<Abstract>

This study examined the potential mediating mechanisms underlying the association between peer victimization and school adjustment. 521 children in the fifth and sixth grades were recruited from primary schools in Korea. Peer nomination and self-reports were used to measure peer victimization, cognitive representations, and school avoidance. Academic achievement records were obtained from official school records. The findings indicated that peer victimization contributed to school avoidance and academic achievement by different pathways. The association between peer victimization and school avoidance was indirectly mediated by perceptions of the self and peers. In contrast, peer victimization was directly associated with academic achievement.

본 연구는 도래괴롭힘 피해와 학교적응의 관계에서 자아 및 도래 지각의 매개효과를 검증하고자 하였다. 연구대상은 초등학교 5, 6학년 남녀 아동 521명이다. 도래 지명법을 사용하여 도래괴롭힘 피해가 측정되었고 자기 보고법을 사용하여 자아 및 도래 지각과 학교 회피가 측정되었다. 연구결과를 보면, 자아 및 도래 지각은 도래괴롭힘 피해와 학교적응의 관계에서 완전 매개 효과가 있었으며, 반면에 도래괴롭힘 피해는 학업 성취에 직접적인 영향을 미치는 것으로 나타났다.

주제어(Key Words): 도래괴롭힘(peer victimization), 인지표상(cognitive representations), 학업성취(academic achievement), 학교회피(school avoidance)
I. Introduction

Research has suggested that a small minority of children is targeted for persistent physical and verbal harassment by their peers (Lee & Kwak, 2002; Perry, Perry, & Kennedy, 1992). These victimized children are at increased risk for psychological maladjustment: for example, peer victimization is associated with loneliness, anxiety, depression, low self-esteem (Egan & Perry, 1998; Kochenderfer & Ladd, 1996; Lee & Kwak, 2002), and behavior problems (Hodges, Boivin, Vitaro, & Bukowski, 1999; Lee & Kwak, 2002; Shim, 2003). Research studies also suggest that children who experience frequent victimization are at risk of school adjustment problems. Schwartz, Gorman, Nakamoto, and Toblin (2005) found that peer victimization predicted academic failure. Kochenderfer and Ladd (1996) reported an association between peer harassment and negative attitudes about school.

This study was conducted to extend the existing research by examining the influence of peer victimization on school adjustment in a Korean setting. We also investigated the potential mediating mechanisms underlying the association between peer victimization and school adjustment. Even though the association has been strongly supported, mechanisms that could explain the link have not been well investigated and it is therefore still not clear how and why frequent peer harassment would place children at risk for school adjustment problems.

In present research, we proposed that peer victimization may affect school adjustment both directly and indirectly through its impacts on social self-perceptions and peer-beliefs. As school adjustment variables, we focused on school avoidance and academic achievement. Previous research presented that peer victimization was linked to school adjustment indices such as school attitudes, school avoidance, and academic achievement (e.g., Ladd, 1990; Lee & Kwak, 2000; Troop-Gordon, 2002). Difficulties in academic achievement and aversive attitude to school are provocative sources of stress and may result in and facilitate school maladjustment (Chen, Rubin, & Li, 1997). Therefore, academic achievement and school avoidance were considered as indices of school adjustment in the current study.

Self- and peer-perceptions might be expected to play a critical role in explaining the association between peer victimization and school adjustment. Previous research has reported representations of self and others to explain the links between social relationships and developmental outcomes (Troop-Gordon, 2002). Self-focused thought patterns and maladaptive perceptions of others have been explored in the development of psychological disorders (Rudolph, Hammel, & Burge, 1995).

