSTRUCTURED SOCIALIZING AND RATES OF DELINQUENCY. *Criminology*, *42*(3), 519–550. https://doi.org/10.1111/j.1745-9125.2004.tb00528.x

Oyserman, D., Coon, H. M., & Kemmelmeier, M. (2002). Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analyses. *Psychological Bulletin*, *128*(1), 3–72. https://doi.org/10.1037/0033-2909.128.1.3

Piquero, N. L., Gover, A. R., MacDonald, J. M., & Piquero, A. R. (2005). The influence of delinquen peers on delinquency. *Youth & Society*, *36*(3), 251–275. https://doi.org/10.1177/0044118x04265652

Pokhrel, P., Bennett, B. L., Regmi, S., Idrisov, B., Galimov, A., Akhmadeeva, L., & Sussman, S. (2017). Individualism-Collectivism, Social Self-Control and adolescent Substance Use and Risky Sexual behavior. *Substance Use & Misuse*, *53*(7), 1057–1067. https://doi.org/10.1080/10826084.2017.1392983

Poulin, F., Cillessen, A. H. N., Hubbard, J. A., Coie, J. D., Dodge, K. A., & Schwartz, D. A. (1997). Children's friends and behavioral similarity in two social contexts. *Social Development*, *6*(2), 224–236. https://doi.org/10.1111/j.1467-9507.1997.tb00103.x

Pratt, T. C., & Cullen, F. T. (2000). THE EMPIRICAL STATUS OF GOTTFREDSON AND HIRSCHI'S GENERAL THEORY OF CRIME: a META-ANALYSIS. *Criminology*, *38*(3), 931–964. https://doi.org/10.1111/j.1745-9125.2000.tb00911.x

Rankin, J. H., & Kern, R. M. (1994). PARENTAL ATTACHMENTS AND DELINQUENCY*. *Criminology*, *32*(4), 495–515. https://doi.org/10.1111/j.1745-9125.1994.tb01163.x

Robins, L. N. (1978). Sturdy childhood predictors of adult antisocial behaviour: replications from longitudinal studies. *Psychological Medicine*, *8*(4), 611–622. https://doi.org/10.1017/s0033291700018821

Rudy, D., & Grusec, J. E. (2006). Authoritarian parenting in individualist and collectivist groups: Associations with maternal emotion and cognition and children's self-esteem.

Journal of Family Psychology, *20*(1), 68–78. https://doi.org/10.1037/0893-3200.20.1.68

Sampson, R. J., & Laub, J. H. (1992). Crime and deviance in the life course. *Annual Review of Sociology*, *18*(1), 63–84. https://doi.org/10.1146/annurev.so.18.080192.000431

Sampson, R. J., & Laub, J. H. (1994). Urban Poverty and the Family Context of Delinquency: A new look at structure and process in a Classic study. *Child Development*, *65*(2), 523. https://doi.org/10.2307/1131400

Savolainen, J., Savolainen, J., Hughes, L. A., Savolainen, J., Hughes, L. A., & Bjarnason, T. (2013). Cross-National Variation in Socioeconomic Status and Delinquency: A Comparative Study of Adolescents from 26 European Countries. *Comparative Sociology*, *12*(5), 677–704. https://doi.org/10.1163/15691330-12341280

Scaglioni, S., Salvioni, M., & Galimberti, C. (2008). Influence of parental attitudes in the development of children eating behaviour. *British Journal of Nutrition*, *99*(S1), S22–S25. https://doi.org/10.1017/s0007114508892471

Scott, T., & Brown, S. L. (2018). Risks, strengths, gender, and recidivism among justice-involved youth: A meta-analysis. *Journal of Consulting and Clinical Psychology*, *86*(11), 931–945. https://doi.org/10.1037/ccp0000343

Smetana, J. G. (2017). Current research on parenting styles, dimensions, and beliefs. *Current Opinion in Psychology*, *15*, 19–25. https://doi.org/10.1016/j.copsyc.2017.02.012

Steketee, M., Junger, M., & Junger-Tas, J. (2013). Sex differences in the predictors of Juvenile delinquency. *Journal of Contemporary Criminal Justice*, *29*(1), 88–105. https://doi.org/10.1177/1043986212470888

