

## RESEARCH ARTICLE

# Understanding the role of parental warmth and its association with developmental trajectories of delinquency across cultures

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## Abstract

**Introduction:** Despite previous research delving into the trajectories of delinquency during adolescence and their links to parental warmth, there remains a notable gap in understanding cultural differences in these trajectories and associated factors. This study sought to address this gap by examining and comparing the levels and trajectories of delinquency, along with their association with parental warmth, between the United States and South Korea.

**Method:** The study included American adolescents ( $N = 5,665$ ) from the National Longitudinal Study of Adolescent to Adult Health (Add Health) at Wave I (1995), II (1996), and III (2001) and Korean adolescents ( $N = 3,449$ ) selected from the Korean Youth Panel Survey at Wave I (2003), II (2004), and VI (2008). The participants, including both adolescent boys and girls at the age of 14/15 at Wave I, completed surveys at each wave.

**Results:** Results from latent growth curves showed that delinquency levels peaked in middle adolescence and declined thereafter in both countries. The initial level of delinquency was higher for American adolescents than for Korean adolescents, however, the slope of delinquency declined faster for American adolescents than for Korean adolescents. Further, the protective effect of parental warmth on delinquency was stronger for Korean adolescents than for American adolescents.

**Conclusion:** The cultural differences in the levels and trajectories of delinquency, along with the different strengths of the protective effect of parental warmth, highlight the importance of considering cultural contexts in understanding delinquency trajectories and the protective role of parental warmth against delinquency.

## KEYWORDS

adolescence, cross-cultural, delinquency trajectories, parental warmth

## 1 | INTRODUCTION

Adolescence has been recognized as a critical phase marked by heightened proclivities for risk-taking behavior, necessitating a thorough examination within the contextual framework of adolescent psychological development and sociocultural dynamics inherent to this period. Given the increasing interconnectedness of global societies and the coexistence of diverse cultural groups, there is an escalating imperative for cross-cultural research. In Western cultures, such as the United States, a prevailing understanding posits that delinquency rates typically reach a zenith in middle adolescence before subsiding thereafter (Hoeve et al., 2008; Meeus et al., 2004). This observed decline is often attributed to psychosocial development, encompassing heightened maturity and evolving priorities. Nevertheless, the universal applicability of this trend remains uncertain, particularly in Eastern cultures such as South Korea, distinguished by disparate cultural norms and societal expectations.

Although delinquent behaviors could be considered intrinsic to the storm and stress of adolescence by decreased selfcontrol and increased sensitivity (Hall, 1904; Steinberg & Silk, 2002), some contextual factors have been shown to

contribute to individual differences in juvenile delinquency. Most early theories and studies of juvenile delinquency considered parental behavior to be an important predictor (Akers & Sellers, 2004). Specifically, some studies have identified parental warmth as a protective factor against adolescent delinquency (Buehler, 2006; Yun, Cui, & Blair, 2016). While adolescent delinquency and its connection to parenting behaviors have been explored in various studies, the specific exploration of cultural differentials in delinquency trajectories and their association with parental warmth has received limited attention. Existing research underscores the impact of cultural variations on parenting behaviors, expectations, and the interpretation of behaviors. In the context of South Korea, where traditional Confucian values accentuate filial piety, the potential impacts of parental warmth on delinquency trajectories may diverge from those observed in Western culture such as the United States. To fill this research gap, this study examined delinquency trajectories from middle to late adolescence and cultural differences in delinquency levels, trajectories, and such association with parental warmth in the United States and South Korea.

## 2 | ADOLESCENT PSYCHOSOCIAL DEVELOPMENT AND CULTURAL ECOLOGICAL THEORY ON DELINQUENCY TRAJECTORIES

It is a well-supported consensus that delinquency levels tend to peak in middle adolescence and then decline in late adolescence and beyond. Using latent growth curve (LGC) modeling, Meeus et al. (2004) found that delinquency peaked in middle adolescence (ages 15–17), and then steadily declined around late adolescence (ages 18–20). According to Hoeve et al. (2008), serious persisting and desisting groups showed that delinquency trajectories peaked in middle adolescence, especially between ages 14 and 15. Powell et al. (2010) also found a declining trajectory of delinquency from middle to late adolescence. During mid-adolescence, individuals often experience heightened levels of risk-taking behavior and impulsivity due to various factors such as increased peer influence, exploration of identity, and biological changes in the brain (Steinberg, 2008). This stage is characterized by a desire for autonomy and independence, while impulse control and decision-making skills are still developing (Casey et al., 2008). Additionally, social and environmental factors such as exposure to peer pressure (Brechwald & Prinstein, 2011), academic stress (Roeser et al., 1998), and familial dynamics (Fosco et al., 2012) can contribute to an increased propensity for delinquent behavior during this period.

