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The Relationship of School, Parent, and Peer Contextual Factors with Self-Reported
Delinquency for Chinese, Cambodian, Lao/Mien, and Vietnamese Youth

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Authors' Note: We are grateful for the assistance of Isami Arifuku, Mary Lai, Lila Booth, and the 18 field interviewers and interns in conducting this study. We also acknowledge Judy Wallen for providing statistical support. This publication was supported by Grant R49/CCR918619-01 from the Centers for Disease Control & Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control & Prevention.

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Key words: delinquency, Asian, peer delinquency, school attachment, parent discipline

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Abstract

The study of delinquency has focused on examining the relative predictive value of school, parent, and peer contextual variables, but relatively little research has included Chinese and Southeast Asian youth. Using data from a larger, community-based research study with 329 Chinese, Cambodian, Mien/Laotian, and Vietnamese youth, we found that peer delinquency was the strongest predictor of self-reported delinquency. However, its predictive power for the Chinese group is about one half that of the other groups. School attachment negatively predicted delinquency for Chinese and Vietnamese, and for males and females, but not for Cambodian and Lao/Mien. Parent Attachment and parent discipline were found to be nonsignificant predictors. LISREL analyses also indicated measurement and structural invariance across ethnic groups, providing support for cross-cultural comparisons. Implications for interventions are discussed.

The Relationship of School, Parent, and Peer Contextual Factors with Self-Reported Delinquency for Chinese, Cambodian, Lao/Mien, and Vietnamese Youth

A considerable body of research has explored the relative predictive value of school, family and peer variables on delinquency. Although most prior empirical studies have identified these variables as risk or protective factors for delinquency in predominately African-American and European American samples (e.g., Smith & Krohn, 1995; Thornberry et al., 1991 & 1994), it is not clear whether similar findings would generalize to other ethnic and racial groups such as Asians. This research investigates the relative predictive value of these variables on delinquency in a sample of Cambodian, Chinese, Lao/Mien, and Vietnamese youth.

Family and Delinquency

Most delinquency theorists and researchers agree that family plays an important role in delinquency, functioning as an important socializing and control agent (Baker & Mednick, 1984; Farrington, 1989; Hirschi, 1969; Loeber & Stouthamer-Loeber, 1986; McCord et al., 1959; McCord, 1979; Maguin et al., 1995; Snyder & Patterson, 1987; Wells & Rankin, 1988). The relationship between parent-child interactions and delinquency is, however, not necessarily straightforward, and a variety of family variables (e.g., parental attachment, hostility, rejection, supervision, and involvement) have been proposed to influence adolescent's antisocial behavior. Hoge et al. (1994), for instance, classified numerous family variables into two distinct and broad dimensions of relationship and structuring. The relationship dimension of parenting addresses concepts such as parental attachment, involvement, acceptance, and rejection. Investigators who emphasized this dimension in their studies such as Farrington (1989), Hanson, Henggeler,

Haefele, and Rodick (1984), Henggeler et al. (1986), Tolan (1988), and Williams (1994) have generally found a positive association between negative parental relationship and juveniles' criminal activity. Farrington (1989), for instance, showed that sons of the fathers who did not engage with them in leisure activities exhibited a higher level of violent behavior and received a greater number of convictions of violent offense as teenagers and adults as compared to fathers who were more involved.

A meta-analytical review of longitudinal studies on the predictors of youth violence suggested that high levels of parental involvement can function as a protective factor against violence (Hawkins et al., 2000). Conversely, research has often characterized parenting practices used in the family of delinquent youth as uninvolved, and distant with poor supervision and control (Cernkovich & Giordano, 1987; Hirschi 1969; Loeber & Stouthamer-Loeber, 1986).

The structuring dimension is conceptualized in terms of constructs such as monitoring, supervision, control, and discipline. Along the lines of social control theory, research considering this dimension has provided ample evidence for the positive relationship between inadequate structured parenting practices and delinquency (Capaldi & Patterson, 1996; Farrington, 1989; McCord et al., 1959; McCord, 1979; Paterson & Stouthamer-Loeber, 1984; Snyder & Patterson, 1987; and Van Vooris et al. 1988). Patterson and Stouthamer-Loeber (1984), for example, found a positive association between poor parental supervision, inadequate parental discipline, and self-reported delinquency. Similarly, Farrington (1989) demonstrated that family interaction variables such as poor parental supervision, harsh parental discipline, and poor child rearing practices each uniquely predicted later violence among adolescents. Along the same line,

a meta-analytical review of delinquency suggested that family factors such as parental supervision, involvement, and parent's marital relations put youth at-risk for juvenile conduct problems and delinquency (Loeber & Stouthamer-Loeber, 1986). In a longitudinal study conducted by McCord and McCord et al. (1959 & 1979), they found that poor parental supervision and aggressive discipline predict children's conviction for later person crimes. In this study, we selected measures of family interactions that reflected these two dimensions. More specifically, we explored the impact of parental attachment and parental discipline with respect to self-reported delinquency for Chinese and Southeast Asian youths.

With respect to ethnic differences, only a limited number of studies have explored how ethnicity interacts with family processes such as parental involvement and supervision. Cernkovich & Giordano (1987), for instance, found that parental supervision and control were better predictors of delinquency among African-American families as compared to European American families because within distressed socio-environmental context of African-American communities, greater parental discipline and control are associated with greater care and concern whereas they would be considered intrusive and inappropriate for European Americans. Similarly, Smith and Krohn (1995) found that among European American, African-American and Hispanic adolescents, living with a single parent along with lack of parental involvement were strongly associated with delinquency, but only among Hispanic adolescents.

Whether these parental factors influence delinquency for Asian youths is unclear as most studies have not included Asian ethnic groups in their samples. However, there are notable reasons why parental factors may be important explanatory factors in

delinquency for Asian groups. In addition to the fact that spending time with parents reduce opportunities for delinquency, Asian youth may refrain from engaging in delinquent activities or hanging out with delinquent peers because they want to avoid parental disapproval and shaming (Warr, 1993). This may be particularly relevant for Asian youth in the context of collectivistic culture like Asia in which following group norms, obeying authority figures like parents, and maintaining group honor and harmony take precedence over individual autonomy and expression. Along similar lines, Bankston and Caldas (1996) suggested that families, particularly Vietnamese American, play an important role in delinquency because they facilitate youth integration into the social structures of their ethnic community as well as the larger mainstream society. Vietnamese youth who were closely connected with their ethnic community through their parents are less likely to engage in delinquent activities. Finally, to the extent that the processes of migration result in disrupting family functioning, family cohesion, and intergenerational conflict, the nature and degree of parent relationships is an important consideration in Asian youth delinquency.