Children’s beliefs about themselves undergo rapid development during childhood (Harter, 1983). During childhood, children's self-perceptions become more realistic and they develop a sense of self-worth and an awareness of their own competence in specific domains (Harter, 1998). As children become increasingly involved in peer relationships, their interpretation of these experiences with their peers may affect how they perceive and feel about themselves. Peer victimization might therefore have a particularly influence on a child’s developing sense of self. Research evidence shows that victimized children tend to have unfavorable views of themselves and low self-perceived competence in social relationships with their peers. Victimization may also lead to self-blame. Graham and Juvonen (1998) compared the responses of victimized and non-victimized children within an attribution theory framework and found that victims were significantly more likely than non-victims to blame themselves for attacks on them by their peers. Prolonged peer victimization increases children’s introspection regarding attributed or actual flaws (Graham & Juvonen, 1998), which may lead to low self-esteem and negative self-beliefs (Kochenderfer & Jovonen, 1996).

Compared with research on self-perceptions, relatively little research has been conducted on the cognitive representations of peers. Previous research noted that children believe either that schoolmates tend to be trustworthy and supportive or that they tend to be untrustworthy and hostile (Rabiner, Keane, & MacKinnon-Lewis, 1993). Children develop cognitive representations of others through repeated experiences with peers (Crick & Dodge, 1994). Whether children
develop beliefs of peers as prosocial and friendly, or hostile depends on the quality of their interpersonal experiences with peers (Troop-Gordon, 2002).

Troop-Gordon (2002) found that children who were chronically rejected by their peers tended to develop negative beliefs about their peers. Moreover, chronically friendless children were less likely to believe that peers were supportive or trustworthy. Similarly, peer rejection has been shown to predict boys’ negative beliefs about familiar peers (MacKinnon-Lewis, Rabiner, & Starnes, 1999). Kodenderfer-Ladd and Ladd (2001) suggested that chronic victimization causes children to develop the generalized belief that peers are hostile.

Even though few studies have investigated the mediating mechanisms in this area of research, there are previous findings to support the role that cognitive representations may play as mediators of the relationship between peer victimization and school adjustment. Juvonen, Nishina, and Graham (2000) noted that an association between self-reports of harassment by peers and academic adjustment was mediated by psychological difficulties, including depression and loneliness. Troop-Gordon (2002) suggested that perceptions of self and peers partially mediated the link between difficulties in peer relationships and internalizing problems and feelings of loneliness. Guay, Boivin and Hodges (1999) found negative peer relationships led to decrease in academic achievement through the mediators of self-system processes involving low perceived relatedness and low perceived competence. Similarly, Kupersmidt and Ladd (1996) suggested the link between poor peer relationships and later school adjustment through negative perceptions of self. Moreover, peer victimization influences change in academic achievement through self-competence and classroom engagement as mediating processes (Buh, 2005). Frequent victimization by peers was associated with poor academic achievement indicated by the grade point average and achievement test scores through the mediating influence of depressive systems (Schwartz, Forman, Nakamoto, & Toblin, 2005).

Therefore, in the current research, we investigated whether victimized children would actively avoid going to school. Moreover, we examined whether peer victimization could have a detrimental impact on academic achievement in school. Finally, we examined if peer victimization would lead to school avoidance and deficient academic achievement through social self-perceptions and peer beliefs.

The following research questions were addressed.

1) Do social self-perceptions and peer-beliefs mediate the relations between peer victimization and school adjustment?

2) Are there gender differences in mediating effects of social self-perceptions and peer-beliefs on the relations between peer victimization and school adjustment?

We predicted that peer victimization would increase the risk of problems in school adjustment. Additionally, we predicted that children who are victims would be more likely to have negative social self-perceptions and peer-beliefs and, in turn, would display more school avoidance and academic failure. Finally, we examined whether similar or different patterns exist for boys and girls. There is no reason to suggest that the link between peer victimization and school adjustment is stronger for one gender than the other. The investigation of gender differences was therefore an empirical issue.

II. Method

1. Participants

The participants were 521 children (282 boys, 54.1%; 239 girls, 45.9%) in the fifth (n=231) and sixth grades (n=290) with ages ranging from 11-12 years. From late childhood, children spend greater amount of time with peers. Peers play a central role in many of the activities that define children’s lives. The children were recruited from two elementary schools in Gwangju City, Korea, which is a big city with a population of about one million, located in the Jeonra province in South Korea. Six 5th and eight 6th grade classes participated in this study, and class sizes ranged from 40 to 43 children.

Forty three percent of the children were the first in birth order and 40.7% were the second. Ninety six percent of the children had at least one sibling and 4% of the children were the only child. Fifty two point four percent of fathers had a college or university education.
and 33.2% had a high school education or less. Thirty three point two percent of mothers had a college or university education and 52.4% had a high school education or less.

2. Measures

1) Peer Victimization

The Peer Nomination Inventory (PNI) was used to assess peer victimization. The PIN has been developed and used in a Korean setting (Schwartz Farver, Chang, & Lee-Shin, 2002) and includes four victimization items. Children were given a classroom roster and asked to nominate up to three classmates who fitted each of the victimization item descriptions. PNI scores for victimization were computed for each child from the total number of nominations made across the four items and these individual total scores were then standardized within each class. The PIN has been shown to have good reliability and validity in a Korean setting (see Schwartz et al., 2002). Internal consistency for the victimization items in this study was high (Cronbach’s alpha = .93).

2) Social Self-Perceptions

Harter’s (1985) Self-Perception Profile for Children (SPPC) was used to measure children’s self-perceptions. We used two subscales, the six-item global esteem subscale and the six-item social self-perception subscale. Children rated themselves on a 4-point scale according to how much they agreed with the subscale statements. The 12 items used in this study showed good internal consistency (Cronbach’s alpha = .74).

3) Peer-Beliefs

Children completed the Peer View Questionnaire (PVQ) which was developed in a previous study (Troop-Gordon, 2002). This questionnaire included 15 items covering the extent to which children perceive their school peers as having prosocial (e.g., helpful, trustworthy, and friendly) and antisocial characteristics (e.g., deceitful, bossy, and hostile). Scores for items measuring perceptions of antisocial behaviors were reverse scored. Higher scores indicate more positive perceptions of peers. The children completed 4-point rating scales with points ranging from 1 (not very true) to 5 (very true). Higher scores reflect more positive perceptions of peers. The internal reliability of this scale was also good (Cronbach’s alpha = .82).

4) School Avoidance

School avoidance was measured using the School Avoidance Questionnaire (Ladd & Price, 1987). This scale assesses the extent to which children express a desire to avoid their schools and classrooms. The children rated each of five items on a five-point scale in terms of how true each question was for the individual. The mean scores across these items were calculated for each child. Higher scores indicate higher tendency of school avoidance. Again, there was good internal consistency (Cronbach’s alpha = .79).

5) Academic Achievement

Academic achievement was measured using children’s math and Korean language scores from official school records. Children’s scores in the two subjects were averaged to obtain a measure of overall academic achievement.

3. Procedure

All measures were group administered to the children during their home room period. The trained research assistants conducted the administration in approximately 45 minutes. The research assistants read instructions and each of items of the measures, and reminded the children of the confidentiality of this project. We obtained children’s mathematics and Korean language scores from official school records. The collected data were analyzed using Pearson correlations and SEM.

III. Results

1. Correlations among all variables

Correlations between the variables are presented in Table 1. Peer victimization was negatively correlated with favorable social self-perceptions and peer-beliefs and high academic achievement and was positively associated with school avoidance. This means that the
more children were victimized, the more unfavorable were their perceptions of themselves and their peers, the poorer was their academic achievement, and the greater was their dislike of school attendance.

The correlations also show that academic achievement was positively related to favorable social self-perceptions, however, the degree of the correlation was low. This indicates that high achieving children were more likely to perceive themselves positively. School avoidance was negatively associated with social self-perceptions and peer-beliefs, indicating that the more the children disliked school, the less favorable were their self- and peer-perceptions.

2. Mediation Processes

To examine how social self-perceptions and peer-beliefs mediated the relationship between peer victimization and school adjustment, a path analysis model was proposed (see Figure 1). This model was tested using Amos version 4.0 (Arbuckle & Wothke, 1999). We predicted that peer victimization would affect school adjustment (school avoidance and academic achievement) both directly and indirectly and that the indirect effects would be through perceptions of self and peers.

Four criteria were used to evaluate the fit of the model; the chi-square test, the Tucker-Lewis Index (TLI; Bentler & Bonnet, 1980), the Comparative Fit Index (CFI; Bentler, 1990), the Root Mean Squared Error of Approximation (RMSEA; Steiger, 1990). Chi-square is known to be sensitive to sample size, thus other model fit was used. Non-significant chi-square values indicted good model fit. A good model fit has TLI and CFI greater than .95 and RMSEA below .06 (Hu & Bentler, 1999).

The chi-square test of the model for the whole data was not significant, $\chi^2(1, N = 521) = .335$, ns. Goodness-of-fit showed adequate fit $\text{TLI} = 1.002$, $\text{CFI} = 1.00$, $\text{RMSEA} = .000$. Together, the pattern illustrated in Figure 2 indicated that victimization is directly associated with academic achievement. Moreover, peer victimization is indirectly associated with school avoidance through social self-perceptions and peer beliefs.

![Figure 1](image-url) Relations between peer victimization, social self-perceptions and peer-beliefs, and school adjustment for whole sample ($N = 521$)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Peer victimization</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Social self-perceptions</td>
<td>-.276***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Peer-beliefs</td>
<td>-.127**</td>
<td>.258***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Academic achievement</td>
<td>-.135**</td>
<td>.086*</td>
<td>.027</td>
<td></td>
</tr>
<tr>
<td>5. School avoidance</td>
<td>.141***</td>
<td>-.263***</td>
<td>-.289***</td>
<td>-.054</td>
</tr>
</tbody>
</table>

*p < .05, **p < .01, ***p < .001.
The model indicated that peer victimization was associated with peer-beliefs, $\beta = -.127$, $p < .01$, which in turn were associated with school avoidance, $\beta = -.234$, $p < .001$. In addition, peer victimization was linked with social self-perceptions, $\beta = -.276$, $p < .001$, which in turn were associated with school avoidance, $\beta = -.186$, $p < .001$. When this indirect path of influence was modeled, the direct pathway linking peer victimization to school avoidance was not statistically significant, $\beta = .060$, ns (see Figure 1). These findings suggest that the relationship between peer victimization and school avoidance is indirectly mediated by social self-perceptions and peer-beliefs.

In the same model, peer victimization was directly associated with academic achievement, $\beta = -.121$, $p < .01$. However, perceptions of self do not show a significant association with academic achievement. This means that the effects of peer victimization on school achievement were not significantly mediated by perceptions of social self. Similarly, the link between peer-beliefs and academic achievement was not significant, which indicates that peer-beliefs did not mediate the association between peer victimization and academic achievement.

3. Gender Differences

We conducted a multiple group analysis to test whether our model fits the data equally for boys compared to girls. To compare gender groups, we followed the procedure suggested by Loehlim (1992). A baseline model which is a multigroup model with no equality constraints is established and used to compare to a model with cross-group constraints. These constraints increased $\chi^2$ values from 1.327 to 191.631,
gaining 19 degrees of freedom. The invariance model is nested within the baseline model, so \( \chi^2 \) difference test was performed. Because the \( \chi^2 \) difference, 190.304, with 17 degree of freedom was statistically significant, the invariance was not supported, which indicated that path coefficients vary between gender groups.

As shown in Figure 2 and 3, the association between social self-perceptions and school avoidance was stronger for girls(\( \beta = - .320, p < .001 \)) than boys(\( \beta = - .129, p < .001 \)), and the association between peer victimization and academic achievement was stronger for girls(\( \beta = - .287, p < .001 \)) than it was for boys(\( \beta = - .097, p < .01 \)). Moreover, the association between peer victimization and peer-beliefs was significant for girls(\( \beta = - .151, p < .01 \)) but not for boys(\( \beta = - .092, \text{ns} \))(See figure 2 and 3).

**IV. Discussion**

The current study performed to obtain a better understanding of how peer victimization increases the risk of school avoidance. To do this, this study investigated the role of cognitive processes in linking peer victimization and school avoidance. As anticipated, we found that the effects of peer victimization on school avoidance are mediated through social self-perceptions. This finding is consistent with those of previous studies which indicate that social self-perceptions mediate the relation between peer difficulties and school related difficulties. The results of the present study showed that children who are being harassed by their peers may perceive themselves as socially incompetent, which in turn leads to emotional reactions to the school setting. Children who perceive themselves as not being liked by peers may worry that they will have no friends at school. These children may therefore choose to avoid school rather than receive negative feedback from their classmates. The results support the suggestion made by Kupersmidt and Ladd(1996) that self-esteem could be a key mechanism for explaining the effects of relational stressors on school adjustment.

A further finding was that peer beliefs provided another important link between peer victimization and school avoidance. The results strengthen the notion that children may have maladaptive peer-beliefs as a consequence of peer harassment. These negative views of peers may contribute to the way that children perceive the school environment as being a threatening place. Avoiding the school environment where victimization occurs may be a coping strategy to reduce the stress caused by peer harassment. According to the stress and coping paradigm, coping strategies can be grouped into two basic types, approach and avoidance(Causey & Dubow, 1992). Avoidance strategies are viewed as attempts to manage the cognitive or emotional reactions to stressors whereas approach strategies are seen as attempts to alter the stressful situation itself(Ladd & Ladd, 2001). Avoidance strategies may help victimized children feel better in the short-term, but may eventually lead to maladaptive outcomes if no action is taken to change the stressful situation(Ladd & Ladd, 2001).

In terms of the path model used in this study, peer victimization was directly linked to academic achievement, but no link was demonstrated between cognitive representations and academic achievement. There was therefore no support for cognitive representation mediating the relationship between victimization and school performance. These results suggest that victimization increases the risk of academic failure, independently of perceptions of self and peers.

One explanation for this finding is that peer victimization may directly undermine the social and cognitive resources necessary for academic achievement. Children who are victimized may develop negative affect toward the school milieu, therefore they would become disinterested in the learning and school activities(Chen, Rubin, & Li, 1997). They may have fewer opportunities than others to receive assistant from peers for learning(Wentzel, 1991). Previous research have showed that children who have peer difficulties tend to underachieve or fail in academic areas(Chen, Rubin, & Li, 1997).

Previous researchers have viewed peer rejection and bullying as stressors which have negative impacts on children’s academic adjustment(Juvonen et al., 2000; Kochenderfer & Ladd, 1996). The stress associated with negative treatment by peers might in itself lead to academic failure. The present findings are generally
consistent with the studies which have demonstrated that the quality of children’s relationships with classmates is associated with academic achievement. Wentzel (1991) showed that children who were rejected by their peers had lower academic achievement scores than more popular children. Schwartz (2000) suggested that children who experience repeated peer harassment may find it difficult to maintain an adaptive focus in their class work. Similarly, children who experienced negative peer treatment are discouraged from social or learning classroom activities or responding to such tasks in a cooperative way (Buh & Ladd, 2001).

It has been argued that children’s social competence and interpersonal acceptance may constitute emotional and social resources for achievement in the school (e.g., Wentzel & Asher, 1995). Victimized children are socially rejected, therefore they have fewer opportunities than others to receive assistance with their school work from their peers (Chen, Rubin, & Li, 1997). Korean children are expected to cooperate with each other and to maintain harmonious relationships with their peers. Given these social conditions in a Korean classroom, it is reasonable to expect that victimized children may have difficulties with engaging in cooperative learning, which may lead to academic difficulties. That is, peer victimization may increases the probability that children would disengage from the classroom, which would impair children’s academic achievement. For example, Buh and Ladd (2001) have shown that classroom engagement (i.e., engagement in an activity) is a key mediator between perceived academic competence and academic achievement. Furthermore, children in group-oriented culture may be particularly sensitive to evaluations by their peers and especially responsive to peer group pressure (Chen, French, & Schneider, 2006), so those children who are harassed by peers are likely to withdraw from classroom activities.

Another plausible explanation is that the link between peer victimization and school achievement arises as the result of a shared association with behavioral problems such as self-dysregulation or behavioral control problems. Some victimized children are troubled by problems in emotion regulation and impulse control (Schwartz, 2000) and children who experience problems with behavioral control could be expected to experience difficulties in the academic demands of school. Children who are impulsive or easily distracted would find it hard to stay on task in the classroom.

In the present study, we have focused on peer victimization as a predictor of academic performance. However, there may be reciprocal relationships between victimization and academic achievement. Academic achievement would be a potential risk factor for negative peer relations, including peer harassment. Children who do not exhibit adequate school performance can be devalued by their peers (Schwartz et al., 2005). Low achieving Korean children have difficulties not only in being accepted by peer groups, but also in forming dyadic friendships with peers in the class (Shin, 2007). Deficits in academic achievement can create behavior tendencies, which increase children’s risk for victimization in their peer group (Pope & Bierman, 1999). Further investigation is required to explore these chains of reciprocally interacting causes and effects.

When we compared gender groups, boys who experienced peer victimization did not have negative peer-beliefs. One potential explanation for this gender difference is that boys and girls differently incorporate the feedback received from peer victimization experiences. Compared with girls, boys may be less likely to have negative views of their peers following victimization experiences. Since boys may view victimization as part of their usual social interactions with their peers, peer victimization does not affect their evaluations of peers (Grills & Ollendick, 2002).

Gender differential goals in social situations may influence the results. Peer related literature reveals that girls are more likely to have connection-oriented goals than boys. For example, Ford (1982) revealed that girls valued social goals more than boys. Girls are socialized to focus on connectedness goals, such as intimacy and nurturance (Chung & Asher, 1996). In contrast, boys tend to endorse more agentic and status-oriented goals (Rose & Rudolph, 2006). Therefore, girls may show greater sensitivity to interpersonal stressors including peer harassment, which affects negative peer perceptions.

The present study has a number of limitations which should be considered when drawing interpretations.
from the results. Firstly, since we used a cross-sectional design and a path model which illustrates only correlational relationships, it is inappropriate to make casual inferences. Accordingly, there is a need for further research to be conducted using longitudinal designs. Secondly, the participants were from only two elementary schools in an urban region. Replication is needed with more diverse and representative school samples to show whether the findings could be generalized. Finally, even though statistically significant results were reported, only a relatively small amount of variance was accounted for in the analyses. A large amount of variance remains to be unexplained. Further studies are needed with additional variables so that the association between peer victimization and school adjustment could be more fully understood.

In conclusion, the findings indicated that different pathways were involved in the prediction of school avoidance and academic achievement from peer victimization. Peer victimization is precursor of two cognitive representations, children’s perceptions of self and peers, and these representations determine school adjustment in terms of school avoidance. In contrast, perceptions of self and peers were found to have no association with school adjustment in terms of academic achievement. Nevertheless, even though the pathways were different, both school avoidance and academic achievement were negatively associated with peer victimization. The results of the present study provide the rationale for a way of intervening to reduce victimization from leading to school avoidance. Since negative social self-perceptions and peer beliefs are mechanisms by which peer victimization results in school avoidance, an intervention focusing on the cognitive representations may be effective.

References


Schwartz, D., Farver, J. M., Chang, L., & Lee-Shin,