Svensson, R., & Shannon, D. (2020). Immigrant Background and Crime among Young people: An examination of the importance of delinquent friends based on National

Self-Report data. *Youth & Society*, *53*(8), 1335–1355. https://doi.org/10.1177/0044118x20942248

The Culture Factor. (2023, October 16). *Country Comparison Tool*. www.hofstede-insights.com. https://www.hofstede-insights.com/country-comparison-tool

The World Bank. (n.d.). *GDP per capita By Country in current US$ 2006*. https://wits.worldbank.org/CountryProfile/en/Country/BY-COUNTRY/StartYear/2006/EndYear/2006/Indicator/NY-GDP-PCAP-CD

Tilley, N. (2017). Handbook of Crime Prevention and Community Safety. In *Routledge eBooks*. https://doi.org/10.4324/9781315724393

Tittle, C. R., Ward, D. A., & Grasmick, H. G. (2003). Gender, Age, and Crime/Deviance: A Challenge to Self-Control Theory. *Journal of Research in Crime and Delinquency/the Journal of Research in Crime and Delinquency*, *40*(4), 426–453. https://doi.org/10.1177/0022427803256074

Triandis, H. C. (2001). Individualism-Collectivism and personality. *Journal of Personality*, *69*(6), 907–924. https://doi.org/10.1111/1467-6494.696169

Triandis, H. C., Brislin, R., & Hui, C. (1988). Cross-cultural training across the individualism-collectivism divide. *International Journal of Intercultural Relations*, *12*(3), 269–289. https://doi.org/10.1016/0147-1767(88)90019-3

Uziel, L., & Hefetz, U. (2014). The selfish side of Self–Control. *European Journal of Personality*, *28*(5), 449–458. https://doi.org/10.1002/per.1972

Van Der Laan, A., Rokven, J., Weijters, G., & Beerthuizen, M. G. C. J. (2019). The drop in juvenile delinquency in the Netherlands: changes in exposure to risk and protection. *Justice Quarterly*, *38*(3), 433–453. https://doi.org/10.1080/07418825.2019.1656762

Van Der Stouwe, T., Asscher, J. J., Stams, G. J. J., Deković, M., & Van Der Laan, P. H. (2014). The effectiveness of Multisystemic Therapy (MST): A meta-analysis. *Clinical Psychology Review*, *34*(6), 468–481. https://doi.org/10.1016/j.cpr.2014.06.006

Veiligheidscoalitie. (n.d.). *Persoonsgerichte aanpak*. Retrieved June 17, 2024, from https://veiligheidscoalitie.nl/apothekerskast/persoonsgerichte-aanpak/

Warr, M. (1993). Parents/Peers, and delinquency. *Social Forces*, *72*(1), 247–264. https://doi.org/10.1093/sf/72.1.247

Watson, P., Sherbak, J., & Morris, R. J. (1998). Irrational beliefs, individualism-collectivism, and adjustment. *Personality and Individual Differences*, *24*(2), 173–179. https://doi.org/10.1016/s0191-8869(97)00168-2

Wells, L. E., & Rankin, J. H. (1988). DIRECT PARENTAL CONTROLS AND DELINQUENCY*. *Criminology*, *26*(2), 263–285. https://doi.org/10.1111/j.1745-9125.1988.tb00841.x

Wilson, J. Q., & Herrnstein, R. J. (1985). *Crime and human nature*. http://ci.nii.ac.jp/ncid/BB05146026

Wojciechowski, T. (2023). Deviant peer association as a risk factor for firearm carrying among Justice-Involved youth: the mediating roles of exposure to violence and moral disengagement. *Crime & Delinquency*, 001112872311750. https://doi.org/10.1177/00111287231175045

Yaman, A., Mesman, J., Van IJzendoorn, M. H., Bakermans-Kranenburg, M. J., & Linting, M. (2010). Parenting in an Individualistic Culture with a Collectivistic Cultural Background: The Case of Turkish Immigrant Families with Toddlers in the Netherlands. *Journal of Child and Family Studies*, *19*(5), 617–628. https://doi.org/10.1007/s10826-009-9346-y