Thus, Asian parents may not only inculcate the values and norms of collectivism and connect youth to potentially buffering elements of culture and ethnic identity, the nature of their relationship with their child and their ability to reduce opportunities for delinquent engagement (e.g., spending time with their child, providing a role model) suggest that parental factors may be inversely related to delinquency for Asian youth.

Peer and Delinquency

Consistent with social learning theory, studies have demonstrated strong, empirical support between delinquent peers and delinquent behavior (e.g., Elliot et al.,

1985; Johnson, 1979). Peers influence youth's beliefs, attitudes, and behavior about what is appropriate or inappropriate behavior. In a comprehensive review of the research literature on the social sources of delinquency, Kornhauser (1978) characterized delinquent peers as the most robust predictor of delinquency. Numerous cross-sectional (e.g., Agnew, 1991; Johnson, 1979; Krohn, 1974; Voss, 1964) and longitudinal studies (e.g., Elliott et al., 1985; Krohn et al., 1985; Patterson and Dishion, 1985; Thornberry et al. 1994) have supported Kornhauser's finding. Similarly, Sutherland and Cressey (1978) documented a causal relationship between association with delinquent peers and delinquent behavior. Thornberry et al. (1994) in their study of interactional theory extended this relationship by investigating the existence of a reciprocal relationship between the aforementioned variables, and found that associating with delinquent peers resulted in increases in delinquency, and vice versa. Prior studies based on the predictive domains of delinquent behavior have also identified the presence of antisocial peers as the leading predictor variable of delinquency among 12-14 year old youths (Lipsey & Derzon, 1998).

Although there is strong evidence that delinquent peers and delinquent behavior are strongly related, only a small number of studies have incorporated Asian ethnic groups in their samples. The few studies that do exist found that among Chinese, Korean, and Japanese American youth, there is a direct and positive relationship between delinquent peer association and delinquent behavior (Kim & Goto, 2000). Thai (2003) also found that Vietnamese adolescents who associate with delinquent peers and have problems in the home, school, or neighborhood are apt to become delinquents or join gangs. In contrast, Vietnamese youth who do not associate with delinquent peers but

have the same problems are less likely to exhibit delinquent behavior or become gang members.

School and delinquency

Prior research studies have consistently documented a positive relationship between school-related variables such as poor academic achievement (Maguin & Loeber, 1996; Denno, 1990), low attachment to school (Catalano & Hawkins, 1996; Hirschi, 1969), low educational commitment (Herrenkohl et al., 2000; Hirschi, 1969, Williams, 1994), spending less time on homework (Cernkovich & Giordano, 1992), getting low grades (Farrington, 1989; Maguin et al., 1995) and delinquency. Thornberry et al. (1991), for instance, found a positive reciprocal relationship between commitment to school and delinquency. Results of their study suggest that a higher level of commitment to school was associated with fewer delinquent activities while delinquent behavior, in turn, reduced commitment to school. Herrenkohl et al. (2001) noted that among elementary and middle school children, the predictors of later child delinquency were low academic performance, low commitment to school, and low education aspiration. Number of prior studies has also examined the role of school commitment and performance as protective factors for high-risk delinquent youths. It was found that commitment to school, attachment to teachers, education aspirations, and expectations about attending college reduced the level of both delinquency and drug use among the high-risk youth (Smith et al. 1995).

Again, only a few studies have explored how ethnicity interacts with school attachment/engagement and delinquency. The few studies that do exist such as Williams (1994), for instance, showed that compared to female European American students,

school bonding was a stronger protective factor against violence for male African-American students. Vazsonyi and Flannery (1997) also found that the school domain appeared to be more salient for European American adolescents in explaining deviance while family domain was more salient for Hispanic deviant conduct. Jang (2002) found that school attachment was significantly associated with delinquency for both Asian and non-Asian youth.

Present Study

Given few studies on delinquency for Chinese and Southeast Asian youth, this study was intended to be exploratory but theoretically centered on using empirical data to examine social control (parent and school attachment) versus social learning theories (peer delinquency) of delinquency. We investigated the relative influence of peer delinquency, parent attachment, parent discipline, and school attachment on youth self-reported delinquency for Cambodian, Chinese, Lao/Mien, and Vietnamese. Based on social learning theory, peer delinquency would be the strongest predictor of youth's self-reported delinquency. Developmentally, peers play a large role in socializing adolescents to delinquent beliefs, attitudes, and behavior. The social control theory, on the other hand, postulates that attachment to parents and school would be negatively related to delinquency. Parents and school are socializing agents that not only regulate and condemn delinquent behavior, but also connect youth to conventional goals like academic achievement, conventional activities like schoolwork, and conventional beliefs like respect for authority figures.

Previous studies that have explored potential racial/ethnic differences, albeit predominately European American vs. African-American, with respect to the exploratory

role of peer, family, and school processes have suggested differences in the salience of these predictors. For instance, Vazsonyi and Flannery (1997) found that the family domain was more important for European American adolescents than Hispanic adolescents, whereas the school domain was more salient for Hispanic than European American adolescents. On the other hand, Smith & Krohn (1995) found that family variables were more important in deterring delinquency for Hispanic male adolescents than African-American and European American male adolescents. Yet, in a more recent study, Vazsonyi and Pickering (2003) showed that there were small differences in the relationships between family and school factors and delinquency for African-American and European American adolescents. School factors accounted for more variance than family factors in both groups.