Such trajectories are consistent with Erikson's (1968) theory of psychosocial development. Adolescence is particularly related to Erikson's fifth stage of "identity versus role confusion." That is, youth explore an identity, pursue autonomy in early adolescence, and develop a sense of self through social interaction and risk-taking behaviors at midadolescence. As adolescents successfully navigate the challenges of identity formation during late adolescence, they tend to have a greater sense of their values and gain a better understanding of the consequences of their behaviors, and this helps avoid delinquent behaviors while establishing a strong sense of self-identity and competence at late adolescence. However, this observed age-crime pattern promotes a critical inquiry into its universality and applicability across adolescents in diverse cultural settings. There are relatively fewer studies of delinquency trajectories among Korean adolescents. Park et al. (2010) utilized the Korean Youth Panel Survey (KYPS) and observed that trajectories of minor offenses (e.g., smoking, drinking, and absenteeism) gradually increased from ages 14–17. Trajectories of serious offenses (e.g., threatening behavior and physical altercations), however, exhibited a sharp decrease during the same age range. Further, there are fewer comparative studies across cultures. This study aimed to investigate whether the trajectories identified in the United States could be replicated in the cultural context of South Korea using comparable measures.

Super and Harkness, (1986, 2002) put forth a theoretical framework designed to elucidate the influence of culture on the process of adolescent development. In their work, Super and Harkness (2002) emphasized the significance of cultural dimensions, with particular emphasis on the dichotomy of individualism and collectivism. The individualistic cultural paradigm prevalent in the United States prioritizes values such as independence, selfexploration, and autonomy. In contrast, the collectivistic culture of South Korea places greater weight on interdependence, conformity, and security (Greenberger et al., 2000). Moreover, culture plays an important role in influencing child socialization such as impacting parental expectations, disciplinary methods, and the transmission of values regarding acceptable behaviors. These cultural variations in child socialization also shape adolescents' perspectives on authority, conformity, and risk-taking, influencing their attitudes and behaviors (Wang & Yang, 2019). Based on the distinct cultural norms between the two countries, American adolescents might view delinquent behaviors as relatively less severe during their process of self-exploration and acquisition of autonomy compared to Korean adolescents. The values of interdependence and obedience that are fundamental to collectivist cultures also tend to encourage the suppression of adolescent behaviors that are not socially acceptable, resulting in less involvement in delinquent activities in collectivistic culture than in individualistic culture (Le & Stockdale, 2005). In addition, because the sociocultural framework of South Korea strongly emphasizes educational achievement, Korean adolescents may have relatively fewer actual opportunities to attempt delinquent activities than American adolescents (Lee, 2003). Based on cultural differences and previous literature, we hypothesized that the levels of delinquency would be higher for American adolescents than for Korean adolescents.

Furthermore, Korean adolescents usually have very limited free time due to high pressure and demands on schoolwork and competitive exams, and this may delay them from achieving primary psychosocial tasks that adolescents must accomplish (Lee, 2003). Beyond academic pressures, the emphasis on interdependence in Korean culture may also delay the search for identity among Korean adolescents. Cultural values prioritizing conformity and filial piety may hinder adolescents' exploration of their own values and beliefs, contributing to identity confusion (Chao, 1994). The primary tasks of adolescence challenge youth to explore personal identity, gain acceptance from peer groups, and develop social competence and skills to navigate social relationships. Brown et al. (1986) cautioned against overlooking the value of risk-taking and suggested that a certain level of risk-taking is required to complete these key tasks of adolescence. If youths do not engage in the sorts of risk-taking, they may get left behind with their primary psychosocial tasks (Brown et al., 1986). Indeed, Kim (1989) found that Korean adolescents' identity formation occurred much later compared to that of Western adolescents. Specifically, Kim (1989) discussed that only 30% of Korean adolescents aged 19–20 achieved identity status, whereas 17% were in identity diffusion, 19% were in foreclosure, and 25% were in moratorium. Therefore, the rates of decline in delinquency trajectories would be faster among American adolescents than Korean adolescents as American adolescents might achieve identity status earlier than Korean adolescents through risk-taking behaviors.

### 3 | PARENTAL WARMTH AND DELINQUENCY TRAJECTORIES IN THE UNITED STATES AND SOUTH KOREA

In Bronfenbrenner's (1986) ecological model, the macrosystem represents the outermost level of societal influence on adolescent development such as cultural values and beliefs. Parental behaviors in the microsystem may also be influenced by culture and this can cause different adolescent outcomes (Bronfenbrenner & Morris, 2006). Specifically, parental warmth is defined as the degree to which parents exhibit warmth and affection, a dimension universally acknowledged as integral to effective parenting (Buehler, 2006; Lee, 2012). However, some studies have shown mixed findings on the association between parental warmth and delinquency trajectories. For example, using a sample of American adolescents, Walker-Barnes and Mason (2001) found that higher levels of parental warmth were associated with lower initial levels of gang delinquency. Over time, however, higher levels of parental warmth were related to an increase in gang delinquency. In a later study (Walker-Barnes & Mason, 2004), the authors reported similar findings that while parental warmth initially showed a potential protective effect at lower levels of gang involvement, this effect diminished and even reversed as gang involvement increased. Higher levels of parental warmth were then associated with slight increases in substance use among adolescents heavily involved in gangs, which might be due to the lack of disapproval. This direction of result regarding parental warmth's impact on delinquency highlights the complexity of the relationship between parenting practices and adolescent behaviors over time. Further, given the various constraints and limitations inherent in cross-cultural studies, there has been a relatively limited exploration of the cross-cultural and longitudinal association between parental warmth and delinquency trajectories. Yun and Cui (2020) found significant cultural differences in the association between parental warmth and delinquency, but they only included middle adolescence (ages 14–16). In this study, we expand the literature by adding longitudinal data for trajectories of delinquency from mid to late adolescence to examine cultural differences in the association between parental warmth and delinquency trajectories in the United States and South Korea.

### 4 | CURRENT STUDY

To extend the previous literature on the association between parental warmth and delinquency trajectories in the United States and South Korea, the purpose of the current study was to investigate: (1) delinquency trajectories of American and Korean adolescents from middle to late adolescence, (2) cultural differences in the levels and trajectories of delinquency in the United States and South Korea, and (3) the association between parental warmth and delinquency trajectories between the two countries. Based on adolescent psychological development theory, cultural ecological perspectives, parenting framework, and previous literature, we proposed the following hypotheses: (1) trajectories of delinquency would decrease from middle to late adolescence in both countries (Hypothesis 1), (2) the levels of delinquency would be higher among American adolescents than Korean adolescents, however, the rate of change would be faster for American adolescents than Korean adolescents (Hypothesis 2), and (3) the impact of parental warmth on delinquency trajectories would be weaker for American adolescents compared to Korean adolescents (Hypothesis 3).

The present study used nationally representative and longitudinal datasets from the United States and South Korea—the National Longitudinal Study of Adolescent to Adult Health (Add Health) and the Korean Youth Panel Survey (KYPS). This study also included other influential factors (i.e., deviant peer association, adolescent gender, parental education, and family structure) that have been demonstrated to be related to delinquency across the two cultures. For example, deviant

peer association has been found to be positively associated with delinquency involvement during adolescence than at any other time in the life course (Osgood et al., 2005). Further, some demographic characteristics such as the gender of adolescents, parental education, and family structure have been shown to be related to delinquency in the United States and South Korea (see Dodge et al., 2006; Lee et al., 2001). Thus, these factors were included as covariates in this study.

## 5 | METHOD

### 5.1 | Samples and procedures

#### 5.1.1 | The United States

The U.S. data were utilized from Add Health, which is an ongoing longitudinal and nationally representative study of American adolescents. Using stratified, multistage, and cluster sampling design, a total of over 20,000 adolescents were recruited from 80 high schools and 52 middle schools and participated in interviews and questionnaires. Wave I surveyed 20,745 adolescents aged 12–21 in 1994–95. Wave II included 14,738 participants aged 13–22 in 1996. Wave III included 15,197 participants aged 18–26 in 2001–02. More details are provided at <https://www.cpc.unc.edu/projects/addhealth> (Harris, 2018). The application of longitudinal weights helped correct attrition bias in subsequent waves and provide more accurate estimations (Chantala, 2006). To align data with the more age-specific Korean sample, we selected adolescents aged 14 or 15 at Wave I and followed them through Wave II and III. Based on the selection criteria, the total sample size of the United States was 5665.

#### 5.1.2 | South Korea

The Korean data were used from KYPS, which is a national longitudinal study of Korean adolescents conducted by the National Youth Policy Institute in South Korea. Using a stratified, multistage, and cluster sampling method, a total of 3697 adolescents were recruited from 104 middle schools and participated in questionnaires and interviews. Wave I surveyed 3449 students in grade 8 in 2003. The five follow-up surveys from Wave II to Wave VI were conducted each subsequent year. The following five waves were conducted with over 90% of the original respondents from 2004 to 2008. More details are available at <https://www.nypi.re.kr/archive/eps> (Lee, 2008). Among 3449 adolescents, 11 adolescents were not included in the age range of 14 to 15. For comparability with the U.S. samples, these 11 participants were excluded. Further, to match data from the timing of Waves I, II, and III from Add Health, Waves I, II, and VI from KYPS were used, and the final sample of South Korea was 3438.

### 5.2 | Measures

#### 5.2.1 | Delinquency (Times 1, 2, and 3)

The same three items were used from both samples through adolescents' self-report of their delinquency: 1) the frequency of gang fighting, 2) threatening other people, and 3) stealing. All items were recoded as 0 = *No* or 1 = *Yes* from both datasets and these counts were summed for each wave. A higher score reflected a higher level of delinquency in both samples.

#### 5.2.2 | Parental warmth (Time 1)

In the U.S. sample, parental warmth was assessed using two items separately evaluating adolescents' perception of their mothers and fathers warmth and affection (i.e., "Most of the time, your mother is warm and loving toward you" and "Most of the time, your father is warm and loving toward you"). Responses ranged from 1 = *Strongly agree* to 5 = *Strongly disagree*, with items reverse-coded. In South Korea, Parental warmth was assessed using a single item (i.e., "My parents always treat me with love and warmth"), rated on a 5-point scale from 1 = *Very untrue* to 5 = *Very true*. To maintain consistency with the single item "parental warmth" measure in the South Korean sample, the ratings from mothers and fathers in the U.S. sample were averaged to create a "parental warmth" score. Higher scores indicated greater perceived parental warmth in both samples.

### 5.2.3 | Covariates (Time 1)

Deviant peer association was categorized as 0 = *No deviant peer association* and 1 = *Deviant peer association*. Adolescent gender was coded as 0 = *Male* and 1 = *Female*. Parental education was measured as the highest level of education completed by the mother or father on a scale of 1 (less than high school) to 8 (post-BA degree). Family structure was coded as 0 = *Others* and 1 = *Two-parent biological families*. The country was coded as 0 = *South Korea* and 1 = *United States*.

## 5.3 | Analytic strategy

As preliminary analyses, descriptive statistics and correlations were used in SPSS 28. An independent samples *t*-test and LGC were used as the primary analyses to test three hypotheses. The missing values were handled using the full-information maximum likelihood estimation in AMOS 27. Model fit indices were used based on Hu and Bentler's (1999) criteria: the comparative fit index (CFI) > 0.95, root-mean-square error of approximation (RMSEA) < 0.05, and *p* close > 0.05. To test the first hypothesis (H1), we used an independent sample *t*-test to compare the levels of delinquency and performed unconditional LGC with the two samples separately. To test H2, we added the country as a predictor to test a moderating effect on the initial level and rate of change in delinquency. To test H3, we first performed conditional LGC to examine the association between parental warmth and delinquency trajectories in each country. Then a chi-square difference test was performed to compare the strength of the paths from parental warmth to delinquency intercept and slope. We imposed the equality constraints on the tested path across the country and compared the constrained model with the unconstrained model. If the chi-square difference with *df* = 1 is larger than the critical value of 3.84, this indicates a significant cultural difference in the association between parental warmth and delinquency intercept and slope.

## 6 | RESULTS

### 6.1 | Levels and trajectories of delinquency in the United States and South Korea (Hypothesis 1)

Sample descriptive statistics are provided in Table 1 and correlations among variables are shown in Table 2. For the U.S. sample, the mean level of delinquency was highest at ages 14/15 (0.50) and then decreased from the ages 15/16 (0.44) to 19/20 (0.24). Approximately, 45% of American adolescents had at least one or more deviant peers and 51% reported being from two-biological parent families. Parental warmth was significantly and negatively associated with delinquency at T1 (−0.17, *p* < .001) and T2 (−0.14, *p* < .001), but not T3 (−0.01, *p* > .001). From the correlation table (below diagonal), deviant peer association, adolescent gender, parental education, and family structure were also significantly associated with parental warmth and delinquency at each wave.

**TABLE 1** Descriptive statistics and independent sample *t*-test in the U.S. sample versus Korean sample.

Variables	United States (N = 5665)			South Korea (N = 3438)			<i>t</i> -test
	<i>M</i> or <i>n</i> (%)	SD	Range	<i>M</i> or <i>n</i> (%)	SD	Range	
Parental warmth (T1)	4.34	0.73	1–5	3.71	0.93	1–5	−33.92***
Delinquency (T1)	0.50	0.74	0–3	0.17	0.45	0–3	−26.87***
Delinquency (T2)	0.44	0.70	0–3	0.08	0.32	0–3	−30.95***
Delinquency (T3)	0.24	0.54	0–3	0.01	0.13	0–3	−26.94***
Control variables (T1)							
Deviant peer	44.5%		0–1	27.7%		0–1	
Adolescent gender	52.3%		0–1	50%		0–1	
Parental education	5.9		1–8	4.8		1–8	
Family structure (two biological parents)	50.9%		0–1	93%		0–1	

Note: Deviant peer: 0 = no deviant peer association, 1 = having deviant peer association, adolescent gender: 0 = male, 1 = female, parental education: parental highest education, family structure: 0 = others, 1 = two-parent biological families.

\*\*\**p* < .001 based on independent sample *t*-tests.

**TABLE 2** Correlation among variables in the U.S. versus South Korean samples.

	1	2	3	4	5	6	7	8
1. Parental warmth (Time 1)	–	–.06***	–.03	–.03	–.09***	–.08***	.13***	.08***
2. Delinquency (Time 1)	–.17***	–	.31***	.09***	.23***	–.03	.00	.01
3. Delinquency (Time 2)	–.14***	.45***	–	.09***	.13***	–.03	.02	.00
4. Delinquency (Time 3)	–.01	.16***	.18***	–	.06**	–.07***	.01	–.01
5. Deviant peer association	–.16***	.27***	.19***	.03*	–	.18***	–.05**	–.03
6. Adolescent gender	–.06***	–.07***	–.09***	–.25***	.05***	–	–.01	–.01
7. Parental highest education	–.05***	–.07***	–.07***	.05***	–.06***	–.03*	–	.17***
8. Family structure	.07***	–.11***	–.08***	.00	–.07***	–.02	.19***	–

Note:  $N = 3438$ . Deviant peer association: 0 = no deviant peer association, 1 = having deviant peer association. Adolescent gender: 0 = male, 1 = female. Family structure: 0 = others, 1 = two-parent biological families. The correlations below diagonal were for the U.S. sample and above diagonal were for the Korean sample.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$  (2-tailed).

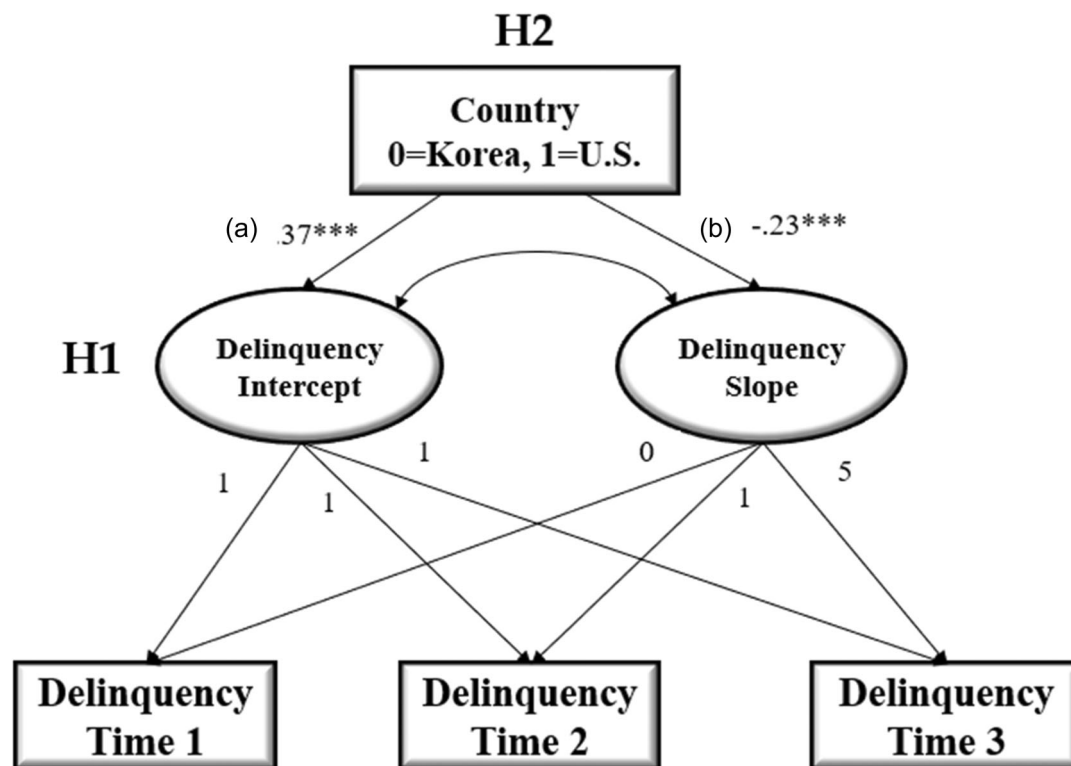
Similar to the delinquency trajectories of American adolescents, the overall mean level of delinquency among Korean adolescents peaked at ages 14/15 (0.17) and then decreased till late adolescence among Korean adolescents. About 28% of Korean adolescents had at least one or more deviant friends and most Korean adolescents (93%) lived with two-biological parent families. In Table 2 correlations (above diagonal), parental warmth was significantly and negatively associated with delinquency at T1 only ( $-0.06$ ,  $p < .001$ ). The results of an independent samples  $t$ -test in Table 1 suggested that the levels of parental warmth and delinquency at each wave were significantly higher among American adolescents than those among Korean adolescents ( $p < .001$ ).

## 6.2 | Comparison of the levels and changes of delinquency in the United States and South Korea (Hypothesis 2)

Country membership (0 = South Korea and 1 = United States) was added to test how the individual delinquency trajectories differ by country in Figure 1 (H2). Consistent with the results from the independent samples  $t$ -test in Table 1, findings revealed that the initial level (intercept) and the rate of change (slope) in delinquency significantly differed between the two countries. Specifically, a significant path from country to intercept ( $0.37$ ,  $p < .001$ ) indicated that American adolescents have higher initial levels of delinquency than Korean adolescents. Further, the path from country to delinquency slope was also statistically significant ( $-0.23$ ,  $p < .001$ ). This result indicated that American adolescents' delinquency decline was faster than Korean adolescents over time. These differences in the rate of decline in delinquency could be attributed to the initial higher levels of delinquency during middle adolescence among American adolescents, allowing for an accelerated decline toward late adolescence. Conversely, Korean adolescents reported lower initial levels of delinquency during middle adolescence, potentially resulting in a slower decline.

## 6.3 | Comparison of the association between parental warmth and delinquency trajectories in the United States and South Korea (Hypothesis 3)

The conditional LGC was conducted on how parental warmth influenced individual delinquency trajectories for each group separately after controlling for other factors (i.e., delinquency peer association, adolescent gender, parental education, and family structure). Among the U.S. sample, a nonsignificant path from parental education to the latent slope was eliminated and this parsimonious conditional model yielded an adequate fit:  $CFI = 0.93$ ,  $RMSEA = 0.01$ ,  $p_{close} = 1.00$ . The result (not shown) indicated that parental warmth was significantly and negatively associated with the initial level of delinquency ( $-0.21$ ,  $p < .001$ ). Additionally, parental warmth was significantly and positively associated with the rate of decline in delinquency, indicating that parental warmth slowed the decline in delinquency ( $0.05$ ,  $p < .001$ ). Among the Korean sample, the parsimonious conditional model after eliminating the nonsignificant paths from parental education and family structure to delinquency intercept and slope yielded a good fit:  $CFI = 0.92$ ,  $RMSEA = 0.01$ ,  $p_{close} = 1.00$ . Consistent with the results from the U.S. sample, parental warmth was significantly and negatively associated with the initial level of delinquency ( $-0.14$ ,  $p < .001$ ), and parental warmth was significantly and positively associated with the rate of decline in delinquency ( $0.02$ ,  $p < .001$ ).



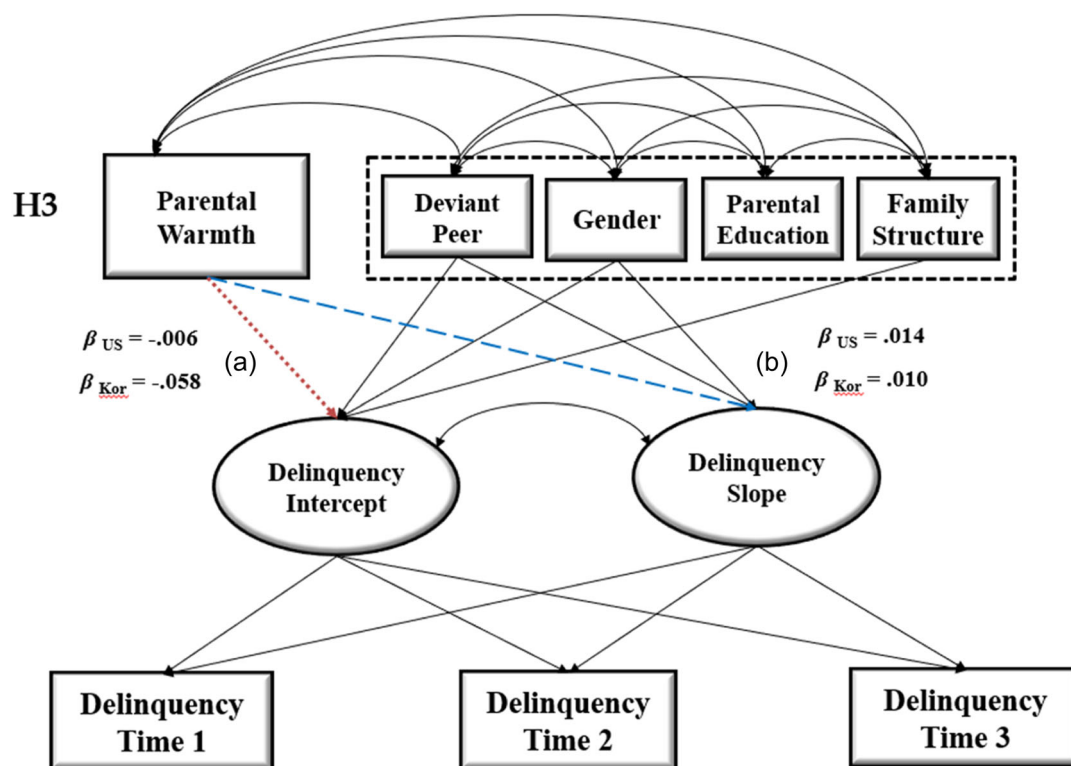
**FIGURE 1** Trajectories of delinquency (H1) and cultural differences in the trajectories of delinquency (H2) in the National Longitudinal Study of Adolescent to Adult Health and Korean Youth Panel Survey.

A group comparison model was then used to test how the effect of parental warmth on delinquency trajectories differs in the United States and South Korea. This model, as shown in Figure 2, produced an adequate model fit:  $CFI = 0.92$ ,  $RMSEA = 0.04$ ,  $p_{close} = 1.00$  after eliminating nonsignificant paths from covariates. Specifically, the path from parental warmth to delinquency intercept (path a) significantly differed by country ( $\beta_{US} = -0.006$ ,  $\beta_{Kor} = -0.058$ ;  $\Delta\chi^2(1) = 121.71$ ,  $p < .05$ ), indicating that the protective effect of parental warmth on the initial level of delinquency was weaker for American adolescents than Korean adolescents. Further, the path from parental warmth to delinquency slope (path b) also significantly differed by country ( $\beta_{US} = 0.014$ ,  $\beta_{Kor} = 0.010$ ;  $\Delta\chi^2(1) = 18.93$ ,  $p < .05$ ), suggesting slower decreasing delinquency by parental warmth in the U.S. sample than in the Korean sample.

## 7 | DISCUSSION

Although there are some studies examining trajectories of delinquency during adolescence and their connection to parenting behaviors, the specific focus on cultural differences in delinquency levels, trajectories, and their association with parental warmth within different cultural contexts has received limited attention. To add to this research gap, the purpose of this study was to examine delinquency trajectories from middle to late adolescence in the United States and South Korea, cultural differences in the levels and trajectories of delinquency, and their association with parental warmth in the two countries. Based on adolescent psychological development, cultural-ecological theory, and previous literature, the current study hypothesized that trajectories of delinquency peak in middle adolescence and then decline afterward in both countries and there would be cultural differences in delinquency levels, trajectories, and the association between parental warmth and trajectories of delinquency. Specifically, we hypothesized that the delinquency levels would be higher among American adolescents than Korean adolescents, on the other hand, the rate of change would be faster for American adolescents than Korean adolescents. Further, the impact of parental warmth on delinquency trajectories would be stronger for Korean adolescents compared to American adolescents.

First, the trajectories of delinquency supported a declining trend of delinquency from middle to late adolescence in both countries. These results were also consistent with previous studies, which demonstrated that the trajectories of delinquency peak at middle adolescence (ages 14/15) and then decline until late adolescence (ages 19/20) (Meeus et al., 2004; Sampson & Laub, 2003). This consistent pattern has been shown across ethnicity, location, and socioeconomic status in previous studies



**FIGURE 2** Comparison of the association between parental warmth and trajectories of delinquency in the National Longitudinal Study of Adolescent to Adult Health and Korean Youth Panel Survey. [Color figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com/doi/10.1002/jad.12382)]

(Piquero et al., 2003). Erikson's (1968) psychosocial development does not explicitly address delinquency. However, certain aspects of theory, such as identity versus role confusion during adolescence, may be relevant to understanding why delinquency levels peak during middle adolescence and then decline afterward. During middle adolescence, youths navigate the challenges of forming their identities and establishing a sense of self. This stage can be marked by identity exploration and experimentation, and this can contribute to increased risk-taking behaviors, including delinquency. As adolescents progress through late adolescence, they often strengthen a sense of identity, which can lead to a decline in delinquent behaviors. However, it is important to understand that the levels and changes of delinquency can be different in cultural settings due to the complex interplay of individual, familial, and cultural factors.

Indeed, we found cultural differences in the levels and changes in delinquency trajectories in the United States and South Korea. The findings suggested that American youths showed a higher level of delinquency than Korean youths. This finding was consistent with previous research (Greenberger et al., 2000; Yun & Cui, 2020). Such differences in levels of delinquency provided supportive evidence that cultural norms and values play a significant role in shaping adolescent delinquency. Specifically, American adolescents are more exposed to individualist cultures, which can promote a greater willingness to engage in exploration and experimentation during adolescence (Greenberger et al., 2000). This stage of life is characterized by identity development and a quest for independence, which may lead some adolescents to involve risk-taking behaviors as they seek to establish their identities and assert their autonomy (Schwartz et al., 2013). In contrast, Korean adolescents are more likely to be influenced by the collectivistic culture, which may place more emphasis on conforming to traditional behavioral norms and suppressing their disapproved behaviors, potentially reducing the likelihood of delinquency (Oyserman et al., 2002; Tyson & Hubert, 2003). Additionally, South Korea's educational system places a significant emphasis on academic success, and this can influence limited opportunities available to Korean adolescents, including their engagement in delinquent activities (Lee, 2003).

In addition to the differences in levels of delinquency, we also found that delinquency declined at a faster rate for American adolescents than for Korean adolescents. Given that the initial levels of delinquency were higher for American adolescents than for Korean adolescents, this finding is not surprising. From Erickson's (1968) psychosocial development theory, the major task of adolescence is understood as a process of distancing oneself from the views of others, particularly parents, to form a sense of self. When this process is completed toward late adolescence, individuals are likely to avoid major risk-taking, but for those who have not achieved identity status at this stage (i.e., identity diffusion, foreclosure, or moratorium), there may still be an association with risk behaviors such as delinquency. Some scholars from South Korea

indeed found that Korean adolescents delayed achieving primary tasks, including identity formation due to higher pressure on their academic success and lack of free time (Kim, 1989; Lee, 2003). Therefore, delinquency decline could be faster for American adolescents than Korean adolescents as Korean adolescents could delay their identity formation compared to American adolescents. It underscores the importance of considering cultural nuances when addressing issues related to adolescent behavior. Additionally, it highlights the need for tailored interventions that are sensitive to cultural contexts and encourage healthy identity development for adolescents who have different cultural backgrounds.

Considering the role of parental warmth in different cultural contexts, we found that the protective effect of parental warmth on the initial level of delinquency was weaker for American adolescents than for Korean adolescents. Further, we found that parental warmth was related to a slower decrease in delinquency among American adolescents than among Korean adolescents. These findings brought an interesting debate on the role of parental warmth in delinquency in different cultures (Greenberger et al., 2000). According to Chen et al. (1998), cultural differences usually do not emerge until middle adolescence because the individualism-collectivism divide in different cultures and the corresponding cultural differences bring the difference in the extent to which parents grant adolescents autonomy. Studies by Park and Han (2018) and Lee et al. (2015) have demonstrated that collectivistic cultures, such as Korean society, tend to place greater emphasis on family cohesion and parental authority. Conversely, in individualistic cultures like United States, parental warmth may be less influential in deterring delinquent behaviors (Fuligni et al., 2005; Steinberg et al., 2001). These previous studies suggest that factors such as peer influence and personal autonomy often exert stronger influences on adolescent behaviors in individualistic societies, potentially diminishing the protective effects of parental warmth.

The findings in this study suggested parental warmth to be a more effective protective factor in adolescent delinquency trajectories for Korean adolescents than for American adolescents. For example, Walker-Barnes and Mason (2004) found that parental warmth was significantly and positively associated with gang delinquency across time and suggested that adolescents could perceive parental warmth as approval for delinquent activities. Further, in individualistic cultures that prioritize autonomy and independence, such as the United States, parental warmth may not have as strong of an impact on adolescent behavior because American adolescents are encouraged to be more independent and have greater autonomy to shape their own lives. These findings can have important implications for researchers, suggesting a more careful look into the role of parental warmth especially when they are moving to late adolescence.

