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New Approaches to Defender and Outsider Roles
in School Bullying

A dissertation submitted in partial satisfaction of the
requirement for the degree Doctor of Philosophy
in Education

by

Hye-Young Yun

2018

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ABSTRACT OF THE DISSERTATION

New Approaches to Defender and Outsider Roles in School Bullying

by

Hye-Young Yun

Doctor of Philosophy in Education

University of California, Los Angeles, 2018

Professor Sandra H. Graham, Chair

Adolescents' defender and outsider behaviors in classroom bullying situations, which involve various kinds of participant roles, are likely determined by individual characteristics, social status variables, and classroom/school contextual factors operating simultaneously in the peer ecology. Despite increasing attention in anti-bullying interventions to the group process and participant roles underlying bullying, there is little research on defending behavior that utilizes this multilevel approach. To comprehend defending behavior, it is necessary to understand both defender and outsider roles. In this dissertation, I refined the traditionally defined defender and outsider roles by modifying measures that have been used for the past 20 years. Then I examined intrapersonal, interpersonal, and contextual factors associated with subtypes of defender and

outsider roles simultaneously. In Study 1, using 1373 adolescents (40% girls, *Age*: 14 yrs) from 54 classrooms in six middle schools in South Korea, I examined how participant roles are distributed across these classrooms. My dissertation identified six participant roles in Korean middle school classrooms. Moreover, by investigating whether participant roles are associated with social status, I argue that bullying is a group process with a hierarchical structure. In Study 2, I selected 752 defenders and outsiders (54.3% girls) as identified in Study 1. Using latent profile analysis (LPA), I identified subtypes of defender and outsider roles (i.e., assertive defender, comforting defender, sympathetic outsider, indifferent outsider). To better understand the different attributes these role subtypes carried, using multi-method (i.e., peer-ratings, peer nomination, self-ratings) and multilevel multinomial analysis, I investigated how these unique defender and outsider profiles were associated with individual characteristics, social factors, and contextual factors. At the individual level, students with high affective empathy, self-efficacy, and sense of responsibility for intervention were more likely to be assertive defenders, relative to comforting defenders. Furthermore, assertive defenders were perceived as more popular, but less liked by peers, than comforting defenders. On the other hand, students with low perceived responsibility and weaker anti-bullying attitudes were more likely to be both sympathetic and indifferent outsiders. In addition to individual characteristics, the likelihood of being either a sympathetic or indifferent outsider, compared to a comforting defender, was weaker in classrooms where peers' prosocial norms were high. Results of this dissertation have implications for tailor-made interventions to reduce school bullying and for studying defending behavior in multiple cultural contexts.

The dissertation of Hye-Young Yun is approved.

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This dissertation is dedicated to my advisor, Dr. Sandra Graham. If I had not met her, I could not have dreamed of being a bullying researcher. She helped me to make a puzzle from black paintings I have done over the last six years to make a big, black whale.

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GENERAL INTRODUCTION

A generation ago, if students were asked what they worry about most in school, they likely would have said, “Passing exams and being promoted to the next grade.” Today, students are often most concerned about bullying (see Graham, 2010). The concept of bullying was first introduced by Olweus (1973a), a pioneering researcher in Scandinavia. He called the phenomenon *mobbing*, defined as a group of people who are engaged in harassment. The word *bullying*—also labeled peer victimization or harassment—is commonly used throughout English-speaking countries. Today, literature widely agrees that bullying includes behavior that is intended to harm or disturb, behavior that occurs repeatedly over time, and an imbalance of power (i.e., a more powerful person or group attacking a less powerful one). Accordingly, the predominant definition of bullying is based on the definition presented by Olweus (1993): “A student is being bullied or victimized when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more students” (p. 9).

Since detrimental consequences of bullying have been reported, bullying has become a serious social issue, dispelling the myth that only simple conflicts occur between peers during youth development. Young people who have experienced victimization by peers exhibit higher rates of substance-abuse disorders, depression, anxiety, panic disorders, suicide, and agoraphobia when they became young adults, compared to nonvictimized youth (e.g., Copeland et al., 2013; Espelage & Holt, 2013; Kaltiala-Heino, Rimpela, Marttunen, Rimpela, & Rantanen, 1999; Kaminski & Fang, 2009; Rigby & Slee, 1999). Furthermore, the more students experience self-reported victimization, the further their grades drop (Juvonen, Wang, & Espinoza, 2011). In addition to impacts of bullying on victims, young people classified as bullies at school have a greater likelihood of binge drinking, drug use, and relationship problems when they are older

(Ttofi & Farrington, 2011; Hemphill & Vanneman, 2011; Kim, Catalano, Haggerty, & Abbott, 2011).

Empirical research on bullying was first conducted by Olweus (1978), and subsequent bullying research focused on the dyadic relationships of bullies and victims and their respective characteristics. In the mid-1990s, however, a critical transition was made from a dyadic approach (i.e., focusing on bullies and victims) to triadic relationships; Finnish researcher Salmivalli and colleagues (1996b) argued that bullying involves not only victims and bullies, but also bystanders, such as assistants (e.g., following the bully), reinforcers (e.g., laughing or observing what is happening), defenders (e.g., being supportive of the victim), and outsiders (e.g., avoiding the bullying situation). Since then, research in Britain, Canada, Italy, and the Netherlands has consistently confirmed that the bullying process includes various bystander roles (Goossens & Dekker, 2006; Sutton & Smith, 1999).

Previous studies have defined a bystander as an individual who witnesses the bullying situation and is sometimes referred to as an innocent bystander (Cowie, 2000; Smith, Twemlow, & Hoover, 1998). The bystander may actively intervene to stop the bully, encourage the bully to continue, or view the bullying passively. My dissertation adopts this definition and considers bystanders to include assistants, reinforcers, defenders, and outsiders.

Hierarchical Peer Groups in Classrooms and Schools

During early adolescence, one of the important transitions is the entrance to middle school from elementary school (Eccles, Wigfield, & Schiefele, 1998). The lack of institutional or organizational structures in middle schools encourages the formation of hierarchical social structures in the peer groups (Hansell, 1984). The peer group not only features a hierarchical structure dominated by leaders, but also is exclusive in nature (Adler & Adler, 1998). This means

that not all individuals in the classroom can be accepted by the certain clique that they want to join. Each clique has its own specific timing, and due to the small nature of these groups, the boundaries tend to close quickly (Adler & Adler, 1998). Specific timing generally refers to the beginning of the year, when classes are reconstituted, and individuals develop new social configurations.

In the fall, right after school starts, when everyone's lining up and checking each other out, is when people move up, but not during the school year. You can move down during the school year, if people decide they don't like you, but not up. (Adler & Adler, 1998, p. 58)

For adolescents, who highly value popularity, obtaining and maintaining a perceived popular status in their peer groups is often a critical developmental goal (Adler & Adler, 1998); aggression is often used to effectively achieve high social status (Pellegrini, 1995). In light of these factors, research suggests that bullying frequency increases during the middle school transition (Pellegrini, 1995; Pellegrini & Bartini, 2000).

Some of the processes relevant to understanding bullying may be inferred through research on nonhuman primates. Demonstrations of power form social groups or troops, and maintain social hierarchies (e.g., Sapolsky, 2005). The maintenance of a dominance hierarchy not only meets individual needs, but also protects the group or troop. Specifically, obeying and respecting a dominant leader reduces in-fighting and promotes group cohesiveness, so the group becomes more powerful against potential enemies. The members of the group are safely protected within the system (Savin-Williams, 1977). Accordingly, understanding the relationship between this power imbalance and the social needs of individuals wishing to belong to the peer group plays a key role in understanding the functions and mechanisms that underlie bullying.

What Do Bullies Want?

Bullies can be easily identified from bullying incidents (Salmivalli, 2010). Their prevalence is typically around 5%-15% (e.g., Craig & Harel, 2004; Goossens, Olthof, & Dekker, 2006; Juvonen et al., 2003; Pellegrini, Bartini, & Brooks, 1999; Pouwels, Lansu, & Cillessen, 2016; Salmivalli et al., 1996b; Sutton & Smith, 1998). Early explanations of bullies' characteristics emphasized their aggressive personality and psychological distress (Olweus, 1993), so aggression in youth comes from a lack of social skills, leading to aggressive behaviors that reflect a budding antisocial personality. Substantial evidence suggests, however, that bullies displaying proactive and goal-directed aggression are not necessarily socially unskilled or emotionally dysregulated; rather, they are quite socially skillful in achieving their goals (Garandeau & Cillessen, 2006; Sutton, Smith, & Swettenham, 1999). Moreover, Juvonen et al. (2003) found that bullies were psychologically stronger than other classmates who were not bullies; bullies in their research exhibited the fewest number of mental health problems.

It has been suggested that bullying incidents are fostered by the bullies' pursuit of high status in the peer group (Pellegrini, 2002). One study showed that in early adolescence, social status was one of the strongest predictors of psychological well-being (Harter, 1996, 1998). Juvonen et al. (2003) explained that the reason bullies had superior mental health was because they enjoyed their social prestige within the social group comprised of their classmates; therefore, it is the powerful and dominant position in the peer group that bullies want and pursue.

What Do Bystanders Want?

The quest for status may originate from the personal motivations of bullies, but their behavior also carries strong group-related propensities (e.g., Hodges & Perry, 1999; Salmivalli & Isaacs, 2005). To effectively and easily achieve high status, bullies need to select not only

appropriate targets, but also the proper times and places for their acts, to reduce any fear of being confronted. The targets selected by bullies are, therefore, likely to be submissive, physically weak, and in a low-power, rejected position within the group (e.g., Hodges & Perry, 1999; Salmivalli & Isaacs, 2005). Furthermore, bullies generally attempt to prove their power not secretly but only when their peers are around. It has been found that 85% to 88% of all bullying episodes occur when many peers are present as an audience (Atlas & Pepler, 1998; Hawkins, Pepler & Craig, 2001). All high-status individuals are not necessarily bullies, but when high status is associated with bullying, group members are able to increase their own social standings within the group by emulating or supporting the bully, or they can at least be self-protective (Moffit, 1993). In addition, group members try to avoid the lowest-ranked members of the group as much as possible. This tendency also becomes apparent within adolescent peer groups. Adolescents endorse the behavior of high-status peers, but they tend to reject the behaviors and attitudes of low-status peers (Cohen & Prinstein, 2006).

For these reasons, bullying has been documented as a “*group process*.” During the process of bullying, majority members of the group pursue their own goals, and the bullying is maintained in a stable manner to achieve those goals. That is, powerful bullies pursue high status while the majority of bystanders work to maintain their stable status and safety in the group.

Bystanders’ Attitudes and Actual Behaviors

Most youth report that they disapprove of bullying and are willing to help victimized peers (Boulton, Trueman, & Flemington, 2002; Rigby & Johnson, 2006). Generally, we would expect that those who are against bullying would stand up to bullies and defend victims, but in reality, a substantial number of witnesses to actual bullying incidents serve facilitating roles that support the bullying, either directly or indirectly. Salmivalli and colleagues (1996b) found that

almost one-third of students failed to defend victims and withdrew themselves from a bullying situation. In observational research, less than 20% of witnessed bullying episodes included defenders who intervened on the victim's behalf (Hawkins et al., 2001). The low rate of observed defending indicates that bystanders coming to the aid of victims are relatively rare (Pepler, Craig, & O'Connell, 2010). It seems that something prevents youth from defending victimized peers even if they think that it would be the right thing to do.

Bystanders Matter

Bullying is not simply a series of aggressive interactions or a hurtful dyadic relationship between bully and victim; it is a dysfunctional *group process*. At the moment bullying occurs, all students at the spot where it takes place become involved with the bullying incident, and certain roles are allocated to each of them. All students other than the bullies and victims take on the role of bystander. It is important to understand that these group processes arise within a unique school setting. Peer relationships form within classrooms, where students typically cannot choose or easily step away from what happens in those classrooms. These unique school contexts are not only somewhat involuntary but also hierarchical. Bullies pursuing high status are prone to choose easy victims to prove their power, and bystanders reward or sanction the bullying by their reactions and inactions. In the course of this process, the extent of the contribution by bystanders is decided by the group norm. In other words, depending on group norms, bystanders may either further or discourage the aggressive behavior of bullies. Considering all of these elements, it becomes evident that bullying is not a phenomenon that can be easily eradicated. Unlike bullies or victims, who can be somewhat clearly identified, the roles of numerous bystanders cannot be as easily identified (e.g., Salmivalli, 2010). Moreover, to change the role of bystanders, who

contribute significantly to the bullying process, changes must be made to group norms and to the affect, attitudes, and behaviors of bystanders.

The implications of interventions in response to the above mechanisms of bullying appear to be straightforward: Interventions that target bystanders with the goal of changing the bystanders' behaviors may be more effective. As bystanders often think that bullying is wrong, and they desire some way to help their victimized peers, it is a more realistic strategy to reinforce these existing attitudes and shift bystanders' attitudes toward defending behaviors rather than to target bullies (Salmivalli, 1999, 2014). Researchers, therefore, have begun to focus on bystander behaviors. Using meta-analysis, Polanin, Espelage, and Pigott (2012) found that programs focusing on bystander interventions have more practically and statistically relevant effects than other approaches.

Significance of This Work

Based on the results described herein, during the past two decades there has been a dramatic increase in public demand for anti-bullying legislation, and all 50 states in the United States have enacted laws requiring school districts to have policies that address bullying (see Swearer, Martin, Brackett, & Palacios, 2017). Consequently, schools have been inundated with bullying intervention programs. Despite the costs associated with these interventions, the impact of bullying prevention programs has been disappointing, especially in middle schools (Espelage, 2013; Hymel & Swearer, 2015; Ttofi & Farrington 2011).

Although anti-bullying intervention programs have emphasized defending behaviors, why do students not intervene more often? Since Latané and Darley (1970) proposed a five-step socioemotional process model of bystander effects (i.e., the phenomenon wherein an individual's likelihood of helping decreases when passive bystanders are present in a critical situation), social

psychologists for the past 50 years have consistently found that helping victims in danger is quite a complicated behavior that involves a number of socioemotional processes (see Fischer et al., 2011).

Since adolescence is a critical developmental period marked by an increased importance of the peer group (Brown & Larson, 2009), behaviors in bullying situations appear to mean more than simply carrying a risk, especially for adolescents. During adolescence, peer interactions come to expand beyond dyadic and small group relationships, and adolescents rely more on their peers and less on their parents (Brown & Larson, 2009). Accordingly, for adolescents who have a strong need to affiliate with and belong to their peers, it may never be easy to engage in defending victims because they fear becoming future targets of bullying and being excluded from peer groups. This seems to be one of the main reasons that anti-bullying interventions are not effective enough. In order to effectively tackle behaviors of bullies who are perceived as popular by peers, it has been widely considered that defenders also need to have high social status similar to bullies. However, since only a few students are able to attain high social status by peers' consensus (see Bukowski, 2011), merely emphasizing defending behaviors may discourage unpopular students from defending victims. To advance anti-bullying interventions, therefore, it is necessary to consider how to safely mobilize majority students who do not have high social status to engage in defending behaviors.