Jang (2002) recently compared Asian vs non-Asian adolescents in self-reported arrest, evaluating the relative predictive value of family vs. school factors, and found that the difference between Asian vs. non-Asian on general forms of delinquency was attributed to differences in family backgrounds and school attachment. More specifically, Asian youth tend to have a more intact family structure and to be more attached to school. Interestingly, family bonding variables (closeness, engagement, monitoring) was nonsignificant. He also conducted comparisons across four regional groups (Far East, East, Southeast, and South Asian) and found more within-group homogeneity than heterogeneity, with differences among these groups attributed to family background and school bonding, similar to the racial group comparisons.

Census data show that Chinese have higher SES and educational attainment as compared to Southeast Asian (Hune & Chan, 1997; Paisano, 1993). Within the Southeast

Asian group, Vietnamese tend to rank higher in SES and education than Cambodian and Lao/Mien (Hune & Chan, 1997; Paisano, 1993). The immigration history among the different Asian ethnic groups is also markedly different. Chinese, for instance, voluntarily came to the US to improve their economic, social and possibly political circumstances (Zhou, 2003). In contrast, Cambodian, Lao/Mien, and Vietnamese primarily came to the US as refugees and political immigrants, as a result of persecution and fleeing a war-torn country (Zhou & Bankston, 2000; Chhim, 2003; Chuong & Ta, 2003; Phapphayboun, 2003). Thus, the disruptive processes of migration and adaptation are likely to be more severe for Southeast Asians than Chinese. Intergenerational conflicts and stresses associated with acculturation and adaptation have been linked to higher rates of delinquency (Bankston & Caldas, 1996; Zhou & Bankston, 2000). Hence, within the context of structural and historical differences, we hypothesize that Chinese youth would score the lowest on delinquency, followed by Vietnamese, Cambodian and Lao/Mien, respectively.

As revealed by Jang's (2002) findings and consistent with previous research as noted earlier, we expect that school attachment would be an important explanatory variable in delinquency in our sample. Given the strong emphasis placed on educational achievement among Chinese and Vietnamese (Caplan, Whitmore, & Choy, 1989; Zhou & Bankston, 2000), we suspect that school attachment would be more important for these two groups as compared to Cambodian and Lao/Mien. Whereas Vietnamese parents rank education and achievement as the number one priority for their children, and push their children to work hard to succeed academically (Caplan et al., 1989), Cambodian parents

perceive ability and talent as innate characteristics, and are thus, reluctant to push their children to pursue academic success (Nguy, 1999).

Jang (2002) also found that family attachment failed to explain Asian vs. non-Asian as well as within Asian group differences, but that school attachment was more important, similar to Vazsonyi and Pickering's (2003) finding with African-American and Caucasian. He suggested that in the developmental task of identity and changes associated with social roles, Asian youth become more similar to their non-Asian American peers; as such, school and peer relationships become more salient than parent relationships although the relevance of family structure factors (e.g., living with both biological parents) remain important in fostering adaptive behaviors. Despite this empirical finding, we nevertheless suspect that parent factors may still be an important explanatory factor for Chinese, Cambodian, Lao/Mien, and Vietnamese given that family life, family solidarity, and values associated with collectivism are emphasized in these four ethnic groups.

Yet, consistent with literature, we hypothesize peer delinquency to be the major contributing factor in self-reported delinquency across the four ethnic groups. Kim and Goto (2000) also suggested that peer groups may even be more important for Asian due to their endorsement of collectivistic values that place group norms and values above individual needs and preferences. We also make this prediction based on O'Donnell's (2003) theoretical analysis on Asian youth. He argued that family, school, and community factors affect delinquency through fostering or inhibiting interactions with delinquent peers. In other words, to the extent that family, school, and community factors play a role, they foster or inhibit connection with delinquent peers.

As an ancillary consideration, we also explored whether sex would moderate the associations between experiences in the school, family, and peer context and delinquency.

Method

Sample

The sample consisted of 329 Cambodian, Chinese, Lao/Mien, and Vietnamese youth. Table 1 shows the demographic distribution for each ethnic group. As observed, the average age for Chinese and Vietnamese was 14 years old, and 15 years old for Cambodian and Lao/Mien. Sex was almost equally distributed with slightly more females in the Lao/Mien group, and more males in Cambodian and Chinese groups. Cambodians, Chinese, and Lao/Mien comprised mainly of second generation while Vietnamese consisted of about half first generation, and half second generation.

Procedure

Data for this study was taken from part of a larger, community-based research study on the risk and protective factors for API delinquency. The study involved three separate phases including development of the interview instrument, convening focus groups with community members from each respective ethnic group to discuss methodology and measures, and field testing the interview instrument on a sample of 20 youth-parent dyads, two from each respective ethnic group. The core measures for the interview instrument were based on the three large, national studies of youth development and delinquency (Denver Youth Study, Rochester Youth Study, Pittsburg Youth Study). Based on responses and critiques from community members and field

participants, revisions were made to be culturally responsive and relevant. All forms and procedures were approved by the University of Hawaii's Institutional Review Board.

Participants were recruited from two local middle and high-schools in Oakland that had the largest concentration of Asian/Pacific Islander youth. On one day assigned by the school administrators, researchers went to every math and physical education class rooms and gave a short presentation about the study and asked for participation.

Interested students were asked to fill out a consent form which collected information about their age, ethnicity, sex, parent's name, and phone numbers. 435 forms from Asian students were collected. Of these, 326 had valid or working phone numbers. This large loss is attributed to the lag time from collecting consent forms to actual scheduling of interview. We were awaiting final approval from the Institutional Review Board that took an unexpected, additional five months. By the time contact and interview started, several phone numbers had been disconnected, and some of the youth had graduated, moved, or were no longer interested.

Researchers first contacted parents to obtain parental consent. Once parental consent was given (through signature on parental consent form), the interviewer then contacted the youth to schedule a convenient date and time to conduct the interview. A second recruitment effort was also made through five community-based organizations (CBOs) serving API families to increase the pool of potential participants. An enclosed shoe box with a slit on top was placed at these CBOs with a sign that provided a short description of the study and form to complete and place in the shoe box if interested. 239 forms were collected through this recruitment effort. Similar to the school recruitment, parents were contacted first to obtain parental consent before an interview was scheduled

with the youth. The overall response rate was 60%, higher through the CBOs (71%) than through the schools (49%). The attrition at this stage was primarily due to the parent's declining to participate.