Yüksek, D. A., & Solakoğlu, Ö. (2016). The Relative Influence of Parental Attachment, Peer Attachment, School Attachment, and School Alienation on Delinquency among High School Students in Turkey. *Deviant Behavior*, *37*(7), 723–747. https://doi.org/10.1080/01639625.2015.1062683

Yun, H., & Cui, M. (2019). The Effects of Parental Warmth on Adolescent Delinquency in the United States and South Korea: a Cross-Cultural Perspective. *Journal of Youth and Adolescence*, *49*(1), 228–237. https://doi.org/10.1007/s10964-019-01078-z

Zhang, Q., Loeber, R., & Stouthamer-Loeber, M. (1997). Developmental trends of delinquent attitudes and behaviors: replications and synthesis across domains, time, and samples. *Journal of Quantitative Criminology*, *13*(2), 181–215. https://doi.org/10.1007/bf02221307

Zhang, Y. B., Lin, M., Nonaka, A., & Beom, K. (2005). Harmony, Hierarchy and Conservatism: A Cross-Cultural Comparison of Confucian values in China, Korea, Japan, and Taiwan. *Communication Research Reports*, *22*(2), 107–115. https://doi.org/10.1080/00036810500130539

Zorba, A. (2015). Mental illness stigma in Turkish and Greek Cypriot communities living in Cyprus: a pilot study. *the European Journal of Social & Behavioural Sciences*, *13*(2), 111–129. https://doi.org/10.15405/ejsbs.158

Appendices

Appendix A.

Questionnaire - Delinquency

1. Did you ever damage on purpose something, such as a bus shelter, a window, a car or a seat in the bus or train or?
2. Did you ever steal something from a shop or a department store?
3. Did you ever break into a building with the purpose to steal something?
4. Did you ever steal a bicycle, moped or scooter?
5. Did you ever steal a motorbike or car?
6. When you use a computer did you ever download music or films?
7. Did you ever steal something out or from a car?
8. Did you ever snatch a purse, bag or something else from a person?
9. Did you ever carry a weapon, such as a stick, knife, or chain (not a pocket-knife)?
10. Did you ever threaten somebody with a weapon or to beat them up, just to get money or other things from them?
11. Did you ever participate in a group fight on the school playground, a football stadium, the streets or in any public place?
12. Did you ever intentionally beat up someone, or hurt him with a stick or knife, so bad that he had to see a doctor?

Questionnaire - Self-Control

1. I act on the spur of the moment without stopping to think
2. I do whatever brings me pleasure here and now, even at the cost of some distant goal.
3. I'm more concerned with what happens to me in the short run than in the long run
4. I like to test myself every now and then by doing something a little risky
5. Sometimes I will take a risk just for the fun of it
6. Excitement and adventure are more important to me than security.
7. I try to look out for myself first, even if it means making things difficult for other people
8. If things I do upset people, it's their problem not mine.

9. I will try to get the things I want even when I know it's causing problems for other people
10. I lose my temper pretty easily
11. When I'm really angry, other people better stay away from me
12. When I have a serious disagreement with someone, it's usually hard for me to talk calmly about it without getting upset

Appendix B.

Table 3

GDP per Capita of each country in dataset

Country	GDP per Capita
Armenia*	$2.109,53
Bosnia and Herzegovina*	$3.170,17
Suriname*	$5.031,16
Venezuela*	$6.769,87
Russia*	$6.920,20
Poland*	$9.035,53
Lithuania	$9.230,71
Hungary	$11.489,56
Estonia	$12.639,40
Czech Republic	$15.261,81
Slovenia	$19.672,97
Portugal	$19.839,45
Cyprus*	$26.729,32
Spain	$28.389,08
Ireland	$33.529,73
Germany	$36.353,88
France	$36.470,21
Belgium	$38.705,11
Austria	$40.669,33
Finland	$41.222,60
Netherlands	$44.900,94
United States	$46.302,00
Sweden	$46.593,29
Denmark	$52.027,19
Iceland	$57.492,93
Switzerland	$59.008,99
Norway	$74.434,11

Note. Taken and adapted from The World Bank (n.d.). Countries with an asterisk are collectivistic.

Appendix C.

Table 4 presents the results of the full model, including country dummy variables. Main and interaction effects of parental attachment, peer delinquency, and self-control remain significant and in the same direction as the other analyses. Most countries have significantly less delinquency compared to Armenia. No significant effect is found for France (B = -.138), Germany (B = .132), Iceland (B = -.414), and The Netherlands (B = -.293). Ireland has significantly more delinquency compared to Armenia (B = .684, p < .01).

Table 4

Full regression analysis with Social Control and Self-Control variables including country dummy's

DV Delinquency	(1)
Independent	
Parental attachment	-.036*** (.002)
Peer delinquency	2.97*** (.030)
Self-Control	-.046*** (.002)
Collectivistic	-.066 (.188)
Controls	
Male	1.70*** (.062)
Grade level	-.231*** (.038)
Family affluence	.010*** (.002)
Family disruption	.011*** (.001)
Attitudes	.052*** (.002)
Non-native	.025 (.079)
Country dummies (ref Armenia)	
Austria	-.643*** (.168)
Belgium	-1.23*** (.194)
Bosnia and Herzegovina	-1.16*** (.237)
Cyprus	-1.02*** (.230)
Czech Republic	-2.68*** (.164)
Denmark	-1.46*** (.242)
Estonia	-3.29*** (.189)
Finland	-1.51*** (.214)
France	-.138 (.185)
Germany	.132 (.162)
Hungary	-1.54*** (.187)
Iceland	-.414 (.327)

Table 4 (continued)

Full regression analysis with Social Control and Self-Control variables including country dummy's

Country dummies (ref Armenia)	**(1)**
Ireland	.684** (.221)
Lithuania	-2.46*** (.197)
Netherlands	-.293 (.192)
Norway	-1.60*** (.216)
Poland	-2.26*** (.256)
Portugal	-1.68*** (.172)
Russia	-1.77*** (.216)
Slovenia	-2.18*** (.187)
Spain	-1.02*** (.212)
Suriname	-1.58*** (.233)
Sweden	-2.03*** (.196)
Switzerland	-1.73*** (.161)
United States	-2.67*** (.191)
Venezuela	-1.50*** (.247)
Moderator	
Parental attachment * Collectivism	.019*** (.005)
Peers * Collectivism	-.012 (.108)
Self-Control * Collectivism	.038*** (.004)
Constant	6.89
R^2	.337
F	609.58

Note. p < 0.001 = ***, p < .01 = **. Standard error between brackets.

Table 5 presents the effect of collectivism on parental attachment. This effect is positive and significant (B = 3.70, p < .001). This indicates that there is higher parental attachment in collectivistic cultures.

Table 5

Direct effect of collectivism on parental attachment

	Parental Attachment
Collectivistic	3.70*** (.174)
Constant	80.37
R^2	.011
F	2237.03

Note. p < 0.001 = ***. Standard error between brackets.

Table 6 presents the effect of collectivism on peer delinquency. This effect is negative and significant (B = -.334, p < .001). This indicates that there is lower peer delinquency in collectivistic cultures.

Table 6

Direct effect of collectivism on peer delinquency

	Peer Delinquency
Collectivistic	-.334*** (.012)
Constant	.522
R^2	.131
F	452.34

Note. p < 0.001 = ***. Standard error between brackets.

Table 7 presents the effect of collectivism on self-control. This effect is negative and significant (B = -1.60, p < .001). This indicates that there is lower self-control in collectivistic cultures.

Table 7

Direct effect of collectivism on self-control

	Self-Control
Collectivistic	-1.60*** (.224)
Constant	62.54
R^2	.035
F	50.91

Note. p < 0.001 = ***. Standard error between brackets.

Appendix D.

SPSS Syntax

```
* Encoding: UTF-8.

* Dependant variable


COMPUTE delinq = VANDLYP + SHOPLYP + BURGLYP + BICTLYP + CARTLYP +
CARBLYP + SNATLYP + WEAPLYP + EXTOLYP + GFIGLYP + ASLTLYP +
DRUDLYP.

EXECUTE.


compute del_p = ((delinq-0)/(12-0))*100.


* Independent variables: Parental attachment


Compute getdad = ((GETALFA-1)/(4-1)) * 100.

Compute getmom = ((GETALMO-1)/(4-1)) * 100.

Compute spendfam = ((leisfam-1)/(6-1)) * 100.

Compute eatfam = ((dinnfam-1)/(8-1)) * 100.

Compute Supvp = ((parsup-1)/(3-1)) * 100.

Compute timetell = ((OBEYTIME-1)/(3-1)) *100.


RELIABILITY

  /VARIABLES=getdad getmom spendfam Supvp eatfam

  /SCALE('ALL VARIABLES') ALL

  /MODEL=ALPHA
```

```
  /STATISTICS=DESCRIPTIVE
  /SUMMARY=TOTAL.

Compute parental_attachment = (getdad + getmom + spendfam + eatfam + supvp).
EXECUTE.

compute prnt_att= ((parental_attachment-0)/(500-0))*100.

* Independent variables: Peer delinquency

Compute delinquent_peers = DELPDRNa +DELPSLNa + DELPBUNa + DELPEXNa +
DELPASNa.

compute peers_del = ((delinquent_peers-0)/(130-0))*20.

* Independent variables: Self-Control

RELIABILITY
  /VARIABLES=SELFC01 SELFC02 SELFC03 SELFC04 SELFC05 SELFC06 SELFC07
SELFC08 SELFC09 SELFC10
    SELFC11 SELFC12
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA
```

```
  /STATISTICS=DESCRIPTIVE

  /SUMMARY=TOTAL.


RECODE SELFC01 SELFC02 SELFC03 SELFC04 SELFC05 SELFC06 SELFC07
SELFC08 SELFC09 SELFC10 SELFC11

    SELFC12 (1=4) (2=3) (3=2) (4=1) (ELSE=SYSMIS).

EXECUTE.


COMPUTE SELFC48=(SELFC01 + SELFC02+ SELFC03+SELFC04 + SELFC05 +
SELFC06 +  SELFC07 +

    SELFC08 + SELFC09 + SELFC10 + SELFC11 + SELFC12).

EXECUTE.


compute self_control = ((SELFC48-12)/(48-12))*100.



* Moderator: collectivism


RECODE ACOUNTRY (1=1) (5=1) (6=1) (21=1) (23=1) (26=1) (30=1) (2=SYSMIS)
(16=SYSMIS) (19=SYSMIS) (ELSE=0) INTO

    Collect.

VARIABLE LABELS  collect 'Collectivist culture'.

EXECUTE.


* Control Variables
```

```
RECODE NATIVE (1=1) (2=1) (3=0) (9=SYSMIS) INTO non_native.

VARIABLE LABELS  non_native '1st or 2nd gen migrant'.


* Nomiss


COMPUTE nomiss1 = (MISSING(del_p) = 0) & (MISSING(prnt_att) = 0) &
(MISSING(peers_del) = 0) & (MISSING(self_control) = 0) & (MISSING(Collect) = 0) &
(MISSING(male) = 0) & (MISSING(grade) = 0) & (MISSING(FAMAFF) = 0)

        & (MISSING(LIFEEVFD) = 0) & (MISSING(ATTVIO) = 0) &
(MISSING(non_native) = 0) & (missing(gdp) = 0).

EXECUTE.

select if nomiss1.


* Dummy variables country extra control variables


RECODE ACOUNTRY (29=1) (ELSE=0) INTO Country_1.

VARIABLE LABELS Country_1 'USA'.

EXECUTE.


RECODE ACOUNTRY (1=1) (ELSE=0) INTO Country_2.

VARIABLE LABELS Country_2 'Armenia'.

EXECUTE.


RECODE ACOUNTRY (3=1) (ELSE=0) INTO Country_3.
```

```
VARIABLE LABELS Country_3 'Austria'.
EXECUTE.

RECODE ACOUNTRY (4=1) (ELSE=0) INTO Country_4.
VARIABLE LABELS Country_4 'Belgium'.
EXECUTE.

RECODE ACOUNTRY (5=1) (ELSE=0) INTO Country_5.
VARIABLE LABELS Country_5 'Bosnia and Herzegovina'.
EXECUTE.

RECODE ACOUNTRY (6=1) (ELSE=0) INTO Country_6.
VARIABLE LABELS Country_6 'Cyprus'.
EXECUTE.

RECODE ACOUNTRY (7=1) (ELSE=0) INTO Country_7.
VARIABLE LABELS Country_7 'Czech Republic'.
EXECUTE.

RECODE ACOUNTRY (8=1) (ELSE=0) INTO Country_8.
VARIABLE LABELS Country_8 'Denmark'.
EXECUTE.

RECODE ACOUNTRY (9=1) (ELSE=0) INTO Country_9.
```

```
VARIABLE LABELS Country_9 'Estonia'.
EXECUTE.

RECODE ACOUNTRY (10=1) (ELSE=0) INTO Country_10.
VARIABLE LABELS Country_10 'Finland'.
EXECUTE.

RECODE ACOUNTRY (11=1) (ELSE=0) INTO Country_11.
VARIABLE LABELS Country_11 'France'.
EXECUTE.

RECODE ACOUNTRY (12=1) (ELSE=0) INTO Country_12.
VARIABLE LABELS Country_12 'Germany'.
EXECUTE.

RECODE ACOUNTRY (13=1) (ELSE=0) INTO Country_13.
VARIABLE LABELS Country_13 'Hungary'.
EXECUTE.

RECODE ACOUNTRY (14=1) (ELSE=0) INTO Country_14.
VARIABLE LABELS Country_14 'Iceland'.
EXECUTE.

RECODE ACOUNTRY (15=1) (ELSE=0) INTO Country_15.
```

```
VARIABLE LABELS Country_15 'Ireland'.
EXECUTE.

RECODE ACOUNTRY (17=1) (ELSE=0) INTO Country_16.
VARIABLE LABELS Country_16 'Lithuania'.
EXECUTE.

RECODE ACOUNTRY (18=1) (ELSE=0) INTO Country_17.
VARIABLE LABELS Country_17 'Netherlands'.
EXECUTE.

RECODE ACOUNTRY (20=1) (ELSE=0) INTO Country_18.
VARIABLE LABELS Country_18 'Norway'.
EXECUTE.

RECODE ACOUNTRY (21=1) (ELSE=0) INTO Country_19.
VARIABLE LABELS Country_19 'Poland'.
EXECUTE.

RECODE ACOUNTRY (22=1) (ELSE=0) INTO Country_20.
VARIABLE LABELS Country_20 'Portugal'.
EXECUTE.

RECODE ACOUNTRY (23=1) (ELSE=0) INTO Country_21.
```

```
VARIABLE LABELS Country_21 'Russia'.
EXECUTE.

RECODE ACOUNTRY (24=1) (ELSE=0) INTO Country_22.
VARIABLE LABELS Country_22 'Slovenia'.
EXECUTE.

RECODE ACOUNTRY (25=1) (ELSE=0) INTO Country_23.
VARIABLE LABELS Country_23 'Spain'.
EXECUTE.

RECODE ACOUNTRY (26=1) (ELSE=0) INTO Country_24.
VARIABLE LABELS Country_24 'Suriname'.
EXECUTE.

RECODE ACOUNTRY (27=1) (ELSE=0) INTO Country_25.
VARIABLE LABELS Country_25 'Sweden'.
EXECUTE.

RECODE ACOUNTRY (28=1) (ELSE=0) INTO Country_26.
VARIABLE LABELS Country_26 'Switzerland'.
EXECUTE.

RECODE ACOUNTRY (30=1) (ELSE=0) INTO Country_27.
```

```
VARIABLE LABELS Country_27 'Venezuela'.
EXECUTE.

*merging GDP data

DATASET NAME DataSet4.
DATASET ACTIVATE DataSet2.
SORT CASES BY ACOUNTRY.
DATASET ACTIVATE DataSet4.
SORT CASES BY ACOUNTRY.
DATASET ACTIVATE DataSet2.
MATCH FILES /FILE=*
  /TABLE='DataSet4'
  /BY ACOUNTRY.
EXECUTE.

Compute gdp = (GDP_Capita-2109.53)/(74434.11-2109.53)*100.

* other control variables, male, grade, family affluence, family disruption, attitudes are
already in dataset

* moderators

compute prnt_col = prnt_att*collect.
```

```
compute prs_col = peers_del*collect.

Compute self_col = self_control*collect.


* descriptives


DESCRIPTIVES VARIABLES=  del_p prnt_att peers_del self_control collect male grade
famaff lifeevfd attvio non_native
  /STATISTICS=MEAN STDDEV MIN MAX.



* Social control


REGRESSION
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA CHANGE
  /CRITERIA=PIN(.05) POUT(.10) TOLERANCE(.0001)
  /NOORIGIN
  /DEPENDENT del_p
  /METHOD=ENTER prnt_att peers_del  Collect
  /METHOD=ENTER MALE GRADE FAMAFF LIFEEVFD ATTVIO non_native gdp
  /METHOD=ENTER prnt_col.


*Self control
```

```
REGRESSION
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA CHANGE
  /CRITERIA=PIN(.05) POUT(.10) TOLERANCE(.0001)
  /NOORIGIN
  /DEPENDENT del_p
  /METHOD=ENTER self_control collect
  /METHOD=ENTER MALE GRADE FAMAFF LIFEEVFD ATTVIO non_native gdp
  /METHOD=ENTER self_col.

*Full

REGRESSION
   /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA CHANGE
  /CRITERIA=PIN(.05) POUT(.10) TOLERANCE(.0001)
  /NOORIGIN
  /DEPENDENT del_p
  /METHOD=ENTER prnt_att peers_del self_control Collect
  /METHOD=ENTER MALE GRADE FAMAFF LIFEEVFD ATTVIO non_native gdp
  /METHOD=ENTER prnt_col prs_col self_col.


* full with country dummies
```

```
REGRESSION
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA
  /CRITERIA=PIN(.05) POUT(.10) TOLERANCE(.0001)
  /NOORIGIN
  /DEPENDENT del_p
  /METHOD=ENTER prnt_att peers_del self_control Collect
  /METHOD=ENTER MALE GRADE FAMAFF LIFEEVFD ATTVIO non_native
  /METHOD=ENTER Country_1 Country_3 Country_4 Country_5 Country_6 Country_7
Country_8
    Country_9 Country_10 Country_11 Country_12 Country_13 Country_14 Country_15
Country_17
    Country_18 Country_19 Country_20 Country_21 Country_22 Country_23 Country_24
Country_25 Country_26
    Country_27
  /METHOD=ENTER prs_col self_col prnt_col.

*Control analysis of direct effects

REGRESSION
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA
  /CRITERIA=PIN(.05) POUT(.10) TOLERANCE(.0001)
  /NOORIGIN
```

```
  /DEPENDENT prnt_att
  /METHOD=ENTER Collect.

REGRESSION
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA
  /CRITERIA=PIN(.05) POUT(.10) TOLERANCE(.0001)
  /NOORIGIN
  /DEPENDENT peers_del
  /METHOD=ENTER Collect.

REGRESSION
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA
  /CRITERIA=PIN(.05) POUT(.10) TOLERANCE(.0001)
  /NOORIGIN
  /DEPENDENT self_control
  /METHOD=ENTER Collect.

* full with dummy's and collinearity testing

REGRESSION
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA COLLIN TOL
```

```
  /CRITERIA=PIN(.05) POUT(.10) TOLERANCE(.0001)

  /NOORIGIN

  /DEPENDENT del_p

  /METHOD=ENTER prnt_att peers_del self_control Collect

  /METHOD=ENTER MALE GRADE FAMAFF ATTVIO non_native

  /METHOD=ENTER Country_1 Country_3 Country_4 Country_5 Country_6 Country_7
Country_8 Country_9

    Country_10 Country_11 Country_12 Country_13 Country_14 Country_15 Country_16
Country_17 Country_18

    Country_19 Country_20 Country_21 Country_22 Country_23 Country_24 Country_25
Country_26 Country_27

  /METHOD=ENTER prnt_col prs_col self_col.
```