Defending behaviors include comforting behaviors toward victims as well as confrontational behavior toward bullies. As comforting victims would carry less risk of becoming a future target of bullying than would confronting bullies, students who are not of high social status would be expected to use defending behaviors in safer ways. These two types of defending behaviors appear to have clearly different attributes; while confrontational bully

behaviors may also involve comforting behaviors toward victims, comforting behaviors may not necessarily be accompanied by confronting behaviors. Previous participant role research has not made distinctions between these two types of defender behavior. To comprehend defending behaviors, familiarity is needed with outsider roles in addition to defender roles. Similarly, the reason that individuals remain as passive bystanders may be that they are simply indifferent to victimized peers, or they might be afraid of the bully even though they wish to help the victim.

In order to develop more advanced anti-bullying intervention programs, a tailor-made intervention approach that considers all specific roles may be required. To accomplish this, the first step needs to be understanding the heterogeneity of defender and outsider roles. Correspondingly, in this dissertation I present two studies to refine defender and outsider roles using a multi-method approach. In Study 1, I examined how participant roles were distributed in classrooms of Korean middle schools by using the participant role questionnaire (PRQ, Salmivalli et al., 1996b), which has been most widely used in bullying studies for the past 20 years. Since the original study in 1996, most studies have been conducted in Europe using peer nominations. My dissertation identified six participant roles in Korean middle school classrooms. Moreover, by investigating whether participant roles are associated with social status, I argue that bullying is a group process with hierarchical structure.

In Study 2, I only selected overall defender and outsider roles as identified in Study 1, and then I identified subtypes of defender and outsider roles. I tested hypotheses that there might be two defender roles (comforting the victim versus confronting the bully) and two outsider roles (indifference to the victim versus fear of retaliation). To better understand the different attributes these role subtypes carried, I investigated what associations they had with individual characteristics, social factors, and contextual factors, which were measured using peer

nominations and self-ratings. Specifically, I examined the degree to which defender and outsider subtypes were predicted by gender, empathy, responsibility for intervention, and self-efficacy as intrapersonal factors; perceived popularity and likability as interpersonal factors; and norms about defending behavior as contextual factors.

In addition to examining the cross-cultural generality of participant role research, I conducted these dissertation studies in a South Korean context for two reasons. First, South Korea has been characterized as a collectivist culture in which students tend to conform to peer group over individual attitudes and behaviors (Farver, Kim, & Lee-Shin, 2000; Hong, Lee, Lee, Lee, & Garbarino, 2014). Korean bullying, called *Wang-ta*, has strong conformity characteristics. For example, many students enlist peer norms as justification for excluding and/or ignoring one or two targeted peers (No, Kim, Lee, & Kim, 1999). Thus, the Korean cultural context is an ideal setting for testing the power of peer group norms. Second, the structure of schooling in South Korea consists of six years of elementary school (grades 1–6), three years of middle school (grades 7–9), and three years of high school (grades 10–12). Because instruction is classroom-based in both elementary and middle schools, the same classmates take nearly all their classes together during an academic year. This organizational structure indicates that the formation of peer relationships occurs more at the classroom level than at the school level. Korean middle school classrooms therefore were well-suited to test my multilevel hypotheses about defending behavior.

STUDY 1

Bullying as a Group Process:

Participant Roles in Korean Middle School Classrooms

Introduction

Following the first empirical study on bullying by Olweus (1978) in Scandinavia, bullying became a serious topic more deeply rooted in public discussion; bullying research has increased exponentially over the last several decades, with a wide range of measures used (Volks, Veenstra, & Espelage, 2017). Although accurate measurement is critical for advanced research, evaluation of interventions, and implementation of legal policies, it remains one of the main challenges in conducting research on bullying (Casper, Meter, & Card, 2015; Cornell & Limber, 2015; Goossens, Olthof, & Dekker, 2006; Volks et al., 2017). One of the reasons that bullying has been difficult to measure is because research has come to include not only the simple power imbalance between a bully and a victim, but also the roles of multiple bystanders who may be present, as part of a “circle of bullying” or a “group process” (Furlong, Sharley, Felix, Tanigawa, & Green, 2010; Olweus, 1993; Olweus & Limber, 2010; Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996b). However, while the approach to understanding bullying has extended from dyadic relationships between the bully and the victim to the various roles of bystanders, there are still very few instruments designed to measure all participant roles in bullying situations (Salmivalli et al., 1996; Salmivalli & Voeten, 2004; Twemlow, Fonagy, & Sacco, 2004).

In addition to considerations of the roles of multiple participants, the variety of possible reporters, such as self, peers, teachers, or parents, makes measuring bullying even more complicated (Volks et al., 2017). While some authors have argued that using multiple reporters could establish psychometric adequacy (Juvonen, Nishina, & Graham, 2001), assessing complex behaviors involving many participant roles and multiple informants may make it more difficult to reach the “gold standard” for accuracy (Hymel & Swearer, 2015). Teacher or parent reports

are considered poor reporting sources, because bullying occurs primarily in peer groups where adult supervision is limited. It is difficult for parents to get exact information about what is happening to their children at school, and teachers often fail to witness bullying or even ignore bullying in spite of having witnessed it (e.g., Cornell & Brockenbrough, 2004; Craig, Pepler, & Atlas, 2000; Vaillancourt et al., 2010). While self-reports are economical and efficient, giving youth a much-deserved voice in measurement (Crick & Bigbee, 1998; Hymel & Swearer, 2015), we cannot rule out the possibility that youths may try to depict themselves in a favorable way or refrain from disclosing the fact that they are or were involved in the bullying (e.g., Juvonen et al., 2000; Perry et al., 1988). Furthermore, self- and peer-reports do not necessarily show high correspondence (e.g., Branson & Cornell, 2009; Crick & Bigbee, 1998; Graham & Juvonen, 1998; Pellegrini, 2001). When peer-reports, self-reports, observations, and diaries were compared, peer-reports were the only method that was significantly correlated with all other methods (Pellegrini, 2001; Pellegrini & Bartini, 2000). In addition, because peers are present in at least 85% of bullying incidents (Pepler, Craig, & O'Connell, 2010), peer reports are considered an adequate alternative to other types of reports, despite being more time-consuming to collect (Cornell & Cole, 2012).

Accordingly, during the last two decades, the Participant Role Questionnaire (PRQ) (Salmivalli et al., 1996b) has effectively captured the group process tendencies of overall bullying, and it also uses peer-reports; it has been the most cited measures in the literature on participant roles. The original study administered to 573 Finnish sixth graders (aged 12–13) found six participant roles, using peer-ratings and peer nominations: bully (e.g., starts bullying), assistant (e.g., assists the bully), reinforcer (e.g., laughs when someone is being bullied), defender (e.g., comforts the victim or encourages him/her to tell the teacher about the bullying),

outsider (e.g., stays away from the situation), and victim. The basic assumption of this study was that each student in the classroom where bullying occurred had at least one primary role. Bullies, assistants, reinforcers, defenders, and outsiders were identified by 48 peer-rating items. The victim role was identified separately by peer nomination, because the authors assumed that if a person was nominated as a victim by 30% or more of her/ his peers, then the victim was regarded as serving a primary role regardless of the peer-ratings of other roles. After the original study, numerous other researchers from various countries adapted the PRQ participant roles scale. Sutton and Smith (1999) applied the PRQ to 206 British children (aged 7–10). However, children were too young to understand the PRQ's 48 items, so the PRQ was reduced to 21 items, and it was conducted by interview instead of questionnaire. This study identified four roles, rather than six: the roles of defenders, outsiders, and victims were clearly identified, but bullies, assistants, and reinforcers were combined into a pro-bullying group. Subsequently, Goossens et al. (2006) employed the 21 items of Sutton and Smith (1999) with the victimization scale of Perry, Kusel, & Perry (1988), and developed the NPRQ (N for new), consisting of 32 items. Using peer nominations, 242 Dutch children (aged 9–12) were assigned to one of five roles: bullies, followers (assistants combined with reinforcers), defenders, outsiders, and victims. Most recently, Pouwels et al. (2016) employed a reduced version (15 items) of the original PRQ, with four items for victim scales using peer nominations. This study replicated the original study to 1,650 Dutch adolescents ($M_{\text{age}} = 16.38$) and identified six roles.

The PRQ has been used by researchers from different countries (e.g., Finland, the United Kingdom, the Netherlands), with youth ranging in age from 7 to 17 years old. Most research on participant roles adapted the original PRQ and employed various procedures (e.g., peer-ratings, peer nominations, interviews) and formats (e.g., 48-item format of the original version, a 15-to-

28-item format with either just one item for victimization or with a set of items for victimization). The PRQ has been reported as substantially reliable (Goossens et al., 2006; Pouwels et al., 2016; Salmivalli et al., 1996b; Sutton & Smith, 1999), and identified roles have been shown to be reasonably stable over a two-year period (Salmivalli et al., 1998; Goossens et al., 2006). Using the criteria employed by Salmivalli et al. (1996b), most studies showed that more than 80% of the individuals studied were assigned to one of the participant roles. Specifically, 8 to 14% of the participants were bullies, 13 to 28% were reinforcers or assistants, 17 to 28% were defenders, 12 to 29% were outsiders, and 10 to 18% were victims.

Correlates of Participant Roles

Most studies have replicated the association between participant roles and both gender and social status. The prevalence of the bully, reinforcer, and assistant roles was higher among boys than girls, whereas the prevalence of the defender and outsider roles was higher among girls than boys (Goossens et al., 2006; Pouwels et al., 2016; Salmivalli et al., 1996b; Sutton & Smith, 1999). However, unlike the results of gender effects, the results of the associations between peer reputations and participant roles were mixed. In general, bullying or aggressive behaviors were found to be associated with rejection by peers (e.g., Boulton & Smith, 1994; Coie, Dodge, & Kupersmidt, 1990; Newcomb, Bukowski, & Pattee, 1993), but some bullies were considered to have high or controversial status (Perry et al., 1988; Warden & MacKinnon, 2003). This is because traditional perspectives oversimplified popularity status, asserting that prosocial individuals were popular, while aggressive individuals were not (Hawley, Little, & Card, 2007).

Since some studies started to consider that aggressors might be socially skilled or socially competent, defined as exhibiting “discrete behaviors that led children to solve social tasks or achieve social success” (e.g., Hawley, 2003a, b; Rubin, Bukowski, & Parker, 1998; Sutton et al.,

1999), researchers have distinguished perceived popularity from sociometric popularity, also called preference or likability (Cillessen & Mayeux, 2004; Cillessen & Rose, 2005). Preferred individuals tend to have a high level of prosocial behavior, but individuals perceived as popular are not necessarily uniquely associated with prosocial behaviors (Sandstorm & Cillessen, 2006). While an association between likability and perceived popularity was suggested (e.g., Parkhurst & Hopmeyer, 1998; Sandstrom & Cillessen, 2006), the correlation between likability and perceived popularity dramatically decreased from middle childhood to early adolescence (Cillessen & Mayeux, 2004). During early childhood, prosocial behavior is a critical determinant of popularity, but in early adolescence, prosociability declines as a determinant of popularity. Thus, aggression is a critical element to separate perceived popularity and likability (Parkhurst & Hopmeyer, 1998; Rodkin, Farmer, Pearl, & Van Acker, 2000). There are few studies that investigate the specific association between the six participant roles and social status, which separates perceived popularity from likability (e.g., Pouwels et al., 2016).

As bullying is considered a mechanism to achieve and attain high social status in peer groups (e.g., Caravita & Cillessen, 2012; Juvonen & Galván, 2008; Sijtsema, Veenstra, Lindenberg, & Salmivalli, 2009), previous studies have often mentioned the association between bullies and social status. Studies found that bullies were perceived as popular, despite their aggressive nature, especially among adolescents (e.g., Caravita, Di Blasio, & Salmivalli, 2009; Juvonen et al., 2003). However, bullies who were perceived as popular were not necessarily liked by their peers (e.g., Boulton & Smith, 1994; Caravita et al., 2009; Pouwels et al., 2016). Moreover, the defender role has been often considered as a participant role often filled by those perceived as popular by their peers (e.g., Peets, Pöyhönen, Juvonen, & Salmivalli, 2015; Pouwels et al., 2016; Yun & Graham, in press). Since defending victims' behaviors carries the risk of

being targeted as a victim in the future, a high social status compared to that of bullies is required to stand up to bullies (Juvonen & Galván, 2008; Pöyhönen et al., 2010). While Salmivalli et al. (1996b) found that defenders had the highest social status among the six roles, this is because the authors measured the social status only by likability. When considering both perceived popularity and likability, defenders showed a higher level of likability but a lower level of perceived popularity than bullies (e.g., Pouwels et al., 2016).

Of the six participant roles, the findings on peer reputations of assistants and reinforcers are limited and mixed. Assistants and reinforcers had a desire to be accepted by aggressive groups in order to maintain their social status in peer groups (Olthof & Goossens, 2008). This need to affiliate with bullies incited further aggressive behavior by assistants and reinforcers (e.g., Juvonen & Galván, 2008), but they were not as aggressive as bullies (Pouwels et al., 2016). Thus, their levels of perceived popularity and being disliked were lower than that of bullies (Pouwels et al., 2016). Moreover, reinforcers had profiles of relatively high or average level of likability (Pouwels et al., 2016; Salmivalli et al., 1996b). Lastly, both outsiders and victims showed considerably low levels of likability and popularity, but the victims' levels were lower than those of outsiders (e.g., de Bruyn, Cillessen, & Wissink, 2010; van den Berg, Segers, & Cillessen, 2012; Pouwels et al., 2016; Salmivalli et al., 1996b).

Current Study

The current study applied Salmivalli's Participant Role Questionnaire (PRQ) to South Korean middle school students, to gain a better understanding of participants' roles in bullying. Subsequently, I compared the Korean results with the findings of previous studies that had been conducted with white European adolescents (e.g., Pouwels et al., 2016; Salmivalli et al., 1996b).

The current study had three main goals. First, I examined the reliability and validity of the PRQ for South Korean adolescents. I expected that the PRQ scales would be internally consistent and would replicate the original results reported by Salmivalli et al. (1996b), concerning the classification of the six roles in bullying.

Second, I investigated the prevalence of specific participant roles in bullying for South Korean students, using peer ratings and peer nominations. In addition to the prevalence of participant roles alone, gender differences were examined. Consistent with previous studies, gender differences were expected in the prevalence of participant roles (Goossens et al., 2006; Pouwels et al., 2016; Salmivalli et al., 1996b).

Third, I assessed the association between participant roles (i.e., bully, assistant, reinforcer, defender, outsider, or victim) and peer reputations (i.e., perceived popularity, likability, or power) in the peer group for South Korean students. Participant roles were expected to have a statistically significant relationship with peer reputations. Specifically, I hypothesized that students in the bully role would have higher levels of perceived popularity, and power, while those in the defender role would have higher ratings of perceived popularity and liking. As few studies have investigated the association between participant roles and powerful status, it was difficult to hypothesize the direction of these associations. Considering that powerful status has been positively associated with aggression in previous research (e.g., Hawley, 1999; Lease, Musgrove, & Axelrod, 2002), I hypothesized that bullies, assistants, and reinforcers would be more likely to be nominated as powerful.