Interviews were conducted in a face-to-face format that lasted on average 45 minutes. The majority of interviews were conducted in the participant's home, with less than 30 interviews conducted at a community-based center or in a public place (library). Participants were informed and reminded that the information was completely confidential and of their right to decline to answer any question or to stop the interview. Participants were compensated \$25.00 for participating.

Measures

Age. Age was calculated as the difference between date of interview and self-reported date of birth.

Sex. Sex was coded 1=male and 2=female.

Ethnicity. Respondent selected the ethnic group that they identified with the most. In cases where more than one ethnic group was selected, and no primary ethnicity was selected, the ethnicity of the mother was used. About 10% of cases fell into this circumstance.

School Attachment.

School Attachment scale was measured by fifteen items, a combination of items related to importance of school related activities, respecting teachers, and school aspirations (Thornberry, Smith, & Howard, 1997). Respondents were asked to indicate their level of agreement as strongly disagree, disagree, neither, agree, or strongly agree to statements about school such as "homework is a waste of time," "I try hard at school", "I

like school a lot”, “getting good grades is very important to me”, “Teachers are fair in dealing with students”, “I get the help and attention I need at my school.” Two items asked respondents to indicate the level of important of going to college and graduating from college (not important at all, not very important, pretty important, very important). Three items asked the participant to indicate the likelihood (not likely at all, somewhat likely, very likely) of graduating high school, going to college, and graduating from college. The final item asked how often participant studied when necessary instead of being with friends (all the time, most of the time, sometimes, never). Items were coded such that a higher score indicated a more positive attitude and thereby attachment towards school.

Parent Attachment.

Based on Hirschi’s (1969) concept of parent attachment which includes three dimensions including affective relations, close communication, and parental supervision, ten items were used to measure Parent Attachment. Participants responded to these items by indicating never, sometimes, or often. These items included knowing how to contact parents/guardian when parent/guardian not home, parent/guardian knows who participant is with, participant does fun things with parent/guardian, parent/guardian talks about what is going on in participant’s life, parent/guardian calmly discusses wrongdoing, participant receives affection, reward, encouragement, or is not ignored after doing something parent/guardian approved of. Items were coded such that a higher score indicated greater Parent Attachment. These measures have been used in previous studies (e.g., Thornberry, et al., 1997; Smith & Krohn, 1995; Stern & Smith, 1995).

Parent Discipline.

Parent Discipline was measured by six items. Participants indicated how often (never, sometimes, or often) they received the following forms of discipline or constraints after committing a wrongdoing: being punished, activities taken away, being sent to room, being yelled or scolded at, being slapped or spanked, made to feel shameful.

Peer Delinquency.

Peer Delinquency consisted of a 16-item scale. Items used were questions in which respondent answered either none, few, half, most, or all to questions asking how many of respondent's friends engaged in various delinquent activities in the past six months: cutting school, damaging property, stealing, joyriding, hitting, attacking, using weapons, using drugs, going to juvenile hall. A higher score indicated a higher level of peer delinquency. Similar version of this scale has been used in other studies (e.g., Thornberry et al., 1994).

Minor Delinquency.

Minor delinquency was measured by a 12-item scale, based on self-report responses from adolescents describing participation in a series of different delinquent activities within the last six-month. These activities included being rowdy in public places, skipping classes, cheating on tests, having lied about age, avoiding paying for things, violating curfew, being drunk in public places, using cigarettes or marijuana or liquor, making threatening or nasty phone calls, running away from home, copying software programs, hacking into someone else's computer, and stealing something worth less than \$50. These items are similar to those used in other studies (e.g., Elliott, Huizinga, & Ageton, 1985; Huizinga, Esbensen, & Weiher, 1991; Thornberry et al.,

1994). Each items was scored as 0=no 1=yes, and the scale was generated by taking the mean of the 12 items.

Serious Delinquency.

Serious Delinquency was measured by a 24–item scale, again based on commonly used measures of delinquency (e.g., Elliott et al., 1985; Huizinga et al., 1991).

Respondents reported whether they had participated in more serious level offenses within the last six-month such as hitting family members or friends, throwing objects such as rocks or bottles at people, breaking into buildings to take something, stealing, committing check fraud, committing arson, committing robbery, carrying weapons, selling drugs, damaging property, or committing assault in the last six-months. Each items was scored as 0=no 1=yes, and the scale was generated by taking the mean of the 24 items.

The reliabilities of all the measures for each ethnic group and sex are presented in Table 2. All the measures had reliabilities over .60 except for Parent Discipline for Cambodian and Lao/Mien, and Serious Delinquency for Chinese. However, it should be noted that self-reported delinquency measures and peer delinquency measures as used here have been shown to have high internal reliabilities, and that test-retest measure are more appropriate. The construct validity and reliability of the self-reported delinquency measures have been clearly demonstrated elsewhere (see Farrington, Loeber, Stouthamer-Loeber, Van Kammen, & Schmidt, 1996).

Analysis

Factorial invariance and structural relations among the latent variables were conducted using LISREL 8.54 (Jöreskog & Sörbom, 2001). Factorial invariance is an important consideration in cross-cultural studies to ensure that certain quantitative

relationships of each latent variable to its indicator variables are the same (invariant) for each group (Caprara, Barbaranelli, Bermudez, Maslach, & Ruch, 2000). Establishing such invariance ensures that scores on the latent variables are comparable across groups.

Latent Variables and Scales

Five latent variables were defined, one criterion variable and four predictor variables. Item parcels (Kishton & Widaman, 1994) were used for three of the predictor variables: Parent Attachment, School Attachment, and Peer Delinquency. Item 6, "don't ignore event," of the Parent Attachment scale was omitted because of inconsistent correlations (i.e., positive, negative, and zero) with the other nine scale items. Parcels were created such that three indicators (parcels) defined each latent variable. Scale items were randomly assigned to each parcel under the constraint that each parcel within a scale maintained the same number of items, where possible. Internal consistency reliability of the three parcels for each scale were as follows: (a) Parent Attachment, .68; (b) School Attachment, .83; (c) and Peer Delinquency, .93.

Item parcels have two distinct advantages over single total-scale score representations of latent variables in SEM analysis. First, if total scores are used as a single indicator of a latent variable the resultant unreliability resulting from both measurement error and specific variance compromises (usually attenuates) the relationships among the latent variables. Multiple indicators (parcels) correct the relationships among the latent variables for this unreliability. Second, and most important where invariance across groups is of concern, item parcels allow for testing invariance as each latent variable has multiple indicators that can be freely estimated or fixed to invariance across groups. With a single indicator per latent variable (i.e., total scale

score), invariance can be imposed, but is not testable in measurement models because two of the three—factor variance, factor loading, and specific variance—parameter estimates must be fixed.

The last predictor, Parent Discipline, was the summation of the six items from the Parent Discipline scale. The criterion latent variable was Delinquency represented by two scales, the 12-item Minor Delinquency scale and the 24-item Serious Delinquency scale.

Because the samples within each ethnic group were relatively small, we combined across ethnicity in conducting analyses by sex. Conducting analyses by sex for each ethnicity would have further reduced statistical power, and rendered conclusions more tentative.

Results

Descriptive Statistics

Means and standard deviations on the six manifest scales for both the ethnic groups and sex are shown in Table 2. Although no definitive conclusions can be made without first establishing factorial invariance, it is prudent to discern trends in these data. First, there were virtually no differences in School Attachment, Parent Attachment, and Parent Discipline among ethnic groups or between sex. For Peer Delinquency, there was no difference between males and females, however, differences among ethnic groups were apparent with the Cambodian group scoring about twice as high as the Chinese group (12.54 vs. 6.00). For Minor and Serious Delinquency, again there was very little difference between males and females which was surprising. For ethnic groups, again the Chinese group was the lowest scoring group on the average number of either minor or serious delinquent incidents.

Factorial and Structural Invariance

Ethnic Groups. Table 3 presents the fit indices for various levels of measurement factorial invariance. Because the baseline model fit the data almost perfectly ($\chi^2 = 187.2$ with 180 *df*), further invariance restrictions must result in either the same or deteriorated model fit. That is, it is nearly improbable to improve on a model with nearly perfect fit. Nevertheless, factorial invariance constraints were pursued.

In investigating factorial invariance, it was found that the factor loading for the first parcel of Parent Attachment for the Chinese group was compromising the fit indices for factorial invariance. Accordingly, this parameter was estimated separately for the Chinese group while remaining invariant across the three other ethnic groups. Accordingly, less than total factorial invariance is represented by the fit indices of Table 3. Although not the near-perfect fit of the baseline model, imposed invariance restrictions on factor loadings and factor intercepts across ethnic groups resulted in highly desirable fit indices (e.g., RMSEA = .028 and TLI = .984), therefore, strong partial factorial invariance is defensible. The limitation in the Chinese group actually became of little consequence because Parent Attachment was found to be a nonsignificant predictor in subsequent analyses.

Based on the strong factorial invariance measurement model, structural invariance was next investigated where Delinquency was predicted from Parent Attachment, Parent Discipline, School Attachment, and Peer Delinquency. Going directly to structural invariance (where the predictors are constrained to equality across groups) and accepting invariant models based on fit indices may overlook an important differential parameter estimate for one or more groups. Thus, it is always prudent to

compare individual group estimates to those of the structurally invariant model, and that was the tactic we pursued.

The results of structural model comparisons are shown in Table 3. Model 10 of Table 3 is strong partial measurement invariance with all predictors of Delinquency freely estimated for each group. In Model 11, Parent Attachment, Parent Discipline, and School Attachment were fixed to 0 as these were nonsignificant predictors in all ethnic groups. For Peer Delinquency, invariance was imposed across the Cambodian, Laotian/Mien, and Vietnamese groups with the Chinese parameter estimated separately. Model 12 further imposed invariance restrictions on the latent variable means (the alpha matrix in LISREL) using the same invariance blueprint for ethnic groups. Model 13 imposed full structural invariance; that is, the Chinese group estimates were forced to invariance with the other three ethnic groups. As is apparent from Table 3, Model 12 is the best fitting model. Thus, the Chinese group cannot be said to have the same structural relations among the latent variables as the Cambodian, Laotian, and Vietnamese groups.

Sex. Fit indices comparing measurement factorial invariance models for females and males are shown in Table 4. Unlike the sequence of models for the ethnic groups where only partial strong measurement invariance was tenable, for sex, improvement in model fit was established for increasing invariance restrictions through full strict factorial invariance, including the variance-covariance matrix and latent variable means (Model 05, Table 4). In Model 05, the factor loadings, factor intercepts, and residual variances of the indicator variables and the variances, covariances, and latent means are invariant across groups, females and males. Furthermore, full structural invariance was established for the sex groups in which the estimated paths for the predictors Parent Attachment,

Parent Discipline, School Attachment, and Peer Delinquency were constrained to equality across females and males (Table 4, Model 11). In Model 12, the predictor coefficients for Parent Attachment, and Parent Discipline were constrained to zero, as the estimates of these paths were nonsignificant in previous structural models. Because Model 12 resulted in minor erosion in model fit, Model 11 was deemed as the optimum model for the sex comparison.

Estimated Path Coefficients and Latent Variable Means

Within group estimated standardized regression coefficients are shown in Table 5 for each group run separately and in Table 6 for baseline structural invariance. For ethnicity, there are conflicting results depending whether or not factorial invariance was assumed. Where factorial invariance was assumed in the baseline structural model (Model 10 of Table 3 with path estimates shown in Table 6), Peer Delinquency was the only significant predictor of delinquency across all groups with its predictive power for the Chinese group about one half that of the other groups (.30 for the Chinese vs. ~ .65 for the other ethnic groups). Neither School Attachment, Parent Attachment, nor Parent Discipline was a significant predictor of Delinquency for any ethnic group. By contrast, where groups were run separately (path estimates shown in Table 5), School Attachment was a significant (negative) predictor of delinquency for the Chinese and Vietnamese ethnic groups. In the separate groups analyses, however, across group comparisons cannot be made because factorial invariance has not been established. Overall for the ethnic groups the definitive conclusions are: (a) Peer Delinquency was a significant predictor of delinquency for all ethnic groups, although less so for the Chinese group, (b) neither Parent Attachment nor Parent Discipline was a significant predictor of

delinquency, and (c) School Attachment cannot be discounted as a predictor of delinquency, particularly for the Chinese and Vietnamese ethnic groups.

Where factorial variance was assumed in the optimum structural model (Model 12 of Table 3), the estimated explained variance in delinquency was 49 percent for all ethnic groups except the Chinese where only 8 percent of the variance was explained. For the mean estimates on the latent variables, the Chinese group scored .57 standard deviations below the other ethnic groups on Peer Delinquency, and .67 standard deviations below the other ethnic groups on Delinquency. The other latent variables (e.g., School Attachment) maintained equivalent estimated means across the ethnic groups.

For sex, the results are less ambiguous. Both Peer Delinquency and School Attachment were significant predictors of delinquency, and both Parent Attachment and Parent Discipline were nonsignificant predictors of delinquency. Where factorial invariance was considered in the best Structural Model (Model 11 of Table 4), the estimated standardized coefficient for both females and males for Peer Delinquency was 0.66 ($t = 7.66$) and for School Attachment, -0.20 ($t = -2.73$). The estimated explained variance in delinquency was 59 percent and all estimated means on the latent variables for females and males were equal.

Discussion

Research in the last several years has demonstrated the relative predictive value of school, parent, and peer relationships in the development of problem behaviors in adolescence for African-American, European American, and Hispanic adolescents. For instance, studies showed that these factors, in varying degree, are linked with the initiation and progression of maladaptive behaviors (e.g., Hawkins et al., 2000; Lipsey &

Derzon, 1998). We did not know whether this finding would generalize to other ethnic populations like Chinese and Southeast Asian. Indeed, the results of this study suggest that for Chinese and Southeast Asian youth (Cambodian, Lao/Mien, Vietnamese), peer delinquency is an important risk factor for delinquency, although less predictive for Chinese than for Southeast Asian youth. In fact, across all groups except Chinese, the combination of these factors (mainly attributed by peer delinquency) accounted for almost half of the variance in delinquency. As Elliott et al. (1983) and many others have noted, peers often play an active role in socializing youth to beliefs and behavior consistent with maladaptive behavior. Through affiliating with delinquent peers, youth may learn behavior patterns, beliefs, and values that are associated with delinquent behavior. The weaker influence of peer delinquency for Chinese may be due to its smaller variance. For instance, the range for Cambodian on peer delinquency was much greater than Chinese. Along the same idea, the fact that peer delinquency has greater predictive value as compared to the other factors could certainly be attributed to its greater variance.

The results also showed consistently that across all groups, parental attachment and parental discipline were nonsignificant predictors, either as a direct effect or mediated through peer delinquency. Within group analyses, however, revealed that for Chinese and Vietnamese youth, school attachment was inversely related to delinquency. For these two ethnic groups, being connected with school is an important consideration in preventing delinquency.

The findings, however, do not necessarily imply that parental influences are insignificant. Parents play an important role in orientating their child toward peers and

choices of peers (Kandel, 1996; O'Donnell, 2003). Youths who have harmonious relationships with their parents are less likely to associate with delinquent peers (Werner & Silbereisen, 2003). Parents also provide social norms related to appropriate behavior, as well as play an important function in the supervision and monitoring of youth's inappropriate behaviors. According to the social control perspective (e.g., Hirschi, 1969), attachment to school and parent are inversely related to delinquency. Yet, in the presence of peer delinquency, parental or school factors may become less significant. Thornberry et al. (1991) suggested that this relationship is more complex, as weakened bonds to family and school and delinquent behavior operate in an interactional manner, influencing one another.

As expected, Chinese scored the lowest on delinquency followed by Vietnamese, Lao/Mien, and Cambodian, respectively, reflecting the idea that social structural variables and immigration history may be influential factors in delinquency rates. Future studies explicitly including immigration experiences and social structure should be explored in accounting for differences across ethnicity in delinquency rates. Although Jang (2002) did not include immigration experience or peer delinquency, he did show that family structure (family intactness, family size) and relations with school accounted for the differences in mean level delinquency rates between Asian and non-Asian as well as within Asian groups.

Interestingly, we also found no support for sex differences. For both males and females, peer delinquency was positively related to delinquency whereas school attachment was negatively related to delinquency. The predictive value of peer delinquency, however, was twice as that of school attachment. This finding may appear

inconsistent with other studies that found that parental relationships were more important for females than males with respect to delinquency (Windle, 1992). It has been argued that girls continue to rely on family members for support despite spending more time with peers, and more so than boys; hence, parental influences would remain a significant factor (Werner & Silbereisen, 2003). However, the results here suggest that interpersonal relations in the peer domain were equally predictive for both sex, and that the influence of parent attachment, parent discipline, and school attachment was invariant for both.

What was surprising was the finding that males and females reported the same level of delinquency. This could be attributed to the fact that the sample did not include at-risk population or youth engaging in serious delinquent behavior. The prevalence rate for delinquency in a community sample is often low, as was the case in this sample. However, the relatively similar level of offending reported by the sexes could also reflect the increasing rate of delinquency for girls as compared to the decreasing rate for boys (Snyder & Sickmund, 1999).

Limitations of the study

Despite these strong and consistent findings across ethnicity and sex, there are several limitations of this study. First, as with any sample that is cross-sectional, causal pathways can not be determined. The results only imply associations and linkages. Longitudinal data are needed to conclusively establish the temporal order of delinquent peers and delinquent behavior. Second, the sample was taken from a defined geographical area that is relatively similar in socio-economic status (i.e., low income, immigrant enclaves). Moreover, the relatively high loss from the school sample limits the potential representativeness of the school sample as well as the sample as a whole.