Using large national and longitudinal datasets, this study contributes to the literature by examining cultural differences in the levels and trajectories of delinquency and the association between parental warmth and delinquency trajectories. Despite the strength of the study, there are some limitations, several of them due to the use of secondary data. First, parenting measures that existed in these datasets were not as comprehensive as we would like to fully capture the concept of parental warmth (Malecki & Demaray, 2003; McNeely & Barber, 2010). In addition, the U.S. sample from Add Health included more diverse ethnic groups (e.g., White, Hispanic, African American, and Asian), and the Korean sample from the KYPS was homogenous. Although this difference accurately reflected the demographics of the two countries, the race/ethnicity variations between the two datasets can affect the result as a confounding factor. Second, the utilization of self-reported delinquency and parental warmth by adolescents potentially inflates the association between parental warmth and delinquency. Specifically, Greenberger and his colleagues (2000) questioned the comparability of self-reports of delinquency among Korean adolescents with those of American adolescents, suggesting that the former may exhibit underreporting due to a tendency to present themselves positively to influential individuals including parents. While past studies have shown the reliability of adolescent self-reports (Auty et al., 2015), future research could benefit from increased robustness by incorporating data from multiple sources, such as parents and teachers. Further, due to the need to match the waves and ages from the two datasets, this study used only three-time points to measure delinquency trajectories from mid to late adolescence. If growth rates were estimated from more waves of data, more reliable and precise outcomes could be produced (Willett, 1989). It is also worth noting that the two datasets were collected at different times, although the numbers of delinquency cases from national estimates were comparable between those time frames (i.e., 1994/95 vs. 2003/04) when each country collected each sample (U.S. National Center for Juvenile Justice, 2012). Future studies would benefit from the use of more waves of data and other dimensions of parenting (e.g., parenting control) within comparable time frames to yield more precise and reliable outcomes in the association between parental warmth and delinquency trajectories in the two countries. To be specific, future studies would gain power by incorporating the longitudinal assessments of changes in parental warmth over time to deepen understanding of the intricate interplay between parental warmth and delinquency trajectories. Further, Yun and Cui (2020) suggested that the verbal/physical expression of warmth in Western culture might be perceived and function differently in South Korea, where financial/practical assistance to children is considered a significant expression of warmth and affection. Thus, exploring the influence of culture on parental warmth expression, its potential connection to adolescent outcomes, and gender variations in parental warmth practices could provide valuable insights for future studies. Despite the limitations, this study adds to the current literature on key topics of cultural differences in adolescent delinquency over time and the role of parental warmth. The findings revealed important messages for future studies in parenting programs and adolescent delinquency prevention and intervention programs. To advance this line of research and

practice, we call for future studies to unpack the cultural elements that could explain the observed cultural differences in the relations between parenting behaviors and adolescent outcomes.

## 8 | CONCLUSION

The current study contributed to the understating of cross-cultural aspects in the relations between delinquency trajectories and parental warmth in the United States and South Korea. Specifically, involvement in delinquency and the influence of parental warmth was not static but rather dynamic, contingent on the developmental stage of adolescence and the cultural environment in which it occurs. This finding has important implications for research, policy, and practice. First, researchers and practitioners must approach the role of parental behaviors on adolescent outcomes with cultural sensitivity, acknowledging that cultural norms and values can significantly influence these dynamics. Also, prevention programs can teach parents strategies for building resilience in their adolescents. This includes helping adolescents develop a strong sense of identity, which can reduce their vulnerability to delinquent behaviors. Cultural competency training can also help immigrant families and interracial families meet their adolescents' needs within the context of their unique cultural backgrounds. Further, policymakers should consider cultural factors when formulating policies related to juvenile justice, family support services, and delinquency prevention, ensuring that interventions are responsive to the changing needs of adolescents. Family life educators and practitioners may develop practices considering the cultural influences observed in this study to prevent or reduce adolescent delinquency. In sum, this study underscores the importance of the need for a culturally sensitive lens when studying delinquency trajectories and their association with parental warmth in adolescence.

### AUTHOR CONTRIBUTIONS

Hye-Jung Yun formulated the research questions, conducted the statistical analyses, and wrote the manuscript. Ming Cui provided guidance on data analysis and contributed to manuscript writing. Both authors have reviewed and approved the final manuscript.

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### CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

### DATA AVAILABILITY STATEMENT

The data that support the findings of this study are openly available in Add Health at <http://www.cpc.unc.edu/addhealth>. The data for the National Longitudinal Study of Adolescent to Adult Health (Add Health) can be accessed through the Add Health website at <http://www.cpc.unc.edu/addhealth>, but restrictions apply to the availability of these data, which were used under a contractual agreement for the current study, and only limited data are publicly accessible. Restricted-use data can be obtained upon request and with permission from Add Health. The Korean data utilized in this study are openly accessible through the NYPI Youth and Children Data Archive at <https://www.nypi.re.kr/archive/board?menuId=MENU00328>. Access to this data is granted through request and with permission of the National Youth Policy Institute.

### ETHICS STATEMENT

The study adhered to the guidelines of the research ethics board of the affiliated university. Approval for the research project, which involves secondary data analysis and does not entail informed consent, was obtained from the Human Subjects Committee at Florida State University.

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