In summary, using multiple methods (e.g., peer-ratings, peer nominations, and self-ratings), this study examined the prevalence of participant roles in South Korean middle school

classrooms. Furthermore, the differences among participant roles were explained by gender and peer reputations, such as popularity, likability, and power in peer groups.

Method

Participants

Participants in this study were 1,430 middle school students from 54 classrooms in six coeducational schools in Seoul, South Korea. Korean middle school has three grades: first grade (7th grade in the U.S.); second grade (8th grade in the U.S.); and third grade (9th grade in the U.S.). As Seoul is primarily divided into Gangbuk (“north of the river”) and Gangnam (“south of the river”), schools from Gangbuk and Gangnam were evenly selected. Three of the six schools (27 classrooms) were selected from the northern part of Seoul, and three of the six (27 classrooms) were selected from the southern part of Seoul. Each middle school classroom in Seoul usually contains an average of 25 students (the class size range is 20-32) and each grade has an average of six classrooms, from which I selected three classrooms from each grade (i.e. 34.3% first graders, 31.9% second graders, and 33.8% third graders). Among these students, 57 who did not have parental consent (2% of total participants), youth consent (0.2%), received special education (1%), or were from other ethnic groups (i.e. Chinese, Japanese, Mongolian) (0.3%) were removed. Thus, 1373 (40% girls) were the final participants.

Procedure

Data were collected in the spring semester of 2017. The data were gathered in accordance with the university-approved IRB protocol. Based on the information provided by the Korean Ministry of Education, three principals in the south of Seoul and three in the north of Seoul were randomly chosen to be contacted. Those principals who approved the study met with homeroom teachers in their school to choose nine classrooms (three from each grade). All the students in

those three classrooms were potential student participants. I met with the homeroom teachers and requested their rosters. At that time, I gave them the recruitment letters for teachers, youth consents, and parental consents. I also asked homeroom teachers to create a private space with barriers so that students could not look at one another's answers.

To ensure the precision of the translation, professional translators in Korea translated and back-translated the surveys from English to Korean and from Korean back to English, working with bullying experts. The paper survey was different for each classroom because the peer-report part included a list of the names of classmates in the corresponding classroom. I attended all classrooms with two research assistants (RAs) to supervise and to explain the survey in the same way. Students took confidential paper surveys during regular school hours in classrooms, requiring approximately 45 minutes to an hour to complete.” Participants received a \$5 gift card when they completed the survey. After data collection, students were identified only by ID numbers, not names. During the period of data entry, I returned to each school to administer the surveys to students who had been absent during data collection.

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Measures

Participant Role Questionnaire (PRQ)

Peer-report (see Appendix A). PRQ first defined bullying as when

“... one child is repeatedly exposed to harassment and attacks from one or several other children. Harassment and attacks may be, for example, shoving or hitting the other one,

calling him/her names or making jokes about him/her, leaving him/her outside the group, taking his/her things, or any other behavior meant to hurt the other one. It is not bullying when two students with equal strength or equal power have a fight, or when someone is occasionally teased, but it is bullying, when the feelings of one and the same student are intentionally and repeatedly hurt.”

In previous studies, the number of items on the PRQ varied from 48 (Salmivalli et al., 1996b) to 15 (Salmivalli & Voeten, 2004). In the current study, students were presented with 15 items describing five participant roles associated with bullying, with three items for each scale.

1. The bully scale: starts bullying; makes others join in with the bullying; always finds new ways of harassing the victim.
2. The assistant scale: joins in the bullying when someone else has started it; assists the bully; helps the bully, maybe by catching the victim.
3. The reinforcer scale: comes around to see the situation; laughs; incites the bully by shouting or saying “Show him/her!”
4. The defender scale: comforts the victim or encourages him/her to tell the teacher about the bullying; tells the others to stop bullying; tries to make the others stop bullying.
5. The outsider scale: is not usually present in bullying situations; stays outside the situation; doesn’t take sides with anyone.

Students were asked to evaluate how often each of their classmates behaved in the ways described, on the 3 point scales (1 = never, 2 = sometimes, 3 = often). The names of all classmates were printed on the questionnaire, except for the student’s own name. Each student’s peer-evaluated sum score on each scale was divided by the number of classmates present and standardized to z-scores within classrooms. Cronbach’s alpha was .87 for the standardized items

on the bully scale, .73 for the reinforcer scale, .61 for the assistant scale, .84 for the defender scale, and .78 for the outsider scale. The proportion of missing data in PRQ ranged from 0% to 0.2% on 15 items.

Self-report (see Appendix B and C). Students also reported the likelihood that they themselves engaged in the behaviors tapped in the PRQ. The bully, victim, assistant, reinforcer, defender, and outsider scales were parallel to the peer-report. Students responded to 15 items and evaluated on a 3-point scale: 1 = never, 2 = sometimes, 3= often) to what extent they behaved in the manners described in each bullying situation. Additionally, students also reported on the frequency of how often they were the targets of different types of peer victimization (e.g., “made fun of you in front of others,” “hit, kicked, or pushed you”) since the beginning of the school year (see Lanza, Echols, & Graham, 2013). This measure was composed of seven items scored on a 3-point rating scale (1 = never, 2 = sometimes, 3= often). Cronbach’s alpha was .80 for the bully scale, .81 for the reinforcer scale, .79 for the assistant scale, .80 for the defender scale, .82 for the outsider scale, and .80 for the victim scale.

Peer Reputations (see Appendix B). As part of a peer nomination procedure, students were asked to list the names of the students in their classrooms who were liked (“Who do you like the most?”), disliked (“Who do you like the least?”), popular (“Who is the most popular?”), unpopular (“Who is the least popular?”), and powerful (“Who has the most power? Everyone notices them and pays attention to them.”). I also asked students who was victimized (“Who is victimized by getting pushed/hit/kicked, or by having nasty things said about them, rumors spread about them, being neglected or excluded?”). Students were given a roster of their own classroom, arranged alphabetically by first name. Using the classroom roster, they were advised that they could list as many names as they wanted for each question, except for their own name.

For each question, the number of nominations that each participant received was divided by the possible number of nominations. Subsequently, these scores were standardized to z-scores within classrooms. A likability score was computed by subtracting the standardized number of “liked least” nominations received from the standardized number of “liked most” nominations. Perceived popularity was computed by subtracting the standardized number of “least popular” from the standardized number of “most popular” nominations. The resulting difference score was again standardized by classroom (Cillessen & Mayeux, 2004).

Analytic Plan

To categorize six participant roles in bullying situations and to compare those six roles with respect to gender and grade, I employed a design based on Salmivalli et al. (1996b). The classification could be divided into two parts; the first part is an identification of five roles (i.e., bully, assistant, reinforcer, defender, outsider) using peer ratings, and the second part is an identification of victim role using peer nominations. To identify bully, assistant, reinforcer, defender, and outsider roles, I computed an average score by taking the standardized scores within classroom of three items that belong to a certain role. The average scores were standardized again within classrooms to control for classroom size. Students would be assigned a specific role if 1) they score above the mean of 0 on the standardized scale of Salmivalli’s PRQ for that particular role, 2) they score higher on that scale than on any of the other scales, and 3) their score is above the second highest score by more than 0.1 points. When the difference between a student’s highest score and his/her second highest score is less than 0.1 or if the student does not score above the mean on any of the scales, he/she is regarded as not having a clearly defined participant role and assigned ‘no role.’ A different method was used for victim identification (Salmivalli et al., 1996b). Students were instructed to write the names of peers

whom they considered to be victims in their classroom. In cases where more than 30% of the classmates nominated a peer as a victim, that student was assigned to the victim role as his or her primary classification, regardless of how this student scored on the bully, assistant, reinforcer, defender or outsider scales.

Finally, to investigate the association between participant roles and social status in the peer group, a multivariate analysis of variance (MANOVA) was conducted with perceived popularity, likability, and power scores as dependent variables, and the categorical variable of participant roles identified above as a fixed factor.

Results

Prevalence of Participant Roles in Bullying

The first aim of Study 1 was to investigate the prevalence of the participant roles using peer rating and peer nominations. Internal consistency coefficients (Cronbach's alpha, α) were calculated as follows: bully (3 items) = .94, assistant (3 items) = .95, reinforcer (3 items) = .95, defender (3 items) = .96, and outsider (3 items) = .85. Table 1 displays the relationships among the standardized mean scores on participant roles. While the scores on bully, assistant, and reinforcer roles were highly positively correlated, the scores on bully, assistant, and reinforcer were negatively associated with the means of defender and outsider. In addition, while scores for the victim scale were negatively associated with scores on the defender scale, they were positively associated with scores on the outsider scale. Moreover, there were no significant associations between scores in the victim and bully group (i.e., bully, assistant, reinforcer) and between defender and outsider. Accordingly, PRQ in this study yielded reliable and valid data.

In accordance with Salmivalli et al. (1996b)'s criteria, six roles were assigned to 88.7% of the students from a total of 1,373 students. Within assigned students, 8.7% of the students

were assigned to the bully role, 9% the assistant role, 11.4% the reinforcer role, 24.3% the defender role, 30.4% the outsider role, and 6% the victim role. The most common participant role was the outsider (30.4%) and the least common role was the victim (6%).

Table 2 displays the comparison of the results from the following three studies: Salmivalli et al. (1996b) which was the original study of participant roles in bullying targeting Finnish adolescents; Pouwels et al. (2016) which recently replicated the Salmivalli's study with Dutch adolescents; and the current study with South Korean early adolescents. The total proportion of assignment to participant roles was similar, Salmivalli et al. (1996b): 87%; Pouwels et al. (2016): 86.2%; Yun: 88.7%. While the proportion of bully roles was similar across the three studies, Korean students showed a lower proportion of the victim role than Finnish and Dutch students. Moreover, Korean students showed a lower proportion of roles that facilitate bullying (i.e., assistant and reinforcer roles) and higher proportions of defender and outsider roles, compared to Finnish and Dutch students. For Dutch students, the proportion of the assistant role was relatively higher than Finnish and Korean students.

Furthermore, I investigated the distribution of participant roles, separately by gender (see Figure 1). As I expected, a higher proportion of boys were classified as bullies ($\chi^2(1) = 11, p = 0.001$), assistants ($\chi^2(1) = 29.75, p < 0.001$), and reinforcers ($\chi^2(1) = 43.39, p < 0.001$), whereas significantly more girls were assigned to the defender ($\chi^2(1) = 75.73, p < 0.001$) and outsider ($\chi^2(1) = 29.07, p < 0.001$) roles compared to boys. However, unlike the findings of Salmivalli et al. (1996b) and Pouwels et al. (2016) where gender difference was not found, my study showed that boys were more classified in the victim role than girls ($\chi^2(1) = 5.65, p = 0.017$). Regarding grade differences (i.e., 7th grade, 8th grade, 9th grade), there was no statistical difference in prevalence of participant roles.

Self-Estimated vs. Peer-Estimated Participant Roles in Bullying

As shown Table 3, I examined how the self-reported participant roles and peer-perceived participant roles were associated. Consistent with Salmivalli et al. (1996b)'s results, the self-rating scores on the bully, assistant, and reinforcer scales were positively correlated with the corresponding peer-rating scores. While the Salmivalli et al. (1996b) results showed that self-rating on the defender scales was positively correlated with peer rating scores on both defender and outsider roles, my results found that self-rating on the defender role was positively associated only with peer-rating on the defender role. Moreover, for the outsider role, peer-rating scores were negatively associated with self-rating scores on all participant roles, except for the outsider role itself. In other words, there was a mismatch between peer- and self-ratings for outsiders. This result suggested that outsiders were not aware of how others perceived them.

Peer Reputations and Participant Roles in Bullying

To investigate the association between peer reputations and participant roles in bullying, a one-way multivariate analysis of variance (MANOVA) was conducted with peer nominations for popularity, likability, and power as dependent variables. There was a statistically significant effect of participant roles in bullying, $F(24, 4745.68) = 78.56, p < .001$; Wilks' $\Lambda = .31$, partial $\eta^2 = .25$. Specifically, participant roles had a statistically significant effect on perceived popularity ($F(6, 1363) = 134.88, p < .001$; partial $\eta^2 = .37$), likability ($F(6, 1363) = 126.01, p < .001$; partial $\eta^2 = .36$), and power ($F(6, 1363) = 57.60, p < .001$; partial $\eta^2 = .20$).

Table 4 displays the multiple comparisons of mean differences between participant roles and social status by univariate ANOVA with a post hoc comparison using Tukey's HSD. Those classified as bullies had significantly higher perceived popular status scores than other groups, except defenders. There was no significant difference between assistants and reinforcers in

perceived popular status. Moreover, defenders had significantly higher perceived popular status scores than outsider and victim roles.

In terms of likability, bullies were less liked by peers than reinforcers, defenders, or outsiders, while there was no difference between bully and assistant roles in liking scores. Reinforcers had higher likability scores than assistants. While defenders were more likely to be liked by peers than all other roles, victims were less likely to be liked than all other roles.

Bullies were perceived as having a more powerful reputation by peers compared to all other roles, and assistants were more likely to be perceived as powerful than reinforcers. Defenders were less likely to be perceived as powerful than bullies or assistants, but more likely to be perceived as powerful compared to outsiders or victims.

Discussion

The current study replicated the original research on participant roles in bullying (Salmivalli et al., 1996b) and found that the participant role questionnaire (PRQ; Salmivalli et al., 1996b) was reliable and well-validated when applied to Korean adolescents. These results indicated that bullying occurring in Korean middle school classrooms was also a group process that involved assistants, reinforcers, defenders, and outsiders as well as bullies and victims. Moreover, this study showed that gender and reputations in the peer group were related to participants' roles in bullying.

Of the total 1,373 participants, 88.7% were assigned to one of the six roles in 54 classrooms; 8.7% bullies, 7.9% assistants, 11.4% reinforcers, 24.3% defenders, 30.4% outsiders, and 6% victims. When comparing these proportions with the original study (Salmivalli et al., 1996b) and those of Pouwels and colleagues (Pouwels et al., 2016), which is the most recent replication of the original study using peer nominations, the total assignment proportions were

quite similar. However, the prevalence of specific roles was different. Compared to other countries, Korea had a lower prevalence of victims, which can be explained by typical Korean bullying culture, where a majority of kids target only one or two potential victims. (No, Kim, Lee, & Kim, 1999). In addition, the proportion of those in the bully role was similar, but Korean adolescents had fewer assistants and reinforcers. Moreover, proportions of defender and outsider roles were higher than in previous studies (e.g., Pouwels et al., 2016; Salmivalli et al., 1996b). Regarding gender differences, as expected, boys were more likely than girls to be bullies, assistants, and reinforcers, but girls were more likely to be defenders and outsiders compared to boys. The reason that Korean adolescents' data showed relatively lower ratios of assistants and reinforcers, while relatively higher ratios of defenders and outsiders could be explained by two factors: recent Korean anti-bullying policy and the gender roles in South Korean culture. Recently, Korean anti-bullying laws and policies have become stricter, and many anti-bullying interventions have been implemented, targeting homes as well as schools (Hong, Lee, Lee, Lee, & Garbarino, 2013). Thus, Korean students might be less likely to be assistants or reinforcers of bullies and more likely to be defenders. Regarding cultural factors, despite significant and progressive modernization, many East Asian countries (e.g., China, Japan, South Korea) are still heavily influenced by Confucianism, and people routinely face notable gender inequalities into which children are indoctrinated via parent-child socialization or school textbooks (Basu, Zuo, Lou, Acharya, & Lundgren, 2017). Under such gender norms in East Asian societies, there is still a high expectation placed on girls to be obedient and engage in caring behaviors, in contrast to norms for boys (Basu et al., 2017; Lindsey, 2015). Due to relatively strong gender roles in Korea, Korean girls might have been perceived as assistants or reinforcers less frequently, and as defenders or outsiders more frequently, compared to girls in Europe. Accordingly, the results of

current study might show that the assistant and reinforcer proportions were lower, but the defender and outsider proportions higher, than the ratios for European adolescents.