Higher at-risk youth such as truant youth are most likely not represented in this sample. The relatively low rate of delinquency, both minor and serious, in this sample is also a major limitation. Thus, the nature of the sample precludes the ability to generalize to other geographical regions in the U.S. and wider socioeconomic statuses as well as to other Asian ethnic groups and at-risk youth. Third, our measure of parent attachment was limited to parent involvement, monitoring, and activities. Other elements such as family cohesion, congruence in cultural values, or amount of time spent with youth may yield more fruitful findings. For instance, Warr (1993) found that it was not the affective relation (i.e., attachment to parents) that buffered the effects of delinquent peers but the amount of time spent with family that reduced or eliminated peer influences. Likewise, school attitude could be further distinguished by attitudes toward school, attitudes toward teachers, likelihood of succeeding in school. For purposes of parsimony, we combined these factors into one scale. Finally, the study could have benefited from including a high-risk or at-risk sample to capture more serious delinquent acts, and to distinguish non-offenders from offenders. Despite these limitations, this study was able to contribute to the literature by expanding our understanding of the etiology of delinquency for Chinese and Southeast Asian groups. Moreover, there was support for measure and structural invariance across the four ethnic groups and sex, suggesting that the findings could be reliability and accurately compared across ethnicity and sex.

Implications for intervention

The findings have several important intervention implications. First, given the relatively strong influence of peer delinquency, it is important that delinquency prevention and intervention programs continue to focus on changing peer norms and to

pay attention to the influence of peers. Perhaps by disbanding deviant peer groups or promoting prosocial peers connections, more positive peer connections can be supported.

The role of parents should also be considered, especially in the context and relations of peers. Parents play an important role in orienting youth toward healthy peer relations as well as fostering positive school connections. Even among adolescents who have a high level of contact with deviant peers, reducing such connection may hold promise toward reducing maladaptive behavior. As Warr (1993) observed, spending time with family members significantly reduced the influence of peers. Although the finding here as well as elsewhere suggest that parents' influence operationalized as attachment and discipline are minimal if not nonsignificant, it may be that it is not so much about connecting with parents, but the absence of conflict with parents and family structure that is significant. During adolescence when other socializing agents (peers, school) become more important, intergenerational and culture conflict at home may propel Asian youth to seek comfort and support elsewhere and potentially with delinquent peers and partners. Hence, the variable of interest is perhaps not parent attachment, but parent conflict (or intergenerational conflict) and family structure as Jang (2002) demonstrated. Future studies assessing and incorporating these factors may yield more fruitful understanding.

Finally, providing opportunities for youth to connect with school and fostering academic achievement, especially for Chinese and Vietnamese youth that are consistent with cultural values, remain important as a protective factor for delinquency.

Conclusions

The results provided strong support for an association between peer delinquency and self-reported delinquency. For Chinese and Vietnamese, school attachment was

negatively associated with delinquency. Small sample size precluded us from developing male and female models separately for each ethnic group; as such, we collapsed ethnicity to examine potential sex differences. The results showed that peer delinquency and school attachment were significant predictors in both sex. Although parental influences were less significant as predictors, they are nevertheless important in that they provide contextual opportunities for youth to connect with peers.

This study is perhaps unique in its cross-cultural applicability. The majority of previous studies have predominately focused on European American, African-American, or Hispanic American populations. By exploring the relative predictive value of peers, school, and familial contextual variables, this study showed that the influence of peer delinquency to youth self-reported delinquency can be generalized to Chinese and Southeast Asian youth as well. Because measures and structural invariance were supported, the findings could be reliably compared across groups. Future studies, however, should also examine potential sex differences within each ethnic group

Although this was considered an exploratory study, it yielded fruitful findings for further considerations. We hope that this finding prompts other researchers to examine the etiology and developmental pathways related to delinquency as well as positive youth development cross-culturally.

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Table 1

Descriptive Statistics

Descriptive	Cambodian (n=112)		Chinese (n=64)		Lao/Mien (n=67)		Vietnamese (n=86)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Age	14.70 ^a	2.22	14.16 ^{abc}	2.12	14.73 ^{ab}	2.02	13.81 ^c	2.09
Sex	1.46 ^a	0.50	1.42 ^a	0.50	1.55 ^a	0.50	1.49 ^a	0.50
Generation	1.88 ^a	0.32	1.70 ^b	0.46	1.72 ^b	0.45	1.53 ^c	0.50

Note. Sex was coded as 1=male, 2=female

Generation was coded as 1=first generation, 2=second generation
 Within rows, values not followed by the same letter are significantly different, $p < .05$.

Table 2

Means, Standard Deviations, and Reliabilities for Ethnicity and Sex on Manifest Scales.

Group	Peer Delinquency	School Attachment	Parent Attachment	Parent Discipline	Minor Delinquency	Serious Delinquency
Ethnic Group						
Cambodian (<i>n</i> = 112)						
Mean	12.54	35.64	21.07	10.15	2.16	1.66
<i>SD</i>	11.73	5.31	2.77	2.19	1.90	2.61
α	.94	.70	.66	.54	.68	.81
Chinese (<i>n</i> = 64)						
Mean	6.00	36.39	20.30	9.73	1.59	0.66
<i>SD</i>	6.69	5.81	3.03	1.99	1.91	1.17
α	.88	.78	.68	.66	.78	.52
Lao/Mien (<i>n</i> = 67)						
Mean	10.93	35.76	20.78	9.43	2.27	1.71
<i>SD</i>	11.08	6.79	2.53	1.82	1.90	2.53
α	.93	.85	.58	.41	.76	.79
Vietnamese (<i>n</i> = 86)						
Mean	8.35	37.01	20.73	10.40	1.99	1.56
<i>SD</i>	9.43	6.65	3.45	2.46	2.03	2.28
α	.92	.84	.76	.64	.78	.74
Sex						
Female (<i>n</i> = 158)						
Mean	8.92	36.65	20.76	10.11	1.99	1.31
<i>SD</i>	9.51	6.35	2.76	2.13	1.89	2.29
α	.92	.83	.63	.54	.75	.81
Male (<i>n</i> = 171)						
Mean	10.70	35.73	20.78	9.87	2.06	1.58
<i>SD</i>	11.20	5.81	3.16	2.22	1.99	2.33
α	.94	.76	.72	.62	.74	.75

Note. Minor Delinquency Mean is average number of incidents out of 12 possible; Serious Delinquency Mean is average number of incidents out of 24 possible.

Table 3

Fit Indices of Factorial Invariance Models for Four Ethnic Groups: Cambodian, Chinese, Lao/Mien, and Vietnamese.

<i>Measurement Model (Group Invariance)</i>	χ^2	<i>df</i>	<i>p</i>	$\chi^2:df$	$\Delta \chi^2$	Δdf	$\Delta \chi^2:\Delta df$	RMSEA	TLI	CFI	CAIC
00. Baseline (configural invariance)	187.2	180	.34	1.04				.000	.995	.997	1400.6
01. Model 00 + Λ invariant (weak factorial invariance)	221.8	200	.14	1.11	34.6	20	1.73	.025	.987	.990	1297.7
02. Model 01 + τ invariant (strong factorial invariance)	248.4	220	.09	1.13	26.6	20	1.33	.028	.984	.987	1185.1
03. Model 02 + Θ_e invariant (strict factorial invariance)	308.9	252	.01	1.23	60.5	32	1.89	.046	.972	.973	1028.4
<i>Structural Model (Group Invariance)</i>											
10. Baseline (all predictors freely estimated)	248.4	220	.09	1.13				.028	.984	.987	1185.1
11. Nonsignificant BE paths=0 (Chinese BE (5,1) noninvariant)	250.9	234	.21	1.07	2.50	14	0.18	.010	.991	.992	1092.2
12. N.S. BE & AL paths=0 (Chinese AL 1 & 5 noninvariant)	257.9	247	.30	1.04	7.00	13	0.54	.000	.995	.995	1010.5
13. Full structural invariance	299.4	250	.02	1.20	41.50	3	13.83	.037	.976	.977	1025.2

Note. For Chinese, ly (3,1) freely estimated in Model 01, ty (3) freely estimated in Model 02, and te (3,3) freely estimated in Model 03.

Table 4

Fit Indices of Factorial Invariance Models for Sex.

<i>Measurement Model (Group Invariance)</i>	χ^2	<i>df</i>	<i>p</i>	$\chi^2:df$	$\Delta \chi^2$	Δdf	$\Delta \chi^2:\Delta df$	RMSEA	TLI	CFI	CAIC
00. Baseline (configural invariance)	168.5	90	<.01	1.87				.064	.958	.972	761.6
01. Model 00 + Λ invariant (weak factorial invariance)	168.7	97	<.01	1.74	0.02	7	0.00	.058	.965	.974	714.3
02. Model 01 + τ invariant (strong factorial invariance)	168.9	104	<.01	1.62	0.02	7	0.00	.052	.970	.976	666.9
03. Model 02 + Θ_e invariant (strict factorial invariance)	169.5	115	<.01	1.47	0.60	11	0.05	.044	.977	.980	592.9
04. Model 03 + Ψ invariant (variance/covariance invariant)	170.4	130	.01	1.31	0.90	15	0.06	.032	.985	.985	491.5
05. Model 04 + A invariant (latent means invariant)	170.5	135	.02	1.26	0.10	5	0.02	.028	.987	.987	457.6
<i>Structural Model (Group Invariance)</i>											
10. Baseline (all predictors freely estimated)	170.4	131	.01	1.30				.031	.986	.986	484.7
11. BE Invariant	170.5	135	.02	1.26	.10	5	0.02	.028	.987	.987	457.6
12. Model 11 + BE restrictions (nonsignificant BE paths = 0)	173.9	137	.02	1.27	3.40	2	1.70	.030	.987	.987	448.8

Table 5

Estimated Standardized Path Coefficients and (t-statistics) for Predictors of Delinquency across Ethnicity and Sex Assuming No Factorial Invariance.

Predictor	Ethnicity				Sex	
	Cambodian <i>n</i> = 112	Chinese <i>n</i> = 64	Lao/Mien <i>n</i> = 67	Vietnamese <i>n</i> = 86	Female <i>n</i> = 158	Male <i>n</i> = 171
Peer Delinquency	0.71*	0.26	0.75*	0.40*	0.58*	0.65*
<i>t</i>	(4.35)	(1.94)	(1.98)	(3.10)	(5.05)	(5.52)
School Achievement	0.03	-0.46*	-0.32	-0.50*	-0.33*	-0.22*
<i>t</i>	(0.23)	(-2.28)	(-1.57)	(-3.46)	(-3.30)	(2.20)
Parent Attachment	0.04	0.01	0.02	-0.09	-0.09	0.07
<i>t</i>	(0.36)	(0.06)	(0.15)	(-0.80)	(-0.93)	(0.73)
Parent discipline	-0.07	0.18	0.00	0.12	-0.01	0.07
<i>t</i>	(-0.79)	(1.60)	(-0.02)	(1.42)	(-0.15)	(0.99)
<i>R</i> ²	0.47	0.44	0.75	0.40	0.66	0.65
RMSEA	0.000	0.037	0.076	0.043	0.020	0.063
TLI	1.000	.971	.950	.982	.995	.959

Note. Models for each group run separately.

* Estimated path statistically significant $p < .05$.

Table 6

Estimated Standardized Path Coefficients and (t-statistics) for Predictors of Delinquency across Ethnicity and Sex Assuming Factorial Invariance.

Predictor	Ethnicity: Strong Invariance				Sex: Strict Invariance	
	Cambodian <i>n</i> = 112	Chinese <i>n</i> = 64	Lao/Mien <i>n</i> = 67	Vietnamese <i>n</i> = 86	Female <i>n</i> = 158	Male <i>n</i> = 171
Peer Delinquency	0.71*	0.30*	0.63*	0.66*	0.67*	0.66*
<i>t</i>	(4.49)	(2.75)	(3.77)	(4.12)	(5.55)	(5.67)
School Achievement	0.02	0.11	-0.10	-0.07	-0.18*	-0.22*
<i>t</i>	(0.14)	(0.84)	(-0.55)	(-0.67)	(-1.71)	(-2.15)
Parent Attachment	0.03	-0.08	0.08	0.06	0.07	0.07
<i>t</i>	(0.26)	(-0.61)	(0.60)	(0.49)	(0.73)	(0.76)
Parent Discipline	-0.07	0.00	-0.07	-0.06	0.08	0.07
<i>t</i>	(-0.74)	(0.03)	(-0.54)	(-0.52)	(1.09)	(0.97)
<i>R</i> ²	0.49	0.08	0.48	0.45	0.59	0.59

Note. * Estimated path statistically significant $p < .05$.