

Running head: SOCIAL-ECOLOGICAL FRAMEWORK TO EXPLORE BULLY/VICTIM

Applying the Social-Ecological Framework to Explore Bully/Victim Subgroups in South
Korean Schools

Jun Sung Hong

Wayne State University & Sungkyunkwan University

Dong Ha Kim

Chungwoon University

Simon C. Hunter

University of Strathclyde

IN PRESS at *Psychology of Violence*

Author Note

Jun Sung Hong, Wayne State University, School of Social Work & Sungkyunkwan University, Department of Social Welfare; Dong Ha Kim, Chungwoon University, Department of Social Welfare; Simon C. Hunter, University of Strathclyde, School of Psychological Sciences and Health.

Correspondence concerning this article should be addressed to Jun Sung Hong, School of Social Work, Wayne State University, Detroit, MI 48202 & Department of Social Welfare, Sungkyunkwan University, Seoul, South Korea.

Email: fl4684@wayne.edu & fl4684@skku.edu

Abstract

Objective: The present study sought to identify the structure of South Korean student bully and victim groups based upon longitudinal data, and the association of groups with social-ecological based factors at the *individual* (age, sex, father and mothers' educational status, household income, aggression, depression, smoking, drinking, type of family structure), *family* (neglect, abuse), *friend/peer* (peer relationships, number of delinquent friends), and *school* (school activity, school rules, teacher relationship) levels.

Method: Participants were 2,284 second year middle school students (50.5% male; $M_{\text{age}} = 14.0$ years old) who completed the Korea Children and Youth Panel Survey annually for three years.

Results: Latent Class Analysis identified victims (4.5%), bullies (2.8%), bully-victims (1%), and uninvolved students (91.8%) across time. At the individual level, compared to uninvolved group, bully-victims and bullies were more likely to smoke and drink alcohol, all subgroups have higher levels of aggression, and bullies and victims were more likely to have depression. At the peer/friend level, victims reported poorer quality peer relationships, and both bully-victims and bullies reported having more delinquent friends. At the school level, victims and bullies reported being less likely to engage in school activities, and bullies and bully-victims reported being less likely to follow school rules.

Conclusion: Certain social-ecological variables are relevant risk factors associated with each group of adolescents in South Korea. Our findings call for a holistic intervention strategy which not only addresses bullying but also problems such as smoking and drinking, and depressive symptomatology.

Keywords: aggressive behavior; bullying; harassment; peer victimization; youth violence

Applying the Social-Ecological Framework to Explore Bully/Victim Subgroups in South Korean Schools

Bullying is a pervasive problem that includes physical, verbal, relational, or cyber aggression. Most research on bullying has been conducted in Western societies, but it is also a social concern in South Korea where more than 40% of youth are involved in bullying (Kim et al., 2001; Kwon et al., 2012) the ratio of bullies to victims is 10.2% to 5.8%, respectively (Koo, Kwak, & Smith, 2008). Bullying and peer victimization in South Korea are primarily classified as *jipdan ttadolim* (isolated by a group), *jipdan goerophim* (harassed by a group), and *hak'gyo pong'nyeok* (violence in school; Lee, Smith, & Monks, 2011). In South Korea, adolescent peer relationships are guided by traditional Confucian ethics, which stress the importance of group awareness and group interdependence over the sense of the individual self and individual concerns (Schwartz, Farver, Chang, & Lee-Shin, 2002). Confucian ethics are distinct because they reinforce hierarchy, potentially placing certain children at higher risk of bullying and peer victimization. Also, South Korea has traditionally reinforced the importance of collectivism and group-identity (Park, 2005), and bullying and peer victimization can be consequences of non-conformity to in-group norms (Lee, 2006). Thus, South Korea can be clearly differentiated from Western societies, yet bullying and peer victimization are still observed.

In South Korea, these issues are recognized as social-ecological phenomena, fostered or inhibited by a complex interplay between inter- and intra-individual variables (Bronfenbrenner, 1979; Swearer & Doll, 2011). South Korean studies indicate that bullying is not an isolated event; rather, it needs to be understood across multiple contexts, such as individual, family, peer, and school (Cho, 2013a, b; Han & Kang, 2004; Jung & Park, 2010; Kim, & Han, 2010; Lee & Song, 2009, 2012; Song, 2013). The purpose of this study is therefore to examine whether subgroups (bullies, victims, bully-victims, and uninvolved)

identified in Western populations also describe South Korean adolescents' involvement in bullying. In addition, it will investigate whether variables relevant to the social-ecological perspective, outlined below, are associated with membership of those subgroups.

To date, there has been no investigation of how we might characterize the groups of young people (e.g., bullies, bully-victims, etc.) involved in bullying problems in South Korea. Nor has there been any investigation of the links between group membership (victims, bullies) and their links to social-ecological factors. Rather, most research in South Korea has focused on multiple contextual predictors of one or two subgroups of bullying involvement, namely perpetrators or victims (Cho & Chung, 2012; Shin & Kim, 2014; Song, 2013). Factors related to all subgroups of bullying within one or two immediate contexts have also been explored (Han & Yoon, 2010; Hu, Park, & Jung, 2009; Jung, Kim, Lee, Kim, & Song, 2002; Kim, Koh, & Leventhal, 2004; Kim & Sim, 2002; Yang, Kim, Kim, Shin, & Yoon, 2006). The present study is unique in that we clarify the group structures, and explore the antecedents of those groups (bullies, victims, bully-victims, and uninvolved) across multiple levels, namely the individual, family, peer, and school.

Exploring Bullying Subgroups Using Latent Class Analysis

Several studies in the U.S. (Goldweber, Waasdorp, & Bradshaw, 2013; Lovegrove, Henry, & Slater, 2012; Williford, Brisson, Bender, Jenson, & Forrest-Bank, 2011) have utilized LCA to construct groups of youth based on responses to individual bullying and peer victimization indicators. Although most young people tend to be classified as uninvolved, there is a substantial subset who are bullies, victims or bully-victims. These four groups were identified within grade 4 children in an LCA of six victimization and six aggression items (Williford et al., 2011). In their study, participants took part for three years, and in grades 5 and 6 only a three-class solution was reported (the bully group disappeared), suggesting a developmental progression where, by adolescence, bullies are primarily young people who

are also victimized. They note that while overt aggression was low in these older bully-victim groups, verbal and relational aggression and peer victimization were high. Goldweber et al. (2013) also carried out an LCA of six indicators (physical, relational, and verbal bullying; physical, relational, and verbal victimization) among 11-15 year olds and found three groups. They reported an uninvolved, a victim (high on all forms of victimization), and a bully-victim group. These two studies suggest that the bully group recede in early adolescence, and that only victims and bully-victims remain. In contrast, Lovegrove et al. (2012) based their LCA on the responses of 7th grade students to three peer victimization and three bullying items and identified four groups of students (victims, bullies, bully-victims, and uninvolved). The retention of the bully group among 7th graders by Lovegrove et al. (2012) may have been because that study did not use items drawn from the Revised Olweus Bully/Victim Questionnaire (Olweus, 1996); instead, they used items created specifically for their study. Notably, Lovegrove et al.'s (2012) items did not include relational aggression (e.g. excluding peers) and this may help explain differences across the LCAs. In summary, U.S. data suggest a three or four group solution concerning involvement in bullying and victimization but there is currently no data examining this issue in populations outside of the U.S.

Social-Ecological Perspective

In addition to characterizing the nature of young people's involvement in bullying and peer victimization, it is necessary to document contextual factors that are related to subtypes of bullying involvement. Within the social-ecological framework, involvement results from a complex interaction of a child's individual characteristics with variables at the family, school, peer, and society levels. The most frequently examined correlates and predictors of bullying and peer victimization are within the individual level.

Individual level. In South Korea (Kim, Boyce, Koh, & Leventhal, 2009; Kim et al., 2004; Lee, 2001; Lee & Jun, 2011; Oh, 2014; Shin & Kim, 2014; Yang et al., 2006) boys are

significantly more likely than girls to bully their peers. However, girls are more likely than boys to be perpetrators of relational aggression and social exclusion (*wang-tta*; Koo, Kwak, & Smith, 2008). Patterns concerning peer victimization are more inconsistent. Kim and Shim (2002) found that peer victimization was most frequent among girls while Bhang et al. (2012) and Kim et al. (2004) report the opposite. Kim and Shim (2002) also report that bullies and bully-victims are more likely to be boys, whereas peer victimization and un-involvement is more frequent among girls. Finally, concerning different forms of victimization, Jung et al. (2002) report that boys are more likely to be victimized by their peers both physically and verbally whereas girls are more likely to be victims of relational aggression and social isolation.

South Korean culture emphasizes group harmony, group conformity, and personal control (Shin, 2010). As a result, children are discouraged from behaviors that may threaten social group harmony and peer conformity (Schneider, Attili, Vermigil, & Younger, 1997). This includes behaviors typical of internalizing and externalizing problems, and children who display such behaviors experience peer difficulties, including peer rejection and peer victimization (Schwartz et al., 2002). Evidence supports these propositions: psychosocial characteristics, including depression and aggressive behaviors, have been identified as significant correlates of bullying and peer victimization in several studies of South Korean children (Kang & Park, 2014; Yang et al., 2006; Yang et al., 2013). Concerning specific forms of bullying behavior, Kang and Park's (2014) study involving 3rd to 6th graders found depression to be associated with both direct and indirect bullying and victimization, while aggression was associated with only bullying behaviors, though these relationships were only true for boys and not for girls. Two studies (Yang et al., 2006; Yang et al., 2013) have reported that higher levels of depression are associated with more bullying and peer

victimization. Thus, involvement in bullying may be associated with psychosocial maladjustment for South Korean children and young people.

Adolescent alcohol and tobacco use are additional individual level correlates of bullying and peer victimization. Several studies suggest that youth who drink and smoke are likely to engage in bullying (Kim & Lee, 2010; Suh & Seo, 2013). Longitudinal work also supports reciprocal associations between bullying perpetration and both drinking and smoking (Jeon & Cho, 2015). Research in the U.S. also substantiate a link between alcohol and substance use and peer victimization (e.g., Luk, Wang, & Simons-Morton, 2010) though this has not been assessed in South Korea.

Two final determinants are parents' educational attainment and household income. Kim et al. (2004) report that the prevalence of bullying and victimization was higher among students of high or low family income than those of middle income families. Kim et al.'s (2009) prospective study of 1,666 7th and 8th grade students found that adolescents whose father had lower educational attainment, and those whose mother had higher educational attainment, were at an increased risk for peer victimization. Family structure, particularly non-traditional structures (e.g., single parent household) is also significantly associated with bullying and peer victimization (Kim et al., 2004; Kim et al., 2009; Yang et al., 2013). Family structure and income with therefore be considered in the present study.

Family level. In addition to research focusing on the individual level and bullying involvement, there is an increasing attention on the role of the family in fostering or inhibiting youths' bullying involvement. The relationship between parental abuse in the home and bullying and peer victimization in school has been reported by several scholars in South Korea (Chae, 2013; Chung & Chun, 2012; Chung & Lee, 2012; Nho & Lee, 2003). In addition, other aspects of parenting behaviors, such as maternal neglect significantly influence both bullying and peer victimization (Baek, 2015; Shin, Hong, Yoon, & Espelage,

2013). An additional risk factor is the degree to which parent and child interactions are characterized by conflict. Girls who have conflicts with their parents are particularly likely to bully their peers in school (Lee, Song, & Ahn, 2015; Moon, Morash, & McCluskey, 2012). This may be because conflict with parents makes girls feel anxious, promoting a need to belong and leading them to engage in bullying so as to conform to the behavior of their friends and peer groups (Lee et al., 2015).

Friend/peer level. In adolescence, friends and peer groups increasingly influence young people's socialization and interpersonal relationships (Berndt, 1982). Adolescents are likely to affiliate with peers who display similar behaviors, including bullying. Affiliation with peer groups characterized as aggressive increases South Korean adolescents' risk of bullying (Cho, 2013a; Cho & Chung, 2012; You et al., 2014) and peer victimization (Kim, 2007) as has been demonstrated in other countries (e.g., Estell et al., 2009). Among middle school students, bullies associate with bullies, and victims associate with victims (Lee & Youm, 2013) again reflecting research carried out in other countries (Hodges & Perry, 1999; Perren & Alasker, 2006). Thus, adolescence is a period when peer influences are important as young people move away from the influence of their families.

School level. The school level has been recognized as an important factor in students' behavioral outcomes. Youth who report cohesiveness between students and teachers are less likely to bully others (Cho, 2013; Lee & Song, 2012) or be peer victimized (Cho, 2013b). In contrast, teachers characterized as physically punitive and uncaring can reinforce students' involvement in bullying (Kim, 2007). Relatedly, school adjustment (teacher and peer relations, quality of instruction, school rules) is higher among uninvolved students as opposed to bullies, victim, or bully-victims (Park, 2013).

In sum, much progress has been made in the application of the social-ecological perspective in bullying and peer victimization. However, more research is needed focusing on

bully and victim groups and on how they differ on social-ecological based factors. The present study hypothesizes that (1) for the individual level, bullies and bully-victims are more likely to be male, to report lower parental educational attainment, to have lower household income, to exhibit higher aggression and depression, to smoke and drink, and to live in a non-intact family structure than uninvolved youth. Victims are more likely to report lower parental educational attainment, household income, and self-esteem than uninvolved youth. (2) For the family level, bullies, bully-victims, and victims are more likely to report parental abuse and neglect than uninvolved youth. (3) For the friend/peer level, bullies, bully-victims, and victims are less likely to report positive peer relationships and more likely to report having more delinquent friends than uninvolved youth. (4) For the school level, bullies, bully-victims, and victims are less likely to report being well adjusted to their school than youth who are uninvolved.

Method

Participants

The study uses data from the Korea Children and Youth Panel Survey (KCYPS) collected by the National Youth Policy Institute (NYPI). The KCYPS is an annual, longitudinal panel survey conducted since 2010 utilizing a stratified multi-stage cluster sampling (NYPI, 2015). The sample is nationally representative with respect to socioeconomic status, sex, and location. The population consists of all middle school students in South Korea and the sampling frame is a list of national schools compiled by the Ministry of Education. The 78 middle schools selected for this study were randomly sampled by calculating the population rate in 16 national areas. In the next step, students and their parents were randomly sampled in proportion to the student enrollment in the selected schools.

Materials and Procedure

Data were collected from students who responded to a questionnaire with an interviewer and parents who responded to telephone interviews after obtaining informed consent. This survey contained information about adolescents and their parents. Most of the measures in the KCYPS data set were reported by youth themselves, while household income, parental education, and family structure were reported by parents.

The sample for the current study was taken from 2011 to 2013 when bullying items were included. Participants who responded to at least two out of the three waves of data collection were included, so the total sample used for the analysis was 2,284, which responded at least two out of three waves. The follow-up rate between initial wave and final wave was 89.7%. Among all participants, 50.5% were male and 49.5% were female, and the mean age was 14 years old ($SD=0.34$) at baseline. Regarding the educational level of the parents, it was true of both mothers and fathers that very few (<3.5%) had less than a high school education while the majority reported more than a high school education. The annual income per household was 45.19 million KRW ($SD=24.82$ million KRW) in South Korean currency. The overwhelming majority of youth (>90 %) reported no smoking or drinking for the last 12 months. The majority of the youth (84.2 %) lived with both parents. Of the sample, 10.5% of the participants experienced bullying at T1, 6% experienced bullying at T2, and 5% experienced bullying at T3. In terms of peer victimization, 12.3% of the participants experienced peer victimization at T1, 10% experienced peer victimization at T2, and 5% experienced peer victimization at T3. Socio-demographic characteristics of the sample at baseline are presented in Table 1.

<<Insert Table 1, about here>>

Measures

Bullying perpetration and victimization. This study used the Korean version of the Juvenile Perpetration (five items) and Peer victimization (five items) Questionnaire

developed by the Korean Youth Institute (1995). These scales have been widely used to measure school bullying and peer victimization among South Korean adolescents, and have demonstrated good construct validity and high internal consistency with South Korean samples (Kim, Sung, & Kim, 2015; Lee, Oh, & Lee, 2014). Participants were asked to indicate whether they had engaged in, or experienced any of following behaviors in the last 12 months: teasing or mocking, social exclusion, physical abuse, threatening, extorting money or goods. Each item had a dichotomous response option (1=experienced and 0=not experienced). The overall bullying score was dichotomized as ‘none’ and ‘engaged in more than one bullying behavior’ at each wave (the same procedure was used for peer victimization). The correlations between bullying at T1, T2, and T3 ranged from .20 to .31 and were all significant ($p<.05$). The correlations between peer victimization at T1, T2, and T3 ranged from .16 to .28 and were all significant ($p<.05$).

Individual. Individual variables included biological sex (1=male and 0=female), father’s and mother’s educational statuses (less than high school, high school, more than high school), and household income (continuous variable) which was the average monthly income measured in Korean currency (unit: 1,000,000 KRW). Since household income scale distribution was severely skewed, we converted it to the value of the natural log. Type of family structure was measured as two-parent family and other family (single parent, grandparents, or single grandparent) and was dichotomized as 1=youth in two-parent family and 0=other types of families (living with father only, mother only, grandparents only, or single grandparent only). These family structures were reported by the youth’s caregiver.

Alcohol and cigarette use history were measured with an item asking for the respondents’ experiences in the last 12 months (1=experienced and 0=not experienced).

Aggression and depression were measured with the translated and modified Korean version of the Child Behavior Checklist Youth Self-Report (Oh, Lee, Hong, & Ha, 1998).

The K-YSR's concurrent validity is well established by high correlations with the original CBCL which are in the 0.75 range (Ha, 2005). The *aggression scale* contained six items such as arguing, attacking, teasing, threatening, demanding, and fighting. Response options were 1=not at all true, 2=not too true, 3=somewhat true, and 4=very true. A composite score was calculated, with higher scores indicating higher levels of aggression. The aggression scale mean was 12.77 (range 6-24, $SD=3.42$) and $\alpha = .81$. The *depression scale* contained ten items that inquired about depressive symptoms including items concerning issues such as hopelessness, loss of interests, irritability, easily crying, etc. Response options ranged from 1=not at all true to 4=very true. A composite score was calculated, with higher scores indicating high levels of depression. The depression scale mean was 19.30 (range 10-40, $SD=6.16$) and $\alpha = .90$. The CBCL (Alchenbach & Rescorla 1983) is among the most widely used parent-report measures of youth emotional and behavioral problems (Alchenbach & Rescorla 2001). In addition, using a nationwide sample of 6570 middle and high school students, the aggression scale from the K-YSR correlated ($r= 0.63$) with delinquent behaviors (Ha, 2005), and the depression scale from the K-YSR highly correlated ($r= 0.85$) with the CES-D (Center for Epidemiological Studies-Depression Scale: Radloff, 1977).

Family. Family variables included maltreatment (abuse and neglect) from parents. *Maltreatment* was measured based on the Parenting Behavior Inventory (PBI) developed by Huh (2004). The PBI for South Korean Children and Youth demonstrated good construct validity (An, Son, & Nam, 2014; Kwon, Lee, & Nho, 2013; Woo, 2013). Exploratory principal component analysis gave two clear factors corresponding to abuse and neglect. All items of each dimension were loaded in the same factor with a correlation of at least 0.30 (Huh, 2004). Confirmatory factor analysis also indicated that a theoretically derived 2-factor model (abuse and neglect) provided an excellent fit in many studies (An, Son, & Nam, 2014; Kwon, Lee, & Nho, 2013; Woo, 2013). *The abuse scale* contained four items, including

physical abuse (e.g., “I have had a bruise or a scar because my parents treated me badly”) and emotional abuse (e.g., “My parents often yelled and swore at me”). Response options were 1=not at all true, 2=not too true, 3=somewhat true, 4=very true. The mean was 7.37 (range 4-16, $SD=2.87$) and $\alpha = .77$. *The neglect scale* also contained four items, including physical neglect (e.g., “My parents take care of my body, clothes, and bedding to ensure cleanliness all the time”; reverse coded) and emotional neglect (e.g., “My parents care about me more than they care about other things”; reverse coded). The response options used for the abuse scale were also used here. The mean was 7.48 (range 4-16, $SD=2.37$) and $\alpha = .85$.

Friend/peer. Friend/peer variables included peer relationships and the number of delinquent friends. *The peer relationships* were measured based on the Korean Inventory of Parent and Peer Attachment (Ok, 1998). This scale is the modified version of the Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987). To test construct validity, exploratory principal component analysis was used. The factor structure of the K-IPPA closely replicates the original IPPA scales (Ok, 1998). In addition, all of the peer relationship items were loaded in the same factor with a correlation of at least 0.40 (Ok, 1998). This scale used six items measuring each adolescent’s quality of relationships with friends (e.g., “My friends respect my opinion”). Response options for each item were 1=not at all true, 2=not too true, 3=somewhat true, 4=very true. The scale mean was 12.24 (range 4-16, $SD=1.94$) and $\alpha = .88$ at baseline. *The number of delinquent friends* was operationalized by summing the number of friends categorized by ten delinquencies: “Among your close friends, how many did the following acts during the last year?” (1) smoking, (2) drinking, (3) truancy, (4) running away, (5) severely beating another person, (6) threatening another person, (7) gang fighting, (8) robbing, (9) stealing, (10) engaging in sexual assault or sexual harassment. The mean number of delinquent friends was 0.37 (range 0-30, $SD=1.26$) and $\alpha = .73$ at baseline.

School. School variables related to school rules, school activities, and teacher relationships were defined by KCYPS based on the School Life Adjustment measure (SLA; Min, 1991). The SLA was developed to measure school adjustment among Korean students. Using a sample of 1,082 students which was randomly derived, the survey questionnaires included an initial pool of 97 items from the school adjustment scale (Min, 1991). Exploratory factor analysis, Person product-moment correlations, and confirmatory factor analysis were employed to test the psychometric properties of school adjustment. Principal axis factoring from the first sample resulted in 19 items which consisted of four factors: school rules (5 items), school activity (4 items), peer relationships (5 items) and teacher relationships (5 items; Min, 1991). For this study, we included school rules, school activity and teacher relationships. We eliminated peer relationships due to high multicollinearity with bullying scales. Correlations with other school-aged children measures supported convergent validity of the SLA. Children who had a high score of SLA reported high levels of social competence (Kim, 2013), self-esteem (Won & Kim, 2016), ego resilience (Sung, Park, & Kim, 2013) and school grades (Kim & Um, 2016). All three scales use the same response options, ranging from 1=not at all true to 4=very true. *School rules* were measured using five items that inquired about attitudes toward school rules (e.g., “I find it difficult to follow school rules and regulations”). The school rules scale mean was 13.97 (range 5-20, $SD=2.81$) and $\alpha = .79$. *School activity* was measured using four items that inquired about the degree of attendance to school activities (e.g., “I am always interested in school events”). The school activity scale mean was 11.28 (range 4-16, $SD=2.32$) with $\alpha = .75$. *Teacher relationships* were assessed using five items that inquired about the level of attachment to teachers (e.g., “I am on good terms with the school teacher”). The teacher relationships scale mean was 14.02 (range 5-20, $SD=3.37$) with $\alpha = .84$.

Results

Univariate analyses were conducted to describe the overall sample. Next, LCA was employed in two ways: preliminary LCA was used to analyze the grouping of each bullying related behavior at the initial time period, and then a second LCA was conducted to determine the number and nature of subgroups for bullying and peer victimization based on the three waves. LCA is a person-centered approach that identifies similar behavior patterns based on individual's response to multiple indicators (Lanza & Rhoades, 2011). The group structure was confirmed by adding models iteratively until the model fit the data well from both a statistical and an interpretive perspective. Statistical criteria were used in conjunction with model interpretability to determine the optimal number of groups for bullying involvement across time. For the statistical criteria, the Lo-Mendell-Ronbin (LMR) adjusted likelihood ratio test was used to evaluate the extent to which the specified model fit better than a model with one less group (Lo, Mendell, & Rubin, 2001). The information statistics Akaike Information Criteria (AIC), Bayesian Information Criterion (BIC), and Sample-Size Adjusted Bayesian Information (SSABIC) values were examined to determine goodness-of-fit, lower values indicating improved fit. Entropy values were used as measures of classification accuracy, higher values for each group indicating better classification and stronger separation. Finally, multinomial logistic regression analyses were conducted on the groups to ascertain differences between groups. All regressions included sex, family income, parents' education level, and household composition. Coefficients, adjusted odds ratios and 95% confidence intervals are reported. LCA was performed using the Mplus version 7.1 (Muthén & Muthén, 2012). Univariate analysis and multinomial logistic regression analysis were performed using the SPSS version 22.0.

Approximately 75% of the respondents had no missing data on any of the variables at baseline. Regarding predictors, all study variables at baseline had data missing between 0.2% and 6.1%. The family income variable had the highest number of cases missing ($n=140$,

6.1%). In terms of bullying/victimization variables across the three waves, the internal dropout was 2.3 % ($n=52$) at the second wave and 8.7% ($n=199$) at the third wave. Ad-hoc approaches, such as listwise deletion, require making strong assumptions that data are missing completely at random (MCAR). However, simulation studies using a full information maximum likelihood (FIML) approach show an elimination or reduction of bias related to missing data (Collins, Schafer, & Kam, 2001) and it is widely accepted as an appropriate way to handle missing data when employing LCA (Muthén & Shedden, 1999). Thus, FIML estimation was utilized as implemented in Mplus (Muthén & Muthén, 2012).

Latent Class Analysis

A preliminary LCA was conducted by first testing the patterning of each bullying and peer victimization item at baseline. The four-class solution was considered the best model due to the lowest AIC, BIC and SSABIC values, a higher Entropy value, and a significant LMRT compare to other solutions. Class 1 (1.6%, $N=36$) was characterized ‘bully-victim’ by peaks for some victim items and some bully items. Specifically, participants who had a high probability of ‘being teased or mocked’ also had a high probability of ‘teasing or mocking others’. Class 2 (3.5%, $N=79$) was characterized ‘bully only’ as high or middle level of bully items while victim items were mostly low. In this class, ‘teasing or mocking others’ had the highest probability among bully items. Class 3 (3.9%, $N=88$) was characterized ‘victim only’ as having peaks for the victim-related items and valleys for the bully perpetration items. In this class, participants had a high probability of ‘being teased or mocked’. The largest group, Class 4 (91%, $N=2,081$) had a predominately flat pattern for all items, which could be termed the ‘uninvolved’ group.

Longitudinal LCA using all three waves of data was conducted to determine the number and nature of subgroups for bullying and peer victimization across time. Based on the model fit indexes, the two-class solution was considered the best model due to the lowest

AIC, BIC and SSABIC values, higher Entropy value, and significant LMRT value for both bullying and peer victimization (see Table 2). Two distinct groups, consistently high and consistently low, across time were revealed for the both bullying behaviors and peer victimization. On the basis of these results, we categorized four groups across time; consistently involved in only bullying ($n=63$, 2.8%), consistently involved in only peer victimization ($n=102$, 4.5%), consistently involved in both peer victimization and bullying ($n=22$, 1%), and consistently uninvolved in any violence across time ($n=2,097$, 91.8%).

<<Insert Table 2, about here>>

Comparison of Groups

Table 5 displays the influence of the social-ecological factors on the three bully-involved groups compared to the reference normative class ('uninvolved' group). The 'bully-only' group (AOR=7.15, $p<.001$), the 'victims only' group (AOR=2.22, $p<.01$) and the 'bully-victim' group (AOR=7.77, $p<.01$) were more likely to include males than females compared to the 'uninvolved' group, supporting our first hypothesis. Contrary to our first hypothesis, the 'bully only' group (AOR=2.71, $p<.01$) was more likely to have higher incomes than the 'uninvolved' group. Compared with the 'uninvolved' group, the 'bully only' group (AOR=4.96, $p<.001$) and the 'bully-victim' group (AOR=5.26, $p<.01$) were more likely to have smoked in the last 12 months, which is also consistent with our first hypotheses. Also in line with our first hypotheses, the 'bully only' group (AOR=8.95, $p<.001$) and the 'bully-victim' group (AOR=17.76, $p<.001$) were more likely to have higher risk for drinking alcohol than the 'uninvolved' group. Regarding aggression, the 'bully-only' group (AOR=1.18, $p<.001$), the 'victims only' group (AOR=1.07, $p<.05$), and the 'bully-victim' group (AOR=1.22, $p<.01$) were more likely to be aggressive than youth in the 'uninvolved' group. In addition, the 'bully-only' group (AOR=1.07, $p<.00$) and the 'victims only' group (AOR=1.09, $p<.001$) were more likely to be depressed than youth in the 'uninvolved' group.

In terms of family factors, there was no significant difference between groups, which did not support our second hypothesis.

Regarding friends/peers factors, the 'victim only' group (AOR=0.86, $p<.001$) were less likely to have positive peer relationships than the 'uninvolved' group, which partially supported our hypotheses. In addition, the 'bully only' group (AOR = 1.26, $p<.001$) and the 'bully-victim' group (AOR=1.32, $p<.001$) were more likely to have delinquent friends than the 'uninvolved' group, congruent with our third hypotheses.

With regards to school factors, our findings were partially consistent with our fourth hypotheses. The 'bully only' group (AOR=0.88, $p<.05$) and the 'victim only' group (AOR=0.90, $p<.05$) were less likely to be involved with school activities than the 'uninvolved' group. The 'bully only' group (AOR=0.91, $p<.05$) and the 'bully-victim' group (AOR=0.85, $p<.05$) were also less likely to follow school rules than the 'uninvolved' group. There was no significant difference between groups regarding teacher relationship.

<<Insert Table 3, about here>>

Discussion

This study identified four groups of South Korean students (victims, bullies, bully-victims, and uninvolved) and the association of social-ecological factors with the subgroups identified was examined. We found support for the role of a number of factors in distinguishing victims, bullies, and bully-victims from those who are uninvolved in bullying. Also, there were both differences and similarities in these groups when contrasted with results with Western samples. The present LCA results extend previous work. Despite differences in the items used, we supported the existence of pure-bully, pure-victim, bully-victim, and uninvolved groups. In the present sample, bully-victims engaged in a similar pattern of bullying behavior to pure bullies, with the main differences being that bully-victims (a) engage in higher levels of bullying behavior overall and (b) socially exclude peers

markedly more. Bully-victims also report experiencing higher levels of peer victimization, especially physical victimization and threats from peers, when compared to pure-victims. Our LCA results suggest that bully-victims are likely to be more at risk of bullying and peer victimization than their peers ('pure' bullies and 'pure' victims). They therefore represent a particularly high-risk group as reflected in research linking bully-victim status to an array of psychosocial difficulties (see e.g., Idsoe, Dyregrov, & Idsoe, 2012).

Supporting past findings (Kim & Lee, 2010; Suh & Seo, 2013) and our first hypothesis, adolescents who smoke or drink alcohol may also be predisposed to engage in risk behaviors, which can also increase their behavior problems, such as bullying. In addition, adolescents who drink may have impaired thoughts and behaviors, which can heighten their risk of bullying involvement. Moreover, bullies, victims, or bully-victims are more likely than uninvolved groups to be consistently exposed to peer aggression, and may subsequently develop aggressive behaviors as a result. In addition, maladaptive behaviors, such as depression may impair adolescents' ability to interact or communicate in socially appropriate ways, which can elevate their risk of bullying or peer victimization (see, e.g., Toblin, Schwartz, Gorman, & Abou-ezzeddine, 2005).

Within the family level, parental neglect and abuse were not related with any type of bullying or peer victimization across time, which was contrary to past findings (Baek, 2015; Chae, 2013; Chung & Chun, 2012; Chung & Lee, 2012; Nho & Lee, 2003; Shin et al., 2013) and our second hypothesis. Adolescence is a developmental period where youth attempt to detach from their parents as they search for identities (Berndt, 1982); therefore, for some adolescents, parenting practices might have less of an influence in adolescent behavior.

At the friend/peer level, the present study findings were somewhat consistent with past research (Cho, 2013a; Cho & Chung, 2012) and the third hypothesis. Bullying behaviors displayed by adolescents may be one behavior of many that are anti-social and delinquent and

that bullying may in essence be an indicator of wider problem behavior (Jolliffe & Farrington, 2006). With regards to victims, this may reflect what some scholars have called the 'friendship protection hypothesis' (Kendrick, Jutengren, & Stattin, 2012), that is, the possibility that having friends may protect young people from victimization. Kendrick et al. (2012) have emphasized that quality of friendships can decrease victimization. It may be that the same processes are operating for South Korean youth. Future research with South Korean populations should investigate these issues further.

At the school level, the present study findings are congruent with other South Korean findings (e.g., Park, 2013) and the fourth hypothesis, possibly indicating that bullies may have antisocial tendencies and victims may experience a sense of school disconnect in victims, resulting in less likelihood of participating in school activities and more likelihood of rejecting school rules.

One key strength of the present study is the inclusion of a large number of individual, family, friend/peer, and school variables which have all been associated with bully/victim group membership in previous research. It is therefore important to note where our results differed from expectation. This provides important information about the extent to which variables can account for unique variance when considered alongside many other variables which research suggests are relevant. We found that victims were less likely to report positive peer relationships, and bullies and bully-victims were more likely to have delinquent friends than uninvolved groups. In sum, our findings add to a growing body of research on bullying in South Korea and call for further research that considers both adolescents' development and their social environments to evaluate the stage-environment fit (Eccles, 2004).

Limitations

Only experimental approaches can truly permit strong causal inference, so despite the strengths of the longitudinal research design such inferences cannot be drawn here. Also,

because of the availability of the variables in the data set, important factors included in the social-ecological framework were not considered in the current study, for example those representing the community level. In addition, potentially relevant family level variables, such as parent-adolescent relationships and parental support, were not considered in this study. Further, the uninvolved group consisted of 92% of the sample, and the bully, victim, and bully-victim group was small. Finally, the study overly relied on adolescents' self-reports, which might have introduced unmeasured biases such as shared-method variance.

Research Implications

Future research should aim to clarify the role played by delinquent behaviors (e.g., smoking) in bully and victim roles. Associations between substance abuse and involvement in bullying appear robust and future research should seek to better understand the reasons for this. Another important issue for future research in this area is the use of a broader and more varied set of measures. The social-ecological framework provides a theoretically informed approach which can guide the consideration of multiple levels (e.g., community).

Triangulation of multi-informant data can help address possible concerns about shared-methods variance. So, for example, parenting could be assessed using parent- or sibling-report and school adaptation could be assessed using objective measures such as attendance. Most importantly, the social-ecological perspective is that individual characteristics of adolescents interact with various levels (i.e., family, school, community). Thus, future research might longitudinally explore how interactions among various levels might not only foster but also inhibit bullying and peer victimization among South Korean youth. South Korean scholars, for instance, might examine whether parent- and teacher-support might buffer the link between bullying and delinquent peer affiliation. Given the important role of school functioning in South Korea, studies might also explore whether high academic performance might moderate the relation between bullying involvement and substance abuse.

Clinical and Policy Implications

Our results argue for an approach which includes a focus upon peer-, and school level variables but not family level variables. The associations reported between the bully/bully-victim roles and delinquent friendships argue for a holistic approach which tackles bullying as well as associated activities such as smoking and drinking alcohol.

The absence of any family level effects argues against an intervention and prevention approach which focuses on parents. Certainly, a normative developmental task in adolescence in Western societies is to move away from an overreliance upon parents toward more autonomous decision making (Berndt, 1982) perhaps arguing for the scaling-back of parental involvement in this issue during adolescence. Practitioners and teachers can work together to teach and reinforce social skills that promote positive peer relations and inhibits peer conflicts that can escalate into bullying and peer victimization.

Conclusion

Our research details both the presence and absence of relationships between variables at different levels of the social-ecological model. Some of the results support parallels with research carried out in Western societies, while others point toward differences which may be important when considering intervention and prevention efforts in South Korea. For example, bullying behaviors appears to be symptomatic of a broader 'delinquent' profile of behavior. However, parenting was not related to bullying involvement in our sample. These and other findings can inform our understanding of how cultural differences can shape the profile of bullying behavior in schools in different levels while also helping practitioners in South Korea more effectively target intervention and prevention efforts.

References

- An, J., Son, Y., & Nam, S. (2014). The effects of abuse and neglect from parents on children's school adjustment: Mediating effect of aggression. *Korean Journal of Youth Studies, 21*, 261-284.
- Armsden, G. C., & Greenberg, M. T. (1987). The inventory of parent and peer attachment: Individual differences and their relationship to psychological well-being in adolescence. *Journal of Youth and Adolescence, 16*, 427-454.
<http://dx.doi.org/10.1007/BF02202939>
- Baek, J. (2015). The effects of individual psychological factors and environmental factors on bullying among early adolescents. *The Journal of Play Therapy, 19*, 1-16.
- Berndt, T. J. (1982). The features and effects of friendship in early adolescence. *Child Development, 53*, 1447-1460.
- Bhang, S., Yoo, H., Kim, J., Kim, B., Lee, Y., Ahn, D., Suh, D.,...Bahn, G.(2012). Victims of bullying among Korean adolescents: Prevalence and association with psychopathology evaluated using the Adolescent Mental Health and Problem Behavior Screening Questionnaire-II Standardization Study. *Journal of the Korean Academy of Child and Adolescent Psychiatry, 23*, 23-30.
- Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press.
- Chae, J. (2013). Children's peer victimization and bullying: Examining the moderating effect of abuse by parents and teachers. *The Korean Journal of Human Development, 20*, 71-86.
- Cho, Y., & Chung, O. B. (2012). A mediated moderation model of conformative peer bullying. *Journal of Child and Family Studies, 21*, 520-529.
<http://dx.doi.org/10.1007/s10826-011-9538-0>

- Cho, Y. (2013a). Gender differences in prevalence and predictors of school violence. *Journal of Youth Welfare, 15*, 155-179.
- Cho, Y. (2013b). A study on the predictors of school violence victimization by using Opportunity Theory. *Korean Association of Victimology, 21*, 33-55.
- Choi, M. (2013). The relationship between school bullying and adolescents' suicidal ideation: Mediators of depression, anxiety, dysfunctional impulsivity, and self-esteem. (Unpublished Master's Thesis). Masan, Republic of Korea: Kyungnam University.
- Chung, H., & Chun, J. (2012). Risk factors of adolescents' victimization by school violence. *Journal of Adolescent Welfare, 14*, 195-212.
- Chung, I., & Lee, J. (2012). The pathways from child abuse and school bullying to depression and aggression in adolescence: With a special focus on differences in gender. *Studies on Korean Youth, 23*, 217-242.
- Collins, L. M., Schafer, J. L., & Kam, C. M. (2001). A comparison of inclusive and restrictive strategies in modern missing data procedures. *Psychological Methods, 6*, 330-351. <http://dx.doi.org/10.1037/1082-989X.6.4.330>
- Eccles, J. (2004). Schools, academic motivation, and stage-environment fit. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of adolescent psychology* (2nd ed., pp. 125-153). Hoboken, NJ: John Wiley & Sons, Inc.
- Estell, D. B., Farmer, T. W., Irvin, M. J., Crowther, A., Akos, P., & Boudah, D. J. (2009). Students with exceptionalities and the peer group context of bullying and victimization in late elementary school. *Journal of Child and Family Studies, 18*, 136-150. <http://dx.doi.org/10.1007/s10826-008-9214-1>
- Goldweber, A., Waasdorp, T. E., & Bradshaw, C. P. (2013). Examining associations between race, urbanicity, and patterns of bullying involvement. *Journal of Youth and Adolescence, 42*, 206-219. <http://dx.doi.org/10.1007/s10964-012-9843-y>

- Ha, E. (2005). A validation study of the Korean youth self-report (K-YSR). *Journal of Child Study, 18*, 83-114.
- Han, S., & Kang, K. (2004). Children's social intelligence, mothers' caregiving attitude, parental conflict, and peer bullying-victimization. *Journal of Human Ecology, 8*, 73-86.
- Han, S., & Yoon, H. (2010). Difference in early adolescent's self-esteem, assertive behavior and parent-child communication by bullying group. *Journal of Human Ecology, 14*, 30-46.
- Hodges, E. V. E., & Perry, D. G. (1999) Personal and interpersonal antecedents and consequences of victimisation by peers. *Journal of Personality and Social Psychology, 76*, 677-685. <http://dx.doi.org/10.1037/0022-3514.76.4.677>
- Hu, S., Park, J., & Jung, T. (2009). A longitudinal study of the effects of bullying on the self-image and self-esteem of adolescent victims. *Studies on Korean Youth, 20*, 279-299.
- Huh, M. (2004). The study for the development and validation of an inventory for parenting behavior perceived by adolescents, *Korean Adolescents Counselling Research, 12*, 170-189.
- Idsoe, T., Dyregrov, A., & Idsoe, E.C. (2012). Bullying and PTSD symptoms. *Journal of Abnormal Child Psychology, 40*, 901-911. <http://dx.doi.org/10.1007/s10802-012-9620-0>
- Jeon, H. R., & Cho, Y. I. (2015). A study on the longitudinal relation between school violence experience and substance use. *Korean Journal of Youth Studies, 22*, 111-129.
- Jolliffe, D., & Farrington, D. P. (2006). Examining the relationship between low empathy and bullying. *Aggressive Behavior, 32*, 540-550. <http://dx.doi.org/10.1002/ab.20154>
- Jung, E., Kim, Y., Lee, H., Kim, Y., & Song, M. (2002). Study on bullying among primary school students. *Child Health Nursing Research, 8*, 422-434.

- Jung, H., & Park, S. (2010). The changes of victimization and the predictors in the early adolescence. *Korean Criminological Review*, 81, 149-173.
- Kang, I., & Park, H. (2014). The effect of peer relationship, depression, and aggression on bullying and victim among boys and girls. *Family and Environment Research*, 52, 213-228.
- Kim, D., & Um, M. (2016). A longitudinal study of the ecological-systemic factors on school absenteeism in South Korean children. *Korean Journal of Social Welfare*, 68, 105-125.
- Kim, E., Kim, H., & Kim, S. (2013). A study of influencing factors on adolescents' peer attachment. *Korean Journal of Youth Studies*, 20, 303-324.
- Kim, J. (2013). Development and validation of school adjustment scale for middle school student and high school student-short form. *Korean Journal of Counseling and Psychotherapy*, 25, 497-517.
- Kim, J., & Lee, K. (2010). The influence of adolescent's drinking and smoking on school violence: Moderating effect of parent-child interaction. *Journal of Youth Welfare*, 12, 53-74.
- Kim, J., Sung, S., & Kim, J. (2015). Bully-victims and their depression, aggression, self-control and experience of domestic violence, *Journal of School Social Work*, 31, 83-109.
- Kim, K., & Sim, H. (2002). A comparison of grade and gender: Daily hassles, bullying and victimization. *Korean Journal of Child Studies*, 23, 139-151.
- Kim, M. (2007). The effects of the school-system on middle school students' bullying. *Studies on Korean Youth*, 18, 287-314.
- Kim, Y., & Han, S. (2010). Analysis of individual, family and school environment factors related to children's bullying behaviors. *Family and Environment Research*, 48, 95-111.

- Kim, Y., Go, Y., Noh, J., Park, M., Son, S., Seo, D., Kim, S., Choi, N., & Hong, S. (2001). School bullying and related psychopathology in elementary school students. *Journal of the Korean Neuropsychiatric Association*, *40*, 876-884.
- Kim, Y. S., Koh, Y. J., & Leventhal, B. L. (2004). Prevalence of school bullying in Korean middle school students. *Archives of Pediatric & Adolescent Medicine*, *158*, 737-741. <http://dx.doi.org/10.1001/archpedi.158.8.737>
- Kim, Y. S., Boyce, W. T., Koh, Y. J., & Leventhal, B. L. (2009). Time trends, trajectories, and demographic predictors of bullying: A prospective study in Korean adolescents. *Journal of Adolescent Health*, *45*, 360-367. <http://dx.doi.org/10.1016/j.jadohealth.2009.02.005>
- Koo, H., Kwak, K., & Smith, P. K. (2008). Victimization in Korean schools: The nature, incidence, and distinctive features of Korean bullying or wang-ta. *Journal of School Violence*, *7*, 119-139. <http://dx.doi.org/10.1080/15388220801974084>
- Kwon, J., Lee, E., & Nho, C. (2013). Mediating effects of teacher and peer relationship on the association between child abuse and neglect and school performance. *Journal of Korean Society of Child Welfare*, *42*, 29-54.
- Kwon, S., Park, T., Park, S., Yang, J., Jeong, Y., & Jeong, S. (2012). Prevalence of school bullying and related psychopathology in children and adolescents. *Korean Academy of Child and Adolescent Psychiatry*, *23*, 143-153.
- Lanza, S. T., & Rhoades, B. L. (2013). Latent class analysis: an alternative perspective on subgroup analysis in prevention and treatment. *Prevention Science*, *14*, 157-168. <http://dx.doi.org/10.1007/s11121-011-0201-1>
- Lee, C., & Song, J. (2009). An ecological approach to bullying: A comparative study between South Korea and the United States. *Journal of Korean Criminological Association*, *3*, 103-143.

- Lee, C. H., & Song, J. (2012). Functions of parental involvement and effects of school climate on bullying behaviors among South Korean middle school students. *Journal of Interpersonal Violence, 27*, 2437-2464.
<http://dx.doi.org/10.1177/0886260511433508>
- Lee, E. (2001). Peer rejection and acceptance of bullies and victims: Differences in gender and types of aggression. *Korean Journal of Child Studies, 22*, 167-180.
- Lee, I. (2006). Collective ostracism among youth in Korea. In C. Daiute, Z. Beykont, C. Higson-Smith, & I. Nucci (Eds.), *International perspectives on youth conflict and development* (pp. 124-138). New York: Oxford University Press.
- Lee, I., & Choi, J. (2008). A path analysis on the factors related to victimization and school maladjustment: Focus on depression and aggression. *Youth Facility and Environment, 6*, 47-58.
- Lee, J., & Youm, Y. (2013). Gender-specific bullying dynamics among Korean middle school students. *Korean Association of Health and Medical Sociology, 34*, 299-334.
- Lee, S. H., Smith, P. K., & Monks, C. P. (2011). Perceptions of bullying-like phenomena in South Korea: A qualitative approach from a lifespan perspective. *Journal of Aggression, Conflict, and Peace Research, 3*, 210-221.
<http://dx.doi.org/10.1108/17596591111187738>
- Lee, S., Oh, I., & Lee J. (2014). Psychosocial characteristics of bullies, victims, bully-victims among elementary school students, *Korean Youth Research, 21*, 391-416.
- Lee, S., & Jun, S. (2011). Victim-offender link in bullying and its gender difference. *Victimology Research, 19*, 207-227.
- Lee, S., Song, K., & Ahn, S. (2015). The relations between parent-child conflicts and bullying-conformative behaviors among elementary school students: Mediation

- effects of anxiety rejection sensitivity and need to belong. *The Korean Journal of Developmental Psychology*, 28, 51-73.
- Lo, Y., Mendell, N. R., & Rubin, D. B. (2001). Testing the number of components in a normal mixture. *Biometrika*, 88, 767-778. <http://dx.doi.org/10.1093/biomet/88.3.767>
- Lovegrove, P. J., Henry, K. L., & Slater, M. D. (2012). Examination of the predictors of latent class typologies of bullying involvement among middle school students. *Journal of School Violence*, 11, 75-93.
<http://dx.doi.org/10.1080/15388220.2011.631447>
- Luk, J. W., Wang, J., & Simons-Morton, B. G. (2010). Bullying victimization and substance use among U.S. adolescents: Mediation by depression. *Prevention Science*, 11, 355-359. <http://dx.doi.org/10.1007/s11121-010-0179-0>
- Min, B. (1991). The influence of school adjustment and self-concept on educational aspiration (unpublished master's thesis). Seoul, Republic of Korea: Hongik University.
- Moon, B., Morash, M., & McCluskey, J. D. (2012). General Strain Theory and school bullying: An empirical test in South Korea. *Crime & Delinquency*, 58, 827-855.
<http://dx.doi.org/10.1177/0011128710364809>
- Muthén, L. K., & Muthén, B. O. (2012). Mplus user's guide. *Muthén and Muthén*.
- Muthén, B., & Shedden, K. (1999). Finite mixture modeling with mixture outcomes using the EM algorithm. *Biometrics*, 55, 463-469. <http://dx.doi.org/10.1111/j.0006-341X.1999.00463.x>
- National Youth Policy Institute. (2015). Korean children and youth panel survey manual. Seoul, Republic of Korea: Department of Education.
- Nho, C., & Lee, S. (2003). A study on predictive factors for school violence among junior high school students: Focusing on intraparental violence, child abuse, international

- locus of control, and perception of school life. *The Korean Society of School Social Work*, 6, 1-35.
- Oh, I. (2014). The relations of traditional bullying, cyberbullying and types of aggression in terms of gender. *Korea Journal of Counseling*, 15, 1871-1885.
- Oh, K., Lee, H., Hong, K., & Ha, E. (1998). *Tests of K-CBCL reliability and validity*. Seoul, Republic of Korea: Central Adjustment Research.
- Ok, J. (1998). The relationship between attachment security and depression in adolescence: Focusing on the mediating effect of perceived competence (unpublished master's thesis). Seoul, Republic of Korea: Ewha Womans University.
- Olweus, D. (1996). *The revised Olweus Bully/Victim Questionnaire for students*. Bergen, Norway: University of Bergen.
- Park, J. (2013). Differential correlates of bully/victim status and bystander roles of school violence with school adjustment in Korea. *KEDI Journal of Educational Policy*, 10, 119-133.
- Park, Y. (2005). Korean and American children's evaluations about peer relationships: Friendship, exclusion, and victimization (Unpublished doctoral dissertation), University of Maryland, College Park.
- Perren, S., & Alasker, F. D. (2006). Social behavior and peer relationships of victims, bully-victims, and bullies in kindergarten. *Journal of Child Psychology and Psychiatry*, 47, 45-57. <http://dx.doi.org/10.1111/j.1469-7610.2005.01445.x>
- Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1, 385-401.
<https://doi.org/10.1177/014662167700100306>
- Schneider, B. H., Attili, G., Vermigil, P. M., & Younger, A. (1997). A comparison of middle-class English-Canadian and Italian mothers' beliefs about children's peer-directed

- aggression and social withdrawal. *International Journal of Behavioral Development*, 21, 133-154. <http://dx.doi.org/10.1080/016502597385027>
- Schwartz, D., Farver, J. M., Chang, L., & Lee-Shin, Y. (2002). Victimization in South Korean children's peer groups. *Journal of Abnormal Child Psychology*, 30, 113-125. <http://dx.doi.org/10.1023/A:1014749131245>
- Shin, H., & Kim, S. (2014). Differences in attitudes toward bullying and moral disengagement among aggression clusters in middle school students. *Korean Journal of Youth Studies*, 21, 307-331.
- Shin, J. H., Hong, J. S., Yoon, J., & Espelage, D. L. (2013). Interparental conflict, parenting behavior, and children's friendship quality as correlates of peer aggression and peer victimization among aggressor/victim subgroups in South Korea. *Journal of Interpersonal Violence*, 29, 1933-1952. <http://dx.doi.org/10.1177/0886260513511695>
- Shin, Y. (2010). Psychosocial and friendship characteristics of bully/victim subgroups in Korean primary school children. *School Psychology International*, 31, 372-388. <http://dx.doi.org/10.1177/0143034310377296>
- Song, J. (2013). Examining bullying among Korean youth: An empirical test of GST and MST. *Han Yang Law Review*, 42, 221-246.
- Suh, K., & Seo, J. (2013). Relation of alcohol consumption and psycho-social factors to school violence among adolescents. *Journal of Korean Alcohol Science*, 14, 97-109.
- Sung, S. O., Park, M. D., & Kim, Y. H. (2013). Mediating effect of ego-resilience on correlation between school stress and adjustment among adolescents. *Korean Journal of Youth Studies*, 20, 49-70.
- Swearer, S. M., & Doll, B. (2001). *Bullying in schools*. *Journal of Emotional Abuse*, 2, 7-23. http://dx.doi.org/10.1300/j135v02n02_02

- Toblin, R. L., Schwartz, D., Gorman, A. H., & Abou-ezzeddine, T. (2005). Social-cognitive and behavioral attributes of aggressive victims of bullying. *Journal of Applied Developmental Psychology, 26*, 329-346. doi:
<http://dx.doi.org/10.1016/j.appdev.2005.02.004>
- Williford, A. P., Brisson, D., Bender, K. A., Jenson, J. M., & Forrest-Bank, S. (2011). Patterns of aggressive behavior and peer victimization from childhood to early adolescence: A latent class analysis. *Journal of Youth and Adolescence, 40*, 644-655.
<http://dx.doi.org/10.1007/s10964-010-9583-9>
- Won, J. S., & Kim, J. (2016). A meta-analysis on the correlation between self-esteem and school adjustment. *Korean Journal of Youth Studies, 23*, 177-205.
- Woo, S. J. (2013). The effects of parental abuse and neglect, and children's peer attachment, on mobile phone dependency. *Family and Environment Research, 51*, 583-590.
- Yang, S. J., Kim, J. M., Kim, S. W., Shin, I. S., & Yoon, J. S. (2006). Bullying and victimization behaviors in boys and girls at South Korean primary schools. *Journal of the American Academy of Child & Adolescent Psychiatry, 45*, 69-77.
<http://dx.doi.org/10.1097/01.chi.0000186401.05465.2c>
- Yang, S. J., Stewart, R., Kim, J. M., Kim, S. W., Shin, I. S., Dewey, M. E., Maskey, S., & Yoon, J. S. (2013). Differences in predictors of traditional and cyber-bullying: A 2-year longitudinal study in Korean school children. *European Child & Adolescent Psychiatry, 22*, 309-318. <http://dx.doi.org/10.1007/s00787-012-0374-6>

Table 1

Descriptive Statistics of the Overall Sample at Baseline

Variable	%	<i>M</i>	<i>SD</i>
Individual			
Age		13.89	.34
Biological sex			
Male	50.5		
Female	49.5		
Fathers' educational status			
Less than high school	3.3		
High school	40.7		
More than high school	56.0		
Mothers' educational status			
Less than high school	2.8		
High school	54.1		
More than high school	43.0		
Household income			
Aggression (range 6-24)		4519.35	2482.20
Depression (range 10-40)		12.77	3.42
Smoking (yes)	6.2		
Drinking (yes)	4.7		
Type of family structures			
Two-parent family	84.2		
Other family (single parent, grandparents, or single grandparent)	12.2		
Family			
Neglect (range 4-16)		7.48	2.37
Abuse (range 4-16)		7.37	2.87
Friends/Peers			
Peer-relationships (range 4-16)		12.24	1.94
Number of delinquent friends (range 0-30)		.37	1.26
School			
School activity (range 4-16)		11.28	2.32
School rules (range 5-20)		13.97	2.81
Teacher relationship (range 5-20)		14.02	3.30
Bullying			
Time 1	10.5		
Time 2	6		
Time 3	5		
Victimization			
Time 1	12.3		
Time 2	10		
Time 3	5		

Table 2

Summary of Information for Selecting Number of Latent Classes

Number of Latent Class	Likelihood Ratio χ^2	<i>df</i>	AIC	BIC	Adjusted BIC	LNR_LRT (<i>p</i> -value)	Entropy
Bullying							
1	-1951.959	15	3935.918	4027.657	3976.823	<.001	-
2	-1863.045	31	3792.090	3981.302	3876.455	<.0001	.848
3	-1842.754	47	3863.231	4021.541	3987.121	.521	.721
Victimization							
1	-2279.643	15	4589.286	4675.291	4627.633	<.001	-
2	-2177.263	31	4416.525	4594.270	4495.777	<.05	.830
3	-2163.878	47	4421.756	4691.239	4541.912	.709	.942

Table 3

Predictors of Group Membership across Three Waves

Variable	Bully Only (N=63)		Victim Only (N=102)		Bully-Victim (N=22)	
	β (SE)	AOR (95% CI)	β (SE)	AOR (95% CI)	β (SE)	AOR (95% CI)
Individual						
Biological sex (male)	1.97***	7.15(3.20-15.95)	0.80**	2.22(1.40-3.53)	2.05**	7.77(1.76-34.35)
Household income (log)	1.00**	2.71(1.38-5.32)	-0.40	0.67(0.41-1.10)	0.80	2.22(0.67-7.33)
Father's education	-0.07	0.93(0.64-1.35)	0.11	1.12(0.84-1.50)	0.55	1.73(0.92-3.25)
Mother's education	-0.17	0.84(0.56-1.27)	0.06	1.06(0.78-1.44)	-0.32	0.72(0.39-1.35)
Two-parent family	-0.02	0.98(0.91-1.06)	0.03	1.03(0.97-1.09)	0.04	1.04(0.91-1.19)
Smoking	1.60***	4.96(2.48-6.62)	0.63	1.89(0.87-4.09)	1.66**	5.26(1.59-17.40)
Drinking	2.19***	8.95(4.29-18.67)	0.58	1.79(0.70-4.61)	2.88***	17.76(6.01-52.45)
Aggression	0.17***	1.18(1.09-1.28)	0.07*	1.07(1.00-1.14)	0.20**	1.22(1.06-1.40)
Depression	0.07**	1.07(1.03-1.12)	0.09***	1.09(1.06-1.13)	0.07†	1.07(0.99-1.16)
Family						
Neglect	0.05	1.05(0.93-1.19)	0.01	1.00(0.91-1.09)	0.05	1.05(0.77-1.18)
Abuse	0.01	1.01(0.91-1.09)	0.02	1.02(0.95-1.10)	0.03	1.02(0.82-1.16)
Friends/Peers						
Peer relationships	-0.02	0.98(0.91-1.06)	-0.16***	0.86(0.81-0.91)	0.01	1.01(0.88-1.16)
Delinquent friends	0.23***	1.26(1.13-1.41)	0.07	1.08(0.91-1.27)	0.27***	1.32(1.15-1.50)
School						
School activity	-0.13*	0.88(0.78-0.99)	-0.11*	0.90(0.82-0.99)	-0.11	0.90(0.73-1.11)
School rules	-0.10*	0.91(0.82-0.99)	0.03	1.03(0.96-1.12)	-0.16*	0.85(0.73-1.99)
Teacher relationship	-0.05	0.95(0.87-1.03)	0.03	1.03(0.96-1.10)	0.06	1.06(0.91-1.25)

Note: Uninvolved group (normative group) is the reference. Controlling for sex, income, parents' education, and household composition (two-parent family).

† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$