Additionally, this study investigated the associations between participant roles and peer reputations. Since bully, assistant, and reinforcer roles are highly correlated, some studies combine assistants and reinforcers into one role, labeled *followers* (Goossens et al., 2006), and other studies viewed bullies, assistants, and reinforcers as one group, referred to as *probullying groups* (e.g., Sutton & Smith, 1999). Although the current study also found that the three scales were highly correlated, peer reputations distinguished these groups. Bullies received the highest scores on popularity, and power, followed by assistants and reinforcers, in that order. Contrary to expectations, reinforcers had a higher likability score than any other role except defenders. This result indicated that, consistent with previous studies (e.g., Bukowski, Sippola, & Newcomb, 2000; Graham & Juvonen, 1998; Moffitt, 1993; Pellegrini & Long, 2002), aggression was viewed less negatively by adolescents. Moreover, high levels of popularity did not necessarily mean high levels of likability in the peer group during adolescence.

With respect to the association between defender roles and peer reputations, previous studies found that students who were perceived as more popular were more likely to defend victims (e.g., Peets et al., 2015; Yun & Graham, in press). In the current study, the perceived popularity score of defenders was slightly lower than that of bullies, but slightly higher than the scores of assistants and reinforcers, although those scores were not significantly different from each other. These results indicated that it might be necessary for defenders to have a high popular status, similar to bullies as well as assistants and reinforcers. Despite the demonstrated salience of prosocial behaviors that confront bullies or comfort victims, however, why did defenders not get a significantly higher popular status compared to bullies, assistants, and

reinforcers? This may be explained through developmental stages, where popularity and likability are highly positively correlated during childhood, but gradually weaken as adolescence approaches and unfolds (LaFontana & Cillessen, 2010). Adolescents who were liked most by peers displayed a high level of prosocial behavior and a low level of aggressive behavior, and these behaviors were not viewed as popular in the eyes of their peers; rather, individuals who have balanced prosocial and aggressive traits are perceived as popular and powerful (e.g., Hawley, 2003; Sutton, Smith, & Swettenham, 1999).

On the other hand, outsiders were not influential and were perceived as having low levels of popularity and power by their peers, but not levels as low as victims. Outsiders were more well-liked by peers than were bullies, assistants, and victims. Considering the fact that the number of nominations for those who were most liked was negatively related to victimization (Pellegrini, Bartini, & Blooks, 1999; Pellegrini & Long, 2002), being liked by peers functioned as a buffer to prevent outsiders from becoming victims.

Although I believe that the current study has a number of strengths, I also acknowledge its limitations. First, it was unclear from these cross-sectional data whether the students were assigned to participant roles based on their social status. Those students assigned as bullies might have attained a perceived popular status because they were aggressive (Cillessen & Mayeux, 2004), or their aggression might have increased as a way to maintain their high status (Bellmore, Villarreal, & Ho, 2011). Furthermore, this association between aggression and perceived popularity might be either enhanced or diminished by the level of bullying in classrooms (Bellmore et al., 2011; Sentse, Veenstra, Kiuru, & Salmivalli, 2014). Further longitudinal studies are, therefore, necessary to investigate the bidirectional relationships between participant roles and social status in the context of peer norms.

Another limitation of this study lies in the relative criteria that were employed to assign participant roles. Creating z-transformations by class relied on the assumption that all six roles existed in every classroom, and that almost all students were assigned to one of those six roles. This method, however, overlooked the possibility that bullying did not occur in some classrooms, or situations where assistants or reinforcers might not have been present in the classrooms where bullying occurred. In addition, because the relative criteria could not be quantified for each classroom, some bullies could have been masked because of the presence of an extremely high bully scorer (Sutton & Smith, 1999). Consequently, certain students who received identical scores may have been classified into different roles based on the average score of the classroom. Goossen et al. (2006) compared relative and absolute criterion (e.g., percentage scores; 10%, 15%, 20%) and suggested that relative criteria could be more valid compared to absolute criteria, but they stressed the fact that absolute criterion was only more valid than relative criterion when researchers investigate developmental trends or intervention effects. This difference in criterion validity depends solely on the goal of research, and “gold standards” are still nowhere to be found. The current study was a cross-sectional design, so employing relative criterion was deemed reasonable; however, further investigation is required to examine how the results from Korean adolescents may differ based on use of relative criterion, absolute criterion, or a combination of both criteria (e.g., Goossen et al., 2006; Pouwels et al., 2016).

In conclusion, the present findings provide evidence that six participant roles exist in bullying that occurs within Korean middle school classrooms, and these roles are associated with social status and gender. By replicating previous research, which primarily focused on White youth in Europe (e.g., Finland, Italy, the Netherlands), to include South Korean middle school

students, the present study offers new insights regarding participant roles in bullying situations among Asian adolescents.

Table 1

Correlations Between the Scales of the Participant Roles in Bullying

	1	2	3	4	5	6
1. Bully	1					
2. Assistant	.923 ^{***}	1				
3. Reinforcer	.884 ^{***}	.928 ^{**}	1			
4. Defender	-.314 ^{**}	-.316 ^{**}	-.320 ^{**}	1		
5. Outsider	-.670 ^{**}	-.720 ^{**}	-.755 ^{**}	.004	1	
6. Victim	.016	-.004	.029	-.196 [*]	.099 ^{**}	1

Note. * $p < .05$ ** $p < .01$ *** $p < .001$.

Table 2

Comparison of Prevalence of Participant Roles in Bullying Between Salmivalli et al. (1996), Pouwels et al. (2016), and Yun

	Salmivalli et al. (1996) Finnish Students 573 students 6 th grade	Pouwels et al. (2016) Dutch Students 1,650 students 9 th to 12 th grade	Yun South Korean Students 1,373 students 7 th to 9 th grade
Participant Roles			
Bully	8.2%	8.7%	8.7%
Assistant	6.8%	12.1%	7.9%
Reinforcer	19.5%	12.0%	11.4%
Defender	17.3%	18.9%	24.3%
Outsider	23.7%	24.1%	30.4%
Victim	11.7%	10.1%	6%
No Role	12.7%	13.8%	11.3%

Table 3

Correlations Between Peer-ratings and Self-ratings on the Participant Roles in Bullying

	Peer-rating/nominations					
	Bully	Assistant	Reinforcer	Defender	Outsider	Victim
Self-rating						
Bully	.270**	.263**	.259**	-.062*	-.261**	-.082**
Assistant	.221**	.234**	.233**	-.032	-.229**	-.045
Reinforcer	.167**	.161**	.166**	-.017	-.174**	-.082**
Defender	.048	.048	.045	.177**	-.121**	.006
Outsider	-.039	-.047	-.065*	-.029	.037	-.062*
Victim	.088**	.083**	.012**	-.061*	-.101**	.273**

Note. * $p < .05$ ** $p < .01$ *** $p < .001$.

Table 4

Multiple Comparisons of Mean Differences (S.E) between Participant Roles in Bullying and Social Status in Peer Groups

		Bully	Assistant	Reinforcer	Defender	Outsider	Victim
Perceived Popularity	J Bully	-	-.30* (0.01)	-.31** (0.09)	-.23 (0.08)	-.85*** (0.08)	-2.65*** (0.11)
	Assistant	.30* (0.01)	-	-.01 (0.10)	.07 (0.09)	-.55*** (0.08)	-2.35*** (0.11)
	Reinforcer	.31** (0.09)	.01 (0.10)	-	.08 (0.08)	-.54*** (0.07)	-2.34*** (0.11)
	Defender	.23 (0.08)	-.07 (0.09)	-.08 (0.08)	-	-.63*** (0.06)	-2.42*** (0.10)
	Outsider	.85*** (0.08)	.55*** (0.08)	.54*** (0.07)	.63*** (0.06)	-	-1.80*** (0.09)
	Victim	2.65*** (0.11)	2.35*** (0.11)	2.34*** (0.11)	2.42*** (0.10)	1.80*** (0.09)	-
Likability	J Bully	-	.28 (0.10)	0.58*** (0.09)	.82*** (0.08)	.55*** (0.08)	-1.72*** (0.11)
	Assistant	-.28 (0.10)	-	.31* (0.10)	.54*** (0.09)	.27* (0.08)	-1.99*** (0.12)
	Reinforcer	-.58*** (0.09)	-.31* (0.10)	-	.24* (0.08)	-.04 (0.07)	-2.30*** (0.11)
	Defender	-.82*** (0.08)	-.54*** (0.09)	-.24* (0.08)	-	-.27*** (0.06)	-2.54*** (0.10)
	Outsider	-.55*** (0.08)	-.27* (0.08)	.04 (0.07)	.27*** (0.06)	-	-2.26*** (0.10)
	Victim	1.72*** (0.11)	1.99*** (0.12)	2.30*** (0.11)	2.54*** (0.10)	2.26*** (0.10)	-
Power	J Bully	-	-.73*** (0.11)	-1.14*** (0.10)	-1.08*** (0.09)	-1.50*** (0.09)	-1.55*** (0.12)
	Assistant	.73*** (0.11)	-	-.41** (0.11)	-.35** (0.10)	-.77*** (0.09)	-.82*** (0.13)
	Reinforcer	1.14*** (0.10)	.41** (0.11)	-	.06 (0.08)	-.36*** (0.08)	-.41* (0.12)
	Defender	1.08*** (0.09)	.35** (0.10)	-.06 (0.08)	-	-.42*** (0.06)	-.47*** (0.11)
	Outsider	1.50*** (0.09)	.77*** (0.09)	.36*** (0.08)	.42*** (0.06)	-	-.05 (0.06)
	Victim	1.55*** (0.12)	.82*** (0.13)	.41* (0.12)	.47*** (0.11)	.049 (0.06)	-

Note. Mean Difference = I – J, S.E. = Standard Error, * $p < .05$ ** $p < .01$ *** $p < .001$.

Figure 1. Prevalence of participant roles by gender

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STUDY 2

What factors predict which adolescents choose defender or outsider roles
in school bullying?

Introduction

Since the landmark studies of Salmivalli and colleagues in the 1990s on participants' roles in bullying episodes, bullying has been recognized as involving not only the bully and the victim but also various bystanders. These bystanders include assistants (e.g., following the bully), reinforcers (e.g., laughing at what is happening), defenders (e.g., being supportive of the victim), and outsiders (e.g., staying away from the bullying situation altogether) (Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996b).

A *bystander*, defined a person who witnesses bullying but is not involved as either bully or victim (Cowie, 2000; Smith, Twemlow, & Hoover, 1998), may continue to passively observe a bullying episode, start to actively encourage a bully, or actively defend a victim. These bystanders represent 56 - 67.3 % of all participant roles (Goossens, Olthof, & Dekker, 2006; Pouwels, Lansu, & Cillessen, 2016; Salmivalli et al., 1996b); therefore, the way the bystanders respond when witnessing bullying affects the extent to which bullying behavior occurs in the given classroom (Salmivalli, 2014). This refers to '*bystanders matter*,' and has become a pivotal factor in anti-bullying interventions.

Considering that most bullying occurs in an environment where peers are witnessing the incident (Hawkins, Pepler, & Craig, 2001), bullying is not merely based on the power imbalance between bully and victim (Olweus, 1993); it is also a group process driven by the social needs of the involved peer groups. Whereas bullies have a social goal—to achieve high status—bystanders may be motivated to fit in with the peer group and avoid becoming a target of the bully themselves (e.g., Baumeister & Leary, 1995; Jarvinen & Nichols, 1996). Among four kinds of bystanders, assistants and reinforcers are positively associated with aggression, while defenders and outsiders are negatively associated with aggression (e.g., Pouwels et al., 2016;

Salmivalli et al., 1996b). A motivation for aggressive behaviors of assistants and reinforcers could be explained by their desire to be accepted by other bullying children (Baumeister & Leary, 1995). Although outsiders are the highest proportion of participant roles in bullying (21 - 24 %) (e.g., Goossens et al., 2006; Pouwels et al., 2016; Salmivalli et al., 1996b), however, understanding their behaviors or motivations has been relatively neglected. To convert the outsider role to a defender role, which is one of main goals of anti-bullying interventions (e.g., Salmivalli, 2014), it is necessary to simultaneously understand defenders' as well as outsiders' characteristics. In this study, therefore, I focused on defender and outsider roles and examined what factors motivate differently individuals to take on a defender role or outsider role, in spite of the fact that both defenders and outsiders have low levels of aggression and high level of empathic responsiveness (Camodeca & Goossens, 2005; Gini, Albiero, Benelli, & Altoè, 2008).

In order to develop more advanced anti-bullying intervention programs, a tailor-made intervention approach that considers all specific roles may be required. To accomplish this, above all, it is necessary to clarify the definitions of defending behavior and outsider behavior. In previous studies, the role of confronting bullies has been indistinguishable from that of comforting victims. As confronting bullies is a behavior that carries a risk, the factors motivating confronting behavior may be different from those motivating comforting or consoling victims. The same is true of outsider behavior. The reason why individuals remain as passive bystanders may be that they are simply indifferent to victimized peers, or they might be afraid of the bully even though they wish to help the victim. Thus, in the current study, the foremost step needs to be understanding the heterogeneity of defender and outsider roles.

Further, although most youth display attitudes against bullying and report a willingness to help victimized peers in hypothetical situations (Boulton, Trueman, & Flemington, 2002; Rigby

& Johnson, 2006), one observational study reported that only about 10 -17 % of students actually stood up for victims of bullying (Pepler & Craig, 1995; Pepler, Craig, & O'Connell, 2010). These results suggest that an individual's social-cognitive factors alone are insufficient for understanding defending behavior. Since bullying is a peer group process involving various participant roles within the classroom or school setting (Salmivalli et al., 1996b), classroom or school contextual factors (e.g., peer norms) and interpersonal factors (e.g., social status in the peer group) need to be examined as possible determinants of defending behavior. The research presented here builds on prior studies and adopts a multilevel approach to examine how intrapersonal, interpersonal, and contextual factors are associated with subtypes of defender and outsider behaviors in school bullying situations.

Intrapersonal Factors

Affective and cognitive empathy. Traditionally, empathy has been regarded as a cornerstone in motivating prosocial behavior (e.g., Eisenberg, Fabes, & Spinrad, 2006; Hoffman, 2001; Penner, Dovidio, Piliavin, & Schroeder, 2005). Since Feshbach (1978) first proposed empathy as a multidimensional construct, multiple studies have consistently shown that empathy has two main components: cognitive empathy and affective empathy (e.g., Davis, 1994; Hoffman, 2001). *Cognitive empathy* is defined as the capacity to take another person's perspective, while *affective empathy* represents sharing others' emotions and feeling concern or sympathy toward others (Feshbach, 1978). When distinguishing the cognitive and affective components, some studies found that affective, rather than cognitive empathy, was associated with defending behavior (e.g., Barchia & Bussey, 2011; Caravita et al., 2009; Peets, Pöyhönen, Juvonen, & Salmivalli, 2015; Pöyhönen, Juvonen, & Salmivalli, 2010). On the other hand, other studies showed that defending was positively associated with either cognitive empathy or both

types of empathy (e.g., Gini, Albiero, & Benelli, & Altoè, 2007, 2008; Rieffe & Camodeca, 2016; van Noorden, Haselager, Cillessen, & Bukowski, 2015). In terms of gender differences, girls report higher levels of empathy (Eisenberg et al., 1998; Olweus & Endresen, 1998) and tend to display more prosocial behavior than boys (Rose & Rudolph, 2006). In studies examining associations between empathy and willingness to defend the victim, empathy was a critical factor in predicting defending behavior in girls; in contrast, there was no direct association between empathy and defending behavior in boys (Barchia & Bussey, 2011). In one study, adolescent boys showed a positive association between affective empathy and defending behavior, but only if they were well-liked in their peer groups (Caravita et al., 2009). Few studies, however, have compared defenders and outsiders while distinguishing cognitive and affective empathy. One study found that both affective and cognitive empathy were positively correlated with defenders, while only cognitive empathy was positively correlated with outsiders (Gini et al., 2008).

Anti-bullying attitudes. In addition to empathy, the other social-cognitive factor which has been emphasized in defending behaviors in bullying is anti-bullying attitudes (Kärnä et al., 2011). Although most youth display attitudes against bullying and report a willingness to help victimized peers in hypothetical situations (Boulton, Trueman, & Flemington, 2002; Rigby & Johnson, 2006), actual defending behavior is rare (Pepler & Craig, 1995; Pepler, Craig, & O'Connell, 2010). When considering specific participant roles, however, not all students have similar levels of anti-bullying attitudes. Salmivalli and Voeten (2004) found that defender and outsider roles were positively related to anti-bullying attitudes, while the opposite relationships were shown among assistants and reinforcers of bullies. These results suggest that considering only students' attitudes against bullying or toward victims is insufficient for understanding defending behavior.

Responsibility for intervention. Latané & Darley's decision model (1970) showed that when bystanders witness the victims facing danger, the bystanders carry out complex social-cognitive processes until they intervene. Although witnessing the same situation, taking responsibility for interventions plays an important role in whether bystanders are defenders or outsiders (Schroeder, Penner, Dovidio, & Piliavin, 1995). It means that those who feel responsible for helping victims who face difficulties are more likely to help. Accordingly, it can be assumed that one of the reasons some students become defenders and others remain outsider—although they have witnessed bullying situations and have sensibly recognized the situation is serious based on high levels of empathy and anti-bullying attitudes—is significantly affected by whether they take up the responsibility to defend victims or not. Notwithstanding the above, previous literature on defending behavior in bullying has rarely considered this responsibility factor. Only two studies (Pozzoli & Gini, 2010; Pozzoli et al., 2012) found that being a defender was significantly associated with responsibility for intervention, while being an outsider was associated with low levels of such responsibility.

Self-efficacy. Previous bullying literature suggested that the reason why most students are unable to intervene to assist victims in bullying situations despite having high levels of empathetic responses and anti-bullying attitudes can be explained through self-efficacy (Barchia & Bussey, 2011; Cappadocia, Weiss, & Pepler, 2012; Gini et al., 2008; Peets et al., 2015; Pöyhönen et al., 2012). Self-efficacy, defined as the belief in one's capabilities to successfully organize, is considered to be a critical motivator of behavior (Bandura, 1986); it is important for youth to have confidence in their ability to defend the victim successfully. It would, however, be difficult to convince many students that they can successfully intervene because defending victims of bullying within peer groups carries a risk of becoming a future target of bullying

(Thornberg & Jungert, 2013; Thornberg, Tenenbaum, Varjas, Meyers, Jungert, & Vanegas, 2012). Especially for adolescents, whose social needs to belong to a peer group continue to increase, it would be even more difficult to willingly assume such risks. Only a few studies examined associations with self-efficacy by separating defender and outsider behaviors (Gini et al., 2008; Thornberg & Jungert, 2013); defenders were positively associated with self-efficacy, while outsiders were negatively associated with self-efficacy.

Interpersonal Factors

Perceived popularity and peer preference. Since bullies are not only aggressive but also perceived as popular and cool by peers (e.g., Juvonen et al., 2003, Pouwels et al., 2016), defenders may believe that they can successfully intervene only when they have social status at least as high as that of the bullies, which would lead them to engage in defending behaviors. Accordingly, the effect of self-efficacy on defending behavior was moderated by perceived popularity (Pöyhönen et al., 2012). This means that students who had high confidence to intervene successfully were more likely to defend victims when they were perceived to be popular by peers. Moreover, since students who are viewed as exhibiting high levels of prosocial characteristics are preferred by peers, peer preference (i.e., sociometric popularity) is considered another critical construct in addition to perceived popularity (Cillessen & Rose, 2005). Research documenting a positive association between defending behaviors and perceived popularity has been consistent (e.g., Caravita et al., 2009; Peets et al., 2015; Yun & Graham, in press). However, associations between preference (sociometric popularity) and defending behaviors have been inconsistently reported (e.g., Pouwels et al., 2016; Salmivalli et al., 1996b). Despite social status in peer groups being a pivotal element of defending behaviors in bullying, few studies have concurrently investigated both perceived popularity and preference.

Contextual Factors

Not all individuals who have high levels of empathy, anti-bullying attitudes, responsibility, self-efficacy, and high social status in the peer group may be inclined to defend victimized peers. An important but understudied factor is the normativeness of defending and outsider behavior in one's classroom or school. Some studies found that classroom differences, particularly in defending behaviors, could be explained in part by classroom or school climate, such as averages of peers' behaviors or attitudes. (Kärnä, Voeten, Poskiparta, & Salmivalli, 2010; Nocentini, Menesini, & Salmivalli, 2013; Pozzol et al., 2012; Salmivalli, Voeten, & Poskiparta, 2011; Thornberg, Wänström, Hong, & Espelage, 2017; Yun & Graham, in press). This social-ecological framework for bullying came from Bronfenbrenner's (1979) ecological system theory (Barboza et al., 2009; Espelage, 2012). This framework has played an important role in understanding how reciprocal interactions between individual and contextual factors encourage or discourage specific behaviors in bullying situations; the contexts where bullying occurs influence youths' perceptions, attitudes, and behaviors (e.g., Espelage, 2012; Hong & Espelage, 2012; Ladd, 2003; Pellegrini & Long, 2002).

Social learning theory (Bandura, 1986) explained that students learn which behaviors are valued and rewarded in classrooms from observing peers. The contextual cues, which are created by peers and affect students' behaviors in classrooms, coexist in various forms. When considering normative influences on behavior, it has been to generally distinguish between the *is* (descriptive norms) and the *ought* (injunctive norms) meanings, because each refers to a separate origin of human motivation (Cialdini, Reno, & Kallgren, 1990). The descriptive norms refer to what are perceived as typical or normal behaviors; many people within a certain group practice certain behavior, which in turn encourages people to effectively adopt those behaviors. On the

other hand, the injunctive meaning of norms refers to rules or beliefs as to what constitutes *morally* approved and disapproved conduct (Cialdini et al., 1990). Nevertheless, few studies have been conducted to examine defender or outsider behaviors by distinguishing norms as descriptive or injunctive; on the contrary, prior studies have mostly employed a single type of norms (Kärnä et al., 2010; Nocentini et al., 2013; Salmivalli et al., 2011; Thornberg et al., 2017). Only one study (Pozzoli et al., 2012) separated descriptive and injunctive norms to describe the variability of defender and outsider behaviors by classrooms. Specifically, while defending behavior was positively associated with descriptive norms about defending behavior, outsider behavior was negatively associated with both peer injunctive norms and descriptive norms about defending behaviors.

Furthermore, for adolescents, peers play a critical role in motivating prosocial behavior by communicating norms and expectations for behavior valued by the peer groups (Wentzel, 2005), and it is anticipated that peers' expectations during bullying within peer groups will play a significant role in defender and outsider behaviors as additional contextual cues. In line with results showing that adolescents' perceptions that peers' expectations of them to use prosocial behaviors should partly motivate them to do so (Wentzel, Filisetti, & Looney, 2007), Rigby and Johnson (2006) also found that a belief that peers expected them to support the victims was among the most important factors of students' decisions to intervene. Only Pozzoli & Gini (2010) replicated findings showing the impact of peer expectations on defending behavior in bullying situations; defenders were positively associated with peer expectations for intervention, while outsiders were negatively associated with those expectations.

Current Study

In the current study, I refined the definitions of defender and outsider roles and investigated intra- and interpersonal factors predicting membership into these roles. I sought to add to the literature on participant roles in bullying in three key ways. The main goal of this study was to identify the subgroups within overall defender and outsider roles. To refine the definitions of defender and outsider roles, self-ratings modifying Salmivalli's PRQ (1996) were used. I expected the overall defender role to contain two specific subgroups: the *assertive* defender and the *comforting* defender. I also hypothesized that the overall outsider role would consist of two subgroups: the *sympathetic* outsider and the *indifferent* outsider.

A second goal was to investigate the effects of intra- and interpersonal factors on the probability of membership into subgroup roles. I hypothesized that the differences among four roles would be explained by gender, empathy, anti-bullying attitudes, responsibility, and self-efficacy as intrapersonal factors and perceived popularity and likability as interpersonal factors.

Finally, my third goal was to investigate how classroom-level norms strengthen or weaken the associations between intra- and interpersonal factors and the probability of membership into defender and outsider roles. If overall defending behavior (descriptive norms), peers' anti-bullying attitudes (injunctive norms), and peer expectations for intervening in a bullying situation are common in the classroom, students would be expected to have a higher chance of being in the assertive defender role, and a lower chance of being in the sympathetic outsider or indifferent outsider role.

Method

Participants

A subset of students from Study 1, the current sample consisted of 752 Korean middle school students (54.3% girls; 33.0% first graders, 31.5% second graders, and 35.5% third

graders). These students were overall defenders ($n = 334$, 24.3% of students in Study 1; 44.4% of participants in Study 2) or overall outsiders ($n = 418$, 30.4% of students in Study 1; 55.6% of participants in Study 2), identified in Study 1. Students were recruited from 54 classrooms in six schools in Seoul, South Korea.

Measures

In the current analyses, primarily established and well-validated measures from the bullying literature were used. To ensure the precision of the translation, professional translators and bullying experts in South Korea translated the surveys from English to Korean and then back-translated from Korean to English.

New defender and outsider roles (see Appendix D). Students self-reported the likelihood that they engaged in specific kinds of defending and outsider behaviors. This scale in this study was created by modifying the Participant Role Questionnaire (Salmivalli & Voeten, 2004), which used peer ratings, in order to identify the assertive defender, the comforting defender, the sympathetic outsider, and the indifferent outsider. Students answered 13 items and used a 3-point scale (1 = never, 2 = sometimes, 3 = often) to evaluate to what extent they behaved in the manners described in each bullying situation. Three items covered the assertive defender role ($\alpha = .75$), three items covered the comforting defender role ($\alpha = .85$), four items covered the sympathetic outsider role ($\alpha = .88$), and three items covered the indifferent outsider role ($\alpha = .80$). Scores for four subscales were averaged across the respective items.

Anti-bullying attitudes (see Appendix E). A 10-item scale (Salmivalli & Voeten, 2004) was used to assess participants' attitudes towards bullying (e.g., "One should try to help the bullied victims," "Bullying makes the victim feel bad.") on a 5-point scale (1 = strongly disagree,

5 = strongly agree). The higher the average on the students' scores on the 10 items, the more his/her attitudes were against bullying ($\alpha = .78$).

Affective and cognitive empathy (see Appendix F). Affective and cognitive empathy were measured with adolescent self-reports on the empathic concern subscale (EC, $\alpha = .77$; e.g., "I often have tender, concerned feelings for people less fortunate than me.") and perspective taking subscale (PT, $\alpha = .77$; e.g., "I try to look at everybody's side of a disagreement before I make a decision.") of the Interpersonal Reactivity Index (IRI; Davis, 1980). Both subscales were composed of seven items scored on a 5-point rating scale (1 = does not describe me well, 5 = describes me very well). Scores for both subscales were averaged across the respective items, and higher scores reflected greater empathy.

Responsibility (see Appendix G). Responsibility to intervene in favor of the victim was measured through four items ($\alpha = .75$; Pozzoli & Gini, 2010). Students were asked to evaluate how much they agree on a 5-point scale (1 = totally disagree, 5 = totally agree) with descriptions of responsibility (e.g., "Helping classmates who are repeatedly teased, hit, or left out is my responsibility," "It is my responsibility to find a way so that in the classroom nobody is insulted, excluded, or attacked."). The score was created by computing the average across the four items, and higher scores reflected greater responsibility for intervention.

General self-efficacy (see Appendix H). The General Self-Efficacy (GSE) scale was originally developed by Jerusalem and Schwarzer in 1979. Although the original instrument contained 20 items, it was reduced to 10 items (Schwarzer & Jerusalem, 1995). In the current study, students were presented with and answered 10 items ($\alpha = .88$) on a 4-point scale (1 = not at all true, 4 = exactly true) (e.g., "If someone opposes me, I can find means and ways to get what I want," "No matter what comes my way, I'm usually able to handle it."). The score was

created by computing the average across the 10 items, and higher scores reflected greater self-efficacy.

Popularity and likability (see Appendix I). As part of a peer nomination procedure, students were asked to list the names of the students in their classroom who were liked (“Who do you like the most?”), disliked (“Who do you like the least?”), popular (“Who are the most popular?”), and unpopular (“Who are the least popular?”). Students were given a roster of their own classroom, arranged alphabetically by first name. Using the roster, they were advised that they could list as many names as they wanted for these questions, but not their own name. For each question, the number of nominations each participant received was divided by the number of classmates present and standardized to z-scores within classrooms. A likability score was computed by subtracting the standardized number of “liked least” nominations received from the standardized number of “liked most” nominations. A popularity score was computed by subtracting the standardized number of least popular from the standardized number of most popular. To create a metric identical to the one for preference and perceived popularity, the resulting difference score was again standardized by classroom (Cillessen & Mayeux, 2004).

Descriptive norms (see Appendix A). Defending behaviors were measured with the PRQ ($\alpha = .96$; Salmivalli & Voeten, 2004). Students answered with three items describing overall defender roles in bullying situations (i.e., “Tries to make others stop bullying,” “Comforts the victim or encourages him/her to tell the teacher about the bullying,” “Tells others to stop bullying or says that bullying is stupid.”). They were also asked to evaluate on a 3-point scale (1 = never, 2 = sometimes, 3 = often) how often each of their classmates behaved in the ways described. The names of all classmates were printed on the questionnaire. Each student’s peer-evaluated sum score on each scale was divided by the number of classmates. A measure of

descriptive norms was created by averaging the peer-ratings of overall defending behavior scores for each classroom. Each classroom had a descriptive norm created whereby all students' average defending behavior scores were summed and divided by the number of students in the classroom.

Injunctive norms (see Appendix J). Perception of classmates' anti-bullying attitudes was measured with 10 items adopted by Salmivalli and Voeten (2004) (e.g., "My classmates try to help the bullied victims," "My classmates think that making friends with the bullied victim is the right thing to do."). Participants answered the extent to which they agree or disagree using a 5-point response scale (1 = strongly disagree, 5 = strongly agree). Each student's perception of classmates' anti-bullying attitudes was calculated by averaging the students' scores on 10 items ($\alpha = .80$). Then, a classroom-level indicator of anti-bullying attitudes as injunctive norms was created by averaging the individual average score for each classroom.

Peer expectations for intervention (see Appendix K). To assess peer expectations, students were asked how their classmates would expect them to behave when they witnessed bullying episodes (Pozzoli & Gini, 2010; Rigby & Johnson, 2006). Students answered on a 4-point rating scale (1 = not at all, 4 = extremely) to what extent peers expected them to behave in each of the following ways: (1) direct intervention ("intervene to help the victim"); (2) ask for adults' intervention ("apprise an adult of what is happening so that he/she intervenes"); (3) disregard ("do nothing because it's not my business"); and (4) withdrawal for self-protection ("do nothing because I could get into trouble"). Each student's peer expectation for intervention was calculated by averaging the students' scores on four items ($\alpha = .70$). Then, a classroom-level indicator of peer expectation was created by averaging the individual average score of peer expectations for each classroom.

Covariate. Given the organization of instruction in South Korea, the current study focused on classroom-level contextual factors. Data were collected from 54 classrooms in six schools in the city of Seoul. Although classrooms are nested within schools, the choice not to model a three-level analysis was made because the number of schools warranting analysis at the school level was not sufficient (Mass & Hox, 2005). Since Seoul is primarily divided into Gangbuk (“north of the river”) and Gangnam (“south of the river”), schools from Gangbuk and Gangnam were evenly selected. Thus, for this study, school region was controlled. Furthermore, in preliminary analyses, there were no significant main effects or interactions involving grade level. Accordingly, grade level was controlled for in the main analyses and was evenly distributed in our sample (seventh grade: 33.0%; eighth grade: 31.5%; ninth grade: 35.5%). Although there might be a within-person change in defending behavior across these same grades, this variable was not meaningful in our cross-sectional analysis.

Analytic Plan

To test my primary hypotheses, two kinds of analysis were conducted. First, to identify four subgroups of defenders and outsiders, I performed a latent profile analysis (LPA, Asparouhov & Muthen, 2008; Henry & Muthen, 2010; Vermunt, 2008; Vermunt, 2003) using *Mplus* 8 (Muthén & Muthén, 2017). Latent class analysis (LCA) is a mixture modeling technique that has been shown to be superior to traditional cluster analyses in detecting classes (Cleland, Rothschild, & Haslam, 2000; McLachlan & Peel, 2000). LPA is a type of latent variable mixture model with only continuous indicators, rather than categorical indicators. The term latent variable means the latent categorical variable of cluster membership, and the term mixture refers to the notion that the data are not sampled from a single population but from sub-populations. Thus, it assumes that the overall population heterogeneity with respect to a set of indicators

results from the existence of two or more distinct homogeneous subgroups, or latent profiles. Accordingly, for this study I identified the model containing the optimal number of profiles, using criteria outlined by Masyn (2013).

To address my second and third goals, I wanted to see whether intra-, interpersonal, and contextual factors predict membership into each of the profiles identified in the LPA. I conducted a multinomial logistic hierarchical generalized linear model (HGLM) in HLM 7.03 software, which accounts for multinomial outcomes as well as the hierarchical nature of the data (Raudenbush & Bryk, 2002). In the models for the present study, students (Level 1) were nested within classrooms (Level 2). Odds ratios quantifying associations between theoretically related variables and the probability of being in each of the profiles (relative to a reference group) were reported.

The current HGLM analysis has a two-level fixed effects component: (a) intra-/interpersonal factors and (b) classroom-level norms on student membership probability. To motivate the model, we define the following conditional on all covariates β for M roles:

$\varphi_1 = P[\text{Role} = 1 \mid \beta]$ is the probability of being in the *first* role,

$\varphi_2 = P[\text{Role} = 2 \mid \beta]$ is the probability of being in the *second* role,

$\varphi_3 = P[\text{Role} = 3 \mid \beta]$ is the probability of being in the *third* role, and

$\varphi_4 = P[\text{Role} = 4 \mid \beta]$ is the probability of being in the *reference* role.

The sum of all four probabilities should be one (i.e., $\varphi_1 + \varphi_2 + \varphi_3 + \varphi_4 = 1$). The log odds represent the probability of being in the respective roles (i.e., first, second, and third role) relative to the reference role. The logit link function for each category $m, \dots, M-1$ is defined as

$$\eta_m = \log \left(\frac{\varphi_m}{\varphi_M} \right).$$

For this analysis, I examined, (1) the log-odds of being in the first role relative to the reference role ($\eta_1 = \log[\varphi_1/\varphi_4]$); (2) the log-odds of being in the second role relative to the reference role ($\eta_2 = \log[\varphi_2/\varphi_4]$); (3) and the log-odds of being in the third role relative to the reference role ($\eta_3 = \log[\varphi_3/\varphi_4]$). Additionally, the intercepts, $\beta_{0j(1)}$, $\beta_{0j(2)}$, and $\beta_{0j(3)}$ are allowed to vary between classrooms, while the effects of all other variables are fixed across classrooms. All categorical variables were dummy coded (i.e., gender, school region, grade), and all continuous predictor variables (i.e., anti-bullying attitudes, affective empathy, cognitive empathy, self-efficacy, responsibility, perceived popularity, peer preference) were centered at the group mean. In this study, the intercepts, $\beta_{0j(1)}$, $\beta_{0j(2)}$, and $\beta_{0j(3)}$ are allowed to vary from classroom to classroom, while the effects of other Level-1 variables are required to be fixed across classrooms. The intercepts at Level 1 $\beta_{0j(1)}$, $\beta_{0j(2)}$, and $\beta_{0j(3)}$ become the Level 2 dependent variables for classroom level predictors. Descriptive norms about defending behavior, injunctive norms about anti-bullying attitudes, and peer expectations are centered on the grand mean. For $m = 1, 2$, and 3 :

Level-1 Model

$$\log[\varphi_{mij} / \varphi_{4ij}] = \beta_{0j(m)} + \beta_{1j(m)} * (\text{School Region}_{ij}) + \beta_{2j(m)} * (\text{First Grade}_{ij}) + \beta_{3j(m)} * (\text{Second Grade}_{ij}) + \beta_{4j(m)} * (\text{Gender}_{ij}) + \beta_{5j(m)} * (\text{Anti-Bullying Attitudes}_{ij}) + \beta_{6j(m)} * (\text{Affective Empathy}_{ij}) + \beta_{7j(m)} * (\text{Cognitive Empathy}_{ij}) + \beta_{8j(m)} * (\text{Self-Efficacy}_{ij}) + \beta_{9j(m)} * (\text{Responsibility}_{ij}) + \beta_{10j(m)} * (\text{Popularity}_{ij}) + \beta_{11j(m)} * (\text{Likability}_{ij})$$

Level-2 Model

(First Role)

$$\begin{aligned} \beta_{0(1)} &= \gamma_{00(1)} + \gamma_{01(1)} * (\text{Descriptive Norms}_j) + \gamma_{02(1)} * (\text{Injunctive Norms}_j) + \gamma_{03(1)} * (\text{Peer Expectations}_j) + u_{0j(1)} \\ \beta_{1(1)} &= \gamma_{10(1)} \\ \beta_{2(1)} &= \gamma_{20(1)} \\ \beta_{3(1)} &= \gamma_{30(1)} \\ \beta_{4(1)} &= \gamma_{40(1)} \\ \beta_{5(1)} &= \gamma_{50(1)} \\ \beta_{6(1)} &= \gamma_{60(1)} \end{aligned}$$

$$\begin{aligned}\beta_{7(1)} &= \gamma_{70(1)} \\ \beta_{8(1)} &= \gamma_{80(1)} \\ \beta_{9(1)} &= \gamma_{90(1)} \\ \beta_{10(1)} &= \gamma_{100(1)} \\ \beta_{11(1)} &= \gamma_{110(1)}\end{aligned}$$

(Second Role)

$$\begin{aligned}\beta_{0(2)} &= \gamma_{00(2)} + \gamma_{01(2)}*(Descriptive Norms_j) + \gamma_{02(2)}*(Injunctive Norms_j) + \gamma_{03(2)}*(Peer Expectations_j) + u_{0j(2)} \\ \beta_{1(2)} &= \gamma_{10(2)} \\ \beta_{2(2)} &= \gamma_{20(2)} \\ \beta_{3(2)} &= \gamma_{30(2)} \\ \beta_{4(2)} &= \gamma_{40(2)} \\ \beta_{5(2)} &= \gamma_{50(2)} \\ \beta_{6(2)} &= \gamma_{60(2)} \\ \beta_{7(2)} &= \gamma_{70(2)} \\ \beta_{8(2)} &= \gamma_{80(2)} \\ \beta_{9(2)} &= \gamma_{90(2)} \\ \beta_{10(2)} &= \gamma_{100(2)} \\ \beta_{11(2)} &= \gamma_{110(2)}\end{aligned}$$

(Third Role)

$$\begin{aligned}\beta_{0(3)} &= \gamma_{00(3)} + \gamma_{01(3)}*(Descriptive Norms_j) + \gamma_{02(3)}*(Injunctive Norms_j) + \gamma_{03(3)}*(Peer Expectations_j) + u_{0j(3)} \\ \beta_{1(3)} &= \gamma_{10(3)} \\ \beta_{2(3)} &= \gamma_{20(3)} \\ \beta_{3(3)} &= \gamma_{30(3)} \\ \beta_{4(3)} &= \gamma_{40(3)} \\ \beta_{5(3)} &= \gamma_{50(3)} \\ \beta_{6(3)} &= \gamma_{60(3)} \\ \beta_{7(3)} &= \gamma_{70(3)} \\ \beta_{8(3)} &= \gamma_{80(3)} \\ \beta_{9(3)} &= \gamma_{90(3)} \\ \beta_{10(3)} &= \gamma_{100(3)} \\ \beta_{11(3)} &= \gamma_{110(3)}\end{aligned}$$

The proportion of missing data in Study 2 ranged from 0% to 0.4% on predictors and covariates, and from 0% to 0.2% on 13 items for four indicator variables. Missing data were handled via listwise deletion at the first level according to HLM protocol.

Results

Descriptive Statistics

A confirmatory factor analysis was conducted using *Mplus 8* (Muthén & Muthén, 2017) to assess the adequacy of the multidimensional structure of the scale for defender and outsider roles. Model fit was assessed using the Comparative Fit Index (CFI), Tucker Lewis Fit Index

(TLI), Standardized Root Mean Square Residual (SRMR) and Root Mean Square Error of Approximation (RMSEA). In this study, the χ^2 statistic is not used as an indicator of goodness of fit due to its sensitivity to sample size that renders it likely to reject models using large samples (Hooper, Coughlan, & Mullen, 2008). Goodness of fit is established when CFI and TLI values are above .95, when RMSEA values are below .05, and when SRMR is less than .08 (Hu & Bentler, 1999). The model with four multidimensional structures showed good fit to Study 2 data: $\chi^2(48) = 127.95$, $p < .001$; CFI = .97; TLI = .96; RMSEA = .04; SRMR = .03. The standardized item loadings ranged between .59 and .84 (see Table 1).

Moreover, the means, standard deviations (*SD*), and correlation coefficients for the four scales separated by gender are presented in Table 2. Boys scored significantly higher than girls in BO_S (bully-oriented defending behavior scale) ($t(749) = 3.83$, $p < .001$), while girls showed significantly higher scores in PO_S (pro-victim outsider scale) ($t(744) = -3.23$, $p < .01$). Boys and girls showed positive associations between BO_S (bully-oriented defending behavior scale) and VO_S (victim-oriented defending scale) scores. For both boys and girls, these BO_S (bully-oriented defending behavior scale) and VO_S (victim-oriented defending scale) scores were also negatively correlated with PO_S (pro-victim outsider scale) and IO_S (indifferent outsider scale) scores. Moreover, the PO_S (pro-victim outsider scale) and IO_S (indifferent outsider scale) scores were positively associated.

Latent Profile Analysis

Class Enumeration. To assess the optimal number of classes, the class enumeration process based on Maysn (2013, see Appendix L) was followed for one up to five classes (see Table 3) which recommends looking at nine indices of fit: Log-Likelihood (LL), Akaike Information Criterion (AIC), Consistent Akaike Information Criterion (CAIC), Bayesian

Information Criterion (BIC), Sample-size adjusted BIC (saBIC), Approximate Weight of Evidence (AWE), p -value of the adjusted Lo-Mendell-Rubin likelihood ratio test (LMR), p -value of the parametric bootstrapped likelihood ratio test (BLRT), and entropy. Starting from the one-class and going up to the five-class solution resulted in consecutively decreasing information criterion values for AIC, CAIC, BIC, saBIC and AWE. However, LMR p -values revealed that the four-class solution fit significantly better than the three-class solution ($p < .001$); and the five-class solution was not significantly better than the four-class solution ($p = .961$). Furthermore, the entropy value for the four-class solution was .90 (the closer to one the better), and suggests that the classification accuracy of the four-class solution with class-invariant unrestricted covariance structure was the best among all classes. Considering all the factors above, the four-class solution was selected as the optimal unconditional latent profile model (see Figure 1).

Model Interpretation. To assign labels for each of the classes, I began with Class 1 which had the most separation from the other three classes. Class 1 comprised 3.8% of the total number of participants, and consisted of individuals with higher scores on the IO_S (indifferent outsider behavior scale) and PO_S (pro-victim outsider behavior scale) indicators compared to the overall mean. This group had the highest average values on IO_S (indifferent outsider behavior scale) with the lowest values on BO_S (bully-oriented defending behavior scale) and VO_S (victim-oriented defending behavior scale), which resulted in Class 1 being labeled the “*indifferent outsider role*.” Class 2, which made up 9.9% of the total sample, was another well-separated class and consisted of individuals with higher scores on the BO_S (bully-oriented defending behavior scale) and VO_S (victim-oriented defending behavior scale) indicators compared to the overall mean. This group had the highest average values on both BO_S (bully-

oriented defending behavior scale) and VO_S (victim-oriented defending behavior scale) scales with the lowest values on PO_S (pro-victim outsider scale) and IO_S (indifferent outsider scale), which resulted in Class 2 being labeled the “*assertive defender role*.” Class 3 made up 53.4% and the largest proportion among the four classes. This group had higher mean values on VO_S (victim-oriented defending behavior scale) and lower mean values on BO_S (bully-oriented defending behavior scale), PO_S (pro-victim outsider scale), and IO_S (indifferent outsider scale). As a result, I labeled this class the “*comforting defender role*.” Class 4 comprised 32.9%, of the total sample and consisted of individuals with higher mean values on PO_S (pro-victim outsider scale) and IO_S (indifferent outsider scale), and lower mean values on BO_S (bully-oriented defending behavior scale) and VO_S (victim-oriented defending behavior scale). Compared to Class 1 (the indifferent outsider role), their means on the PO_S (pro-victim outsider scale) indicator were similar, but Class 4 displayed much lower scores on the IO_S (indifferent outsider scale) indicator. For this reason, I labeled Class 4 the “*sympathetic outsider role*.”

The Three Steps of the Hierarchical Generalized Linear Model (HGLM)

Step 1. The Unconditional Model. Since the goal is to predict membership into each of the four classes, a set of hierarchical multinomial logistic regressions were run in HLM version 7.03. For all models, the Comforting Defender role was chosen as the baseline category. Based on guidelines of Raudenbush and Bryk (1992), the log-odds for a certain Role m is defined as:

$$\eta_{mij} = \log(\text{Probability}(\text{Role} = m)) - \log(\text{Probability}(\text{Role} = \text{Comforting Defender})),$$

which helps to interpret a positive log-odds as higher probability of being in Role m and a negative log-odds as lower probability of being in Role m compared to the probability of being in the Comforting Defender role.

As the baseline model, an unconditional model with no predictors (the intercept-only

model) estimated the extent of between-classroom variation on the three outcomes: η_{1ij} , the log-odds of being in the assertive defender role (relative to comforting defender role), η_{2ij} , the log-odds of being in the sympathetic outsider role (relative to comforting defender role), and η_{3ij} , the log-odds of being in the indifferent outsider role (relative to comforting defender role). At the student level (Level 1), the equations are follows,

$$\eta_{1ij} = \beta_{oj(1)},$$

$$\eta_{2ij} = \beta_{oj(2)},$$

$$\eta_{3ij} = \beta_{oj(3)}.$$

For the unconditional model, each intercept or $\beta_{oj(m)}$ term corresponds to the average log-odds of being in each of the roles. At the classroom level (Level 2), the classroom-specific intercepts were allowed to vary randomly over classrooms:

$$\beta_{oj(1)} = \gamma_{00(1)} + u_{oj(1)},$$

$$\beta_{oj(2)} = \gamma_{00(2)} + u_{oj(2)},$$

$$\beta_{oj(3)} = \gamma_{00(3)} + u_{oj(3)},$$

$$\begin{pmatrix} u_{oj(1)} \\ u_{oj(2)} \\ u_{oj(3)} \end{pmatrix} \sim N \left[\begin{pmatrix} 0 \\ 0 \\ 0 \end{pmatrix}, \begin{pmatrix} \tau_{00(1)00(1)} & & \\ \tau_{00(2)00(1)} & \tau_{00(2)00(2)} & \\ \tau_{00(3)00(1)} & \tau_{00(3)00(2)} & \tau_{00(3)00(3)} \end{pmatrix} \right]$$

As shown in Table 5, all log-odds of being in the assertive defender, sympathetic outsider, and indifferent outsider roles are negative, which suggests that students are more likely to be in the comforting defender role ($\hat{\gamma}_{00(1)} = -1.96, <0.001$; $\hat{\gamma}_{00(1)} = -0.51, <0.001$; $\hat{\gamma}_{00(1)} = -2.82, <0.001$), which is consistent with the descriptive analysis. Moreover, there is statistically significant variation between classrooms in the log-odds of being in the sympathetic outsider role (relative to comforting defender role), $\tau_{00(1)00(1)} = 0.16, \chi^2 = 75.95, p\text{-value} < .05$. However,

there is less evidence of variation across classrooms in the log-odds of assertive defender and indifferent outsider roles relative to the comforting defender role.

Step 2. Conditional Model: Effects of Individual-level Covariates. To examine the contributions of individual specific characteristics on the log-odds of membership into the four roles, I added gender, grade, anti-bullying attitudes, affective empathy, cognitive empathy, self-efficacy, responsibility, perceived popularity, and peer preference as intra-/interpersonal factors, controlling for school region (northern versus southern Seoul). Following Bryk and Raudenbush's recommendations (1992), anti-bullying attitudes, affective empathy, cognitive empathy, self-efficacy, responsibility, perceived popularity, and peer preference were centered around the group mean to yield more accurate interpretation of the intercepts, while school region, gender, and grade were dummy coded (school region: southern = 0; gender: male = 0; grade: two dummy variables first grade and second grade, while third grade was omitted to serve as the reference group). Table 6 represents the coefficient estimates in log-odds from the hierarchical multinomial logistic analyses, controlling for classroom-level effects.

I turn first to intrapersonal factors. The results suggest that for a one-unit increase in anti-bullying attitudes, the log odds of being sympathetic outsiders and indifferent outsiders is decreased by 1.36 (odds ratio $[OR] = 0.26, p < .001$) and 2.77 ($OR = 0.06, p = 0.06$), respectively. That is, students with higher anti-bullying attitudes had a lower chance of belonging to sympathetic or indifferent outsider roles relative to the comforting defender role. For a one-unit increase in responsibility for intervention, the log odds of being in the assertive defender role increased by 0.85 ($OR = 2.34, p < .01$), and log-odds of being in the sympathetic and indifferent outsider roles decreased by 0.44 ($OR = 0.65, p < .01$) and 1.63 ($OR = 0.20, p < .01$) respectively, relative to being in the comforting defender role.

Turning next to interpersonal factors, Table 6 shows that a one-unit increase in peer preference decreased the log-odds of being in the indifferent outsider role and the assertive defender role by 0.63 ($OR = 0.53, p < .001$) and 0.57 ($OR = 0.56, p < .05$) respectively. For assertive defenders, a one-unit increase in self-efficacy and perceived popularity increased the log odds by 1.06 ($OR = 2.90, p < .01$) and 0.41 ($OR = 1.51, p < .05$) respectively. Unexpectedly, there was no gender effect on the log-odds of membership into the four roles.

Step 3. Effects of Individual- and Classroom-level Covariates. In the final step, to estimate the combined effects of student and classroom characteristics on the log-odds of membership into each of the roles, I added grand mean centered classroom-level covariates on top of the model in Step 2. Classroom norms (i.e., descriptive norms about defending behavior, injunctive norms about anti-bullying attitudes, and peer expectations for intervening) had differential effects on each of the defender and outsider roles as shown in Table 7. The results indicate that, controlling for student-level covariates, a one-unit increase in the average of peer expectation for intervening in the bullying situation, significantly decreased the log odds of being sympathetic outsiders and indifferent outsiders (relative to comforting defenders) by 1.86 ($OR = 0.16, p < 0.01$) and 4.60 ($OR = 0.01, p < 0.05$), respectively. That is, students in classrooms with higher peer expectation for intervening in a bully situation had lower log-odds of being sympathetic outsiders and indifferent outsiders, compared to comforting defenders. Furthermore, for a one-unit increase in the average of injunctive norms about anti-bullying attitudes in the classroom, the log odds of being sympathetic outsiders significantly decreased by 2.29 ($OR = 0.10, p < 0.01$) relative to comforting defenders. Students who were in classrooms with higher average anti-bullying attitudes (injunctive norms) had lower log-odds of being sympathetic outsiders and indifferent outsiders, compared to comforting defenders. There was no effect of

descriptive norms about defending behaviors on defender or outsider roles. Furthermore, no contextual factors were associated with membership in the assertive defender role, which was unexpected.

Discussion

This study examined heterogeneity of defender and outsider roles among South Korean middle school students in bullying situations and how these specific roles are associated with intrapersonal, interpersonal, and contextual factors. In this study, the traditionally defined defender and outsider roles were further refined by modifying measures that have been used for the past 20 years to better understand defender and outsider roles in actual school bullying situations. As I expected, the overall defender role was disaggregated as assertive defender and comforting defender roles, while overall outsider roles were decomposed as sympathetic outsider and indifferent outsider roles. Specifically, comforting defenders, representing 53.4 % of overall defenders and outsiders identified in Study 1, tended to support victims, but not confront bullies. On the other hand, assertive defenders (10%), who were capable of directly confronting bullies, also reported a high level of comforting victim behaviors. These two roles reported a notably low level of outsider behaviors.

Like overall defenders, two subgroups of overall outsiders were identified, sympathetic- and indifferent outsiders. Indifferent outsiders (accounting for 3.8% of overall defenders and outsiders) generally showed a low tendency to become defenders and instead strongly tended to believe either bullying has nothing to do with them or victims are also responsible for bullying. Sympathetic outsiders may appear to have relatively unclear tendencies; despite high levels of sympathy with victims, victim-oriented defending behaviors were lower than for either defender group.

To further look into distinctive attributes of the four subgroups, I first examined differences among these groups by using intrapersonal factors found from the previous studies focused on general defending behaviors. Since the comforting defender role represents the highest proportions among the four roles, the comforting defender role was selected as a reference group and compared to a group composed of assertive defender, sympathetic outsider, and indifferent outsider roles. Previous studies examining why defenders and outsiders assume different roles under bullying situations, despite their similar levels of empathy and anti-bullying attitudes, documented several reasons, including self-efficacy (e.g., Gini et al., 2008; Thornberg & Jungert, 2013), responsibility (e.g., Pozzoli & Gini, 2010; Pozzoli et al., 2012), or perceived popularity (e.g., Peets et al., 2015; Pöyhönen et al., 2012). Inconsistent with previous studies, however, when I further subdivided defender and outsider roles and compared assertive defenders, sympathetic outsiders, and indifferent outsiders to comforting defenders, their affective empathy and anti-bullying attitudes were not similar to each other. Specifically, in order to engage in bully-confronting defending behaviors in bullying situations (referred to as assertive defender) rather than remaining in a victim-comforting role, students need to possess the sense of responsibility for resolving the conflict and the confidence that they can take care of the bullying situation.

This raises the question of what factors make students remain passive bystanders without even trying to comfort victims in bullying situations. Both sympathetic and indifferent outsiders displayed lower levels of anti-bullying attitudes and the sense of responsibility than comforting defenders. Consistent with Pozzoli and Gini's (2012) model, adopting Latané and Darley's (1970) model, the current study found that complex social-cognitive factors are required to defend victims in the bullying situation. Given that social behavior can be influenced by an

individual's perception of the situation (Fazio, 1990; Pozzoli & Gini, 2012), high levels of anti-bullying attitudes may be required in order for individuals to become aware that bullying represents a dangerous situation. In addition to awareness, a decision needs to be made regarding whether intervention is his/her own responsibility or not. Having anti-bullying attitudes and a sense of responsibility may play a role to distinguish between comforting defenders and outsiders (i.e., sympathetic and indifferent outsiders).

Further differentiating defender roles, confronting bullies may increase the real or perceived risk of making the defender a future target of bullying, meaning that assertive defenders must have additional motivation in order to intervene in this more direct way. In addition to feeling a higher level of responsibility and strong self-confidence that they are capable of completing successful intervention, assertive defenders were more likely to have a higher level of affective empathy than comforting defenders. Thus, it may be that students become assertive defenders, rather than staying comforting defenders, because they are compelled to express their *empathic anger* against bullies by empathizing more with the distress of victims under bullying situations (Hoffman, 2000).

In addition to intrapersonal factors, assertive defenders were more likely to be perceived as popular, but less likely to be preferred by peers, compared to comforting defenders. Assertive defenders who directly confront bullies may need to have a reputation as popular comparable to that of bullies in order to make the choice of direct intervention, because they have to take greater risks than comforting defenders. Counterintuitively, as likability is negatively associated with perceived popularity (Parkhurst, & Hopmeyer, 1998), assertive defenders may be less liked by peers than comforting defenders, despite their direct interventions in bullying situations. Furthermore, the difference between sympathetic outsiders and indifferent outsiders was

explained by peer liking. Although sympathetic outsiders and comforting defenders were deemed similarly likable by peers, indifferent outsiders were less liked relative to comforting defenders. Previous studies found that students who were neglected or rejected by peers were less likely to engage in prosocial behaviors (Coie & Dodge, 1988; Wentzel, 2003). Considering the fact that friends can be important socializers of prosocial behavior (Barry & Wentzel, 2006), it is possible for indifferent outsiders to become more indifferent to classroom bullying due to their lack of peer affiliations. On the other hand, their indifferent attitudes toward victimization may cause them to be more disliked by their peers.

As these four participant roles in bullying are generated from interactions with peers in the classroom, intra-/inter-personal factors may not be enough to fully explain these four roles. Thus, in the current study, I assumed that a variety of contextual cues do exist within classrooms, and I investigated how three types of contextual factors (i.e., descriptive norms about defending behavior, injunctive norms about anti-bullying attitudes, and peer expectations) were differently associated with those four roles. While descriptive norms about defending behavior were not associated with any roles, injunctive norms about anti-bullying attitudes were negatively associated with only sympathetic outsider roles. Students in classrooms in which the average perceived level of peers' anti-bullying attitudes was high were less likely to be sympathetic outsiders compared to comforting defender. Given these results, students do not simply imitate behaviors of peers in bullying situations; instead, their participant roles may change depending on the peer-developed classroom moral climate regarding bullying. The result that the sympathetic outsider roles were associated only with perceptions of peers' beliefs can be partially explained by stating that it is because injunctive norms are closely associated with the interpersonal goal of gaining or maintaining social approval (Jacobson, Moretensen, & Cialdini,

2011). It is anticipated that sympathetic outsiders would have higher peer acceptance than either assertive defenders or indifferent outsiders, and would be more sensitive to peers' attitudes or moral approval. Accordingly, in the current study, being a member of the sympathetic outsider role showed high variability between classrooms.

Additionally, peer expectation for intervention in bullying situations was negatively associated with indifferent outsider as well as sympathetic outsider roles. Students who were in the classrooms with a high level of peer expectation for intervention were less likely to be in the sympathetic outsider and indifferent outsider role. Consistent with previous studies (Pozzoli & Gini, 2010; Rigby & Johnson, 2006), the current study also found that outsider behaviors are closely related to peer expectation. The finding that students were less likely to be in outsider roles when peers expected them to intervene indicated that peers play a critical role in motivating prosocial behaviors. The results showing that outsiders' behaviors might be changed by classroom contextual factors underscores again that anti-bullying interventions need social-ecological approaches targeting whole classrooms or schools.

In conclusion, to comprehend defending behavior, it is necessary to understand both defender and outsider roles; what makes some children stick up for the victim or remain uninvolved, and how do they use their skills in prosocial ways to combat bullying. First, I refined the traditionally defined defender and outsider roles by modifying measures that have been used for the past 20 years. Then, taking a multilevel approach, I examined intrapersonal, interpersonal, and contextual factors associated with subtypes of defender and outsider roles simultaneously. At the individual level, students who had high level of affective empathy, responsibility for intervention, and self-efficacy were more likely to be assertive defenders, relative to comforting defenders. Furthermore, assertive defenders were more perceived as popular, but less liked by

peers, than comforting defenders. On the other hand, students who had low level of responsibility and anti-bullying attitudes were more likely to be both sympathetic and indifferent outsiders. However, indifferent outsiders lacked peer affiliation, relative to comforting defenders. In addition to individual characteristics, the likelihood to be in either sympathetic- or indifferent outsider roles lessened when students resided in classrooms where peers' prosocial norms were high.

Table 1

Descriptive statistics and confirmatory factor analysis

Items	N	M	Variance	Standardized Factor Loadings			
				BO_S	VO_S	PO_S	IO_S
1. Attacks the bully in order to defend the victim (BO_S)	751	0.334	0.276	.842			
2. Calls the bullies names in order to defend the victim (BO_S)	751	0.533	0.414	.736			
3. Take revenge on the bully for the victim (BO_S)	751	0.258	0.200	.716			
4. Says to the victim: Don't care about them (VO_S)	751	0.858	0.506		.724		
5. Comforts the victim afterwards (VO_S)	752	0.919	0.444		.884		
6. Stays with the victim during the breaks (VO_S)	752	0.594	0.438		.733		
7. Although I feel sorry for the victim, I avoid the bullying situation because I think the teacher will help the victim (PO_S)	750	0.675	0.441			.719	
8. I know bullying is bad, but I don't get involved because I am afraid to get hurt by bullies myself (PO_S)	750	0.624	0.472			.778	
9. I want to help the victims, but I don't think there is anything I can really do to help (PO_S)	750	0.641	0.475			.758	
10. Although I feel sorry for the victim, I avoid the bullying situation, because I think victims' friends will intervene (PO_S)	751	0.763	0.492			.830	
11. I ignore the bullying because it's none of my business (IO_S)	752	0.533	0.435				.738
12. I do not get involved in bullying situations because I do not think bullying is a serious problem (IO_S)	749	0.351	0.303				.814
13. I do not get involved in bullying, because victims have reasons for that (IO_S)	751	0.457	0.376				.787

Table 1 (continued)

Factors	Cronbach's alpha	Correlation between factors			
		BO_S	VO_S	PO_S	IO_S
BO_S	.800	1			
VO_S	.861	.504***	1		
PO_S	.916	-.251**	-.181**	1	
IO_S	.847	-1.80**	-.278**	.538**	1

Note. BO_S = bully-oriented defending behavior scale, VO_S = victim-oriented defending behavior scale, PO_S = Pro-victim outsider behavior scale, IO_S = Indifferent Outsider behavior scale.

Table 2

Correlations, Mean, and Standard Deviation Among Study Variables for Student-Level Models separated by Gender

Boys (<i>N</i> = 343)				
Variables	1	2	3	4
1. BO_S	1			
2. VO_S	.573**	1		
3. PO_S	-.244**	-.203**	1	
4. IO_S	-.198**	-.288**	.520**	1
<i>Mean</i>	0.365	0.765	0.605	0.458
<i>Standard Deviation</i>	0.389	0.559	0.549	0.494
Girls (<i>N</i> = 408)				
Variables	1	2	3	4
1. BO_S	1			
2. VO_S	.487**	1		
3. PO_S	-.267**	-.230**	1	
4. IO_S	-.155**	-.279**	.548**	1
<i>Mean</i>	0.274	0.811	0.735	0.437
<i>Standard Deviation</i>	0.354	0.571	0.546	0.479

Note: BO_S = bully-oriented defending behavior scale, VO_S = victim-oriented defending behavior scale, PO_S = pro-victim outsider behavior scale, IO_S = indifferent outsider behavior scale. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 3

Model Fit Indices for Exploratory Latent Profile Analysis for 1 - 5 Classes.

Number of classes (K)	LL	npars	AIC	CAIC	BIC	saBIC	AWE	<i>p</i> -value of LMRT	<i>p</i> -value of BLRT	Entropy
1	-1807.127	14	3642.25	3720.97	3706.97	3662.52	3841.69			
2	-1733.484	19	3504.97	3611.80	3592.80	3532.47	3775.63	0.06	<.001	0.826
3	-1654.48	24	3356.96	3491.91	3467.91	3391.70	3698.85	<.001	<.001	0.925
4	-1611.89	29	3281.78	3444.84	3415.84	3323.75	3694.90	<.01	<.001	0.900
5	-1504.422	34	3076.84	3268.02	3234.02	3126.05	3561.19	0.18	-	0.961

Note: LL = Log-Likelihood, npars = number of parameters, AIC = Akaike Information Criterion, CAIC = Consistent Akaike Information Criterion, BIC = Bayesian Information Criterion, saBIC = Sample-size adjusted BIC, AWE = Approximate Weight of Evidence Criterion, LMR = the adjusted Lo-Mendell-Rubin likelihood ratio test, BLRT = the parametric bootstrapped likelihood ratio test. * $p < .05$; ** $p < .01$; *** $p < .00$

Table 4

Correlations, Mean, and Standard Deviation Among Study Variables for Student-and Classroom-Level Models

Variables	1	2	3	4	5	6	7	8	9	10
Student- Level Characteristics										
1. Anti-bullying Attitudes	1									
2. Affective Empathy	.478**	1								
3. Cognitive Empathy	.492**	.569**	1							
4. Self-Efficacy	.161**	.288**	.380**	1						
5. Responsibility	.496**	.497**	.461**	.338**	1					
6. Perceived Popularity	-.074*	.178**	.104**	.168**	.160**	1				
7. Peer Preference	-.044	.155**	.106**	.102*	.095**	.533**	1			
Classroom-Level Characteristics										
8. Descriptive Norms	.108**	.049	.029	.018	.107**	-.013	-.012	1		
9. Injunctive Norms	.260**	.224**	.149**	.135**	.202**	.029	-.019	.533**	1	
10. Peer Expectations	.175**	.153**	.077**	.086*	.172*	-.016	-.009	.561**	.574**	1
<i>Mean</i>	4.112	3.840	3.681	2.787	3.370	.002	.254	.0211	4.031	2.593
<i>Standard Deviation</i>	.534	.607	.605	.493	.726	.816	.687	.633	.158	.148

Note. * $p < .05$ ** $p < .01$ *** $p < .001$.

Table 5

Hierarchical Multinomial Logistic Regression Unconditional Model (Step 1)

Fixed Effect	<i>Coeff.</i>	SE	OR	t	df	<i>p</i> -value
Assertive Defender Role	-1.96	0.15	0.14	-13.08	53	<.001
Sympathetic Outsider Role	-0.51	0.10	0.60	-5.19	53	<.001
Indifferent Outsider Role	-2.82	0.24	0.06	-11.98	53	<.001
Random Effects	Variance		df	Chi-square		<i>p</i> -value
Assertive Defender Role	0.13		53	55.29		0.388
Sympathetic Outsider Role	0.16		53	75.95		<.001
Indifferent Outsider Role	0.70		53	59.69		0.245

Note. *Coeff.* = Coefficient. *SE* = Standard error.

Table 6

Hierarchical Multinomial Logistic Regression Analyses Linking Profile Membership with Student-Level Characteristics (Step 2)

	Assertive Defenders versus Comforting Defenders				Sympathetic Outsiders versus Comforting Defenders				Indifferent Outsiders versus Comforting Defenders			
	<i>Coeff.</i>	<i>S.E.</i>	<i>p</i> - value	OR	<i>Coeff.</i>	<i>S.E.</i>	<i>p</i> - value	OR	<i>Coeff.</i>	<i>S.E.</i>	<i>p</i> - value	OR
Intercept	-2.14	0.37	< .001	0.12	0.63	0.23	<0.001	0.54	-4.03	0.62	< .001	0.02
School Region	-0.50	0.30	0.099	0.61	0.24	0.22	0.287	1.27	0.04	0.47	0.939	1.04
First Grade	0.55	0.34	0.110	1.73	-0.13	0.30	0.674	0.88	0.01	0.67	0.983	1.01
Second Grade	-0.43	0.42	0.308	0.65	0.05	0.25	0.851	1.05	-0.25	0.61	0.684	0.78
Gender	-0.28	0.31	0.363	0.76	-0.11	0.16	0.486	0.90	0.29	0.47	0.535	1.34
Anti-bullying Attitudes	-0.41	0.46	0.372	0.67	-1.36	0.22	< .001	0.26	-2.77	0.50	< .001	0.06
Affective Empathy	0.89	0.41	< .05	2.44	0.08	0.19	0.662	1.09	-0.36	0.44	0.414	0.70

Note. *Coeff.* = Coefficient; *S.E.* = standard error; OR = odds ratio; School Region: southern of Seoul = 0 and northern of Seoul = 1; Gender: male = 0 and female = 1; Comforting Defender is the reference group. All values are unstandardized estimates. * $p < .05$; ** $p < .01$; *** $p < .00$

Table 6 (continued)

Hierarchical Multinomial Logistic Regression Analyses Linking Profile Membership with Student-Level Characteristics (Step 2)

	Assertive Defenders versus Comforting Defenders				Sympathetic Outsiders versus Comforting Defenders				Indifferent Outsiders versus Comforting Defenders			
	<i>Coeff.</i>	<i>S.E.</i>	<i>p</i> - value	OR	<i>Coeff.</i>	<i>S.E.</i>	<i>p</i> - value	OR	<i>Coeff.</i>	<i>S.E.</i>	<i>p</i> - value	OR
Cognitive Empathy	-0.12	0.37	0.738	0.88	-0.27	0.18	0.13	0.76	0.19	0.45	0.672	1.21
Self-Efficacy	1.06	0.39	< .01	2.90	-0.06	0.23	0.783	0.94	0.63	0.50	0.208	1.87
Responsibility	0.85	0.32	< .01	2.34	-0.44	0.16	< .01	0.65	-1.63	0.60	< .01	0.20
Perceived Popularity	0.41	0.22	< .05	1.51	0.03	0.15	0.859	1.03	-0.09	0.30	0.770	0.92
Peer Preference	-0.57	0.25	< .05	0.56	-0.12	0.14	0.415	0.89	-0.63	0.38	< .05	0.53

Note. *Coeff.* = Coefficient; *S.E.* = standard error; OR = odds ratio; School Region: southern of Seoul = 0 and northern of Seoul = 1; Gender: male = 0 and female = 1; Comforting Defender is the reference group. All values are unstandardized estimates. * $p < .05$; ** $p < .01$; *** $p < .00$

Table 7

Hierarchical Multinomial Logistic Regression Analyses Linking Profile Membership with Student-and Classroom-Level Characteristics (Step 3)

	Assertive Defenders versus Comforting Defenders				Sympathetic Outsiders versus Comforting Defenders				Indifferent Outsiders versus Comforting Defenders			
	<i>Coeff.</i>	<i>S.E.</i>	<i>p</i> -value	OR	<i>Coeff.</i>	<i>S.E.</i>	<i>p</i> -value	OR	<i>Coeff.</i>	<i>S.E.</i>	<i>p</i> -value	OR
Intercept	-2.16	0.39	< .001	0.12	-0.51	0.22	< .05	0.60	-4.14	0.70	< .001	0.20
Descriptive Norms (Defending Behavior)	0.51	0.30	0.093	1.67	0.48	0.20	.658	1.61	-0.11	0.55	0.836	0.89
Injunctive Norms (Anti-Bullying Attitudes)	-0.98	1.29	0.455	0.38	-2.29	0.80	< .01	0.10	-0.68	2.09	0.748	0.51
Peer Expectation	-0.01	1.07	0.992	1.00	-1.86	0.69	< .01	0.16	-4.60	1.79	< .05	0.01
School Region	-0.51	0.32	0.109	0.60	0.14	0.20	0.495	1.15	0.21	0.56	0.705	1.24
First Grade	0.51	0.36	0.159	1.66	-0.10	0.24	0.681	0.91	0.04	0.66	0.948	1.04
Second Grade	-0.35	0.45	0.431	0.70	-0.09	0.25	0.710	0.91	-0.71	0.68	0.296	0.49

Note. *Coeff.* = Coefficient; *S.E.* = standard error; OR = odds ratio; School Region: southern of Seoul = 0 and northern of Seoul = 1; Gender: male = 0 and female = 1; Comforting Defender is the reference group. All values are unstandardized estimates. * $p < .05$; ** $p < .01$; *** $p < .001$

Table 7 (continued)

Hierarchical Multinomial Logistic Regression Analyses Linking Profile Membership with Student-and Classroom-Level Characteristics (Step 3)

	Assertive Defenders versus Comforting Defenders				Sympathetic Outsiders versus Comforting Defenders				Indifferent Outsiders versus Comforting Defenders			
	<i>Coeff.</i>	<i>S.E.</i>	<i>p</i> -value	OR	<i>Coeff.</i>	<i>S.E.</i>	<i>p</i> -value	OR	<i>Coeff.</i>	<i>S.E.</i>	<i>p</i> -value	OR
Gender	-0.29	0.31	0.361	0.75	-0.15	0.19	0.416	0.86	0.34	0.49	0.487	1.41
Anti-bullying Attitudes	-0.40	0.40	0.316	0.67	-1.43	0.22	< .001	0.24	-2.93	0.59	< .001	0.05
Affective Empathy	0.83	0.39	< .05	2.29	0.11	0.20	0.584	1.12	-0.40	0.48	0.412	0.67
Cognitive Empathy	-0.12	0.35	0.742	0.89	-0.26	0.21	0.216	0.77	0.09	0.47	0.855	1.09
Self-Efficacy	1.09	0.39	< .01	2.97	-0.03	0.21	0.896	0.97	0.36	0.49	0.460	1.43
Responsibility	0.909	0.34	< .01	2.46	-0.43	0.18	< .05	0.65	-1.50	0.48	< .01	0.22
Perceived Popularity	0.40	0.22	< .05	1.49	-0.01	0.14	0.967	0.99	-0.10	0.36	0.781	0.91
Peer Preference	-0.64	0.25	< .05	0.53	-0.10	0.16	0.546	0.91	-0.68	0.38	< .05	0.51

Note. *Coeff.* = Coefficient; *S.E.* = standard error; OR = odds ratio; School Region: southern of Seoul = 0 and northern of Seoul = 1; Gender: male = 0 and female = 1; Comforting Defender is the reference group. All values are unstandardized estimates. * $p < .05$; ** $p < .01$; *** $p < .001$

Figure 1. Estimated Means of the Four Classes

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GENERAL DISCUSSION

“It’s easy, it works, and it makes me feel good” (Sutton, Smith, & Swettenham, 2001, p. 74). This title well-captured the fact that, from the perspective of bullies, bullying is easy and enables bullies to achieve their goals. Thus, anti-bullying intervention is somewhat straightforward (i.e., bullying is not easy, bullying does not work, bullying does not make bullies feel good). To accomplish this paradigm shift, the common goal of a variety of anti-bullying interventions is for more bystanders who witness bullying to engage in defending behavior so bullying can be further tackled. In this dissertation, I assumed the position that anti-bullying interventions for the past 20 years have been only modestly successful in solving school bullying problems—despite emphasizing defending behaviors—because previous research had viewed defender and outsider roles as homogeneous. In this study, I employed multi-method and multilevel analysis to refine defender and outsider roles, which have been in use for two decades. This multi-method and multilevel approach allowed me to identify heterogeneity of defender and outsider roles, and examine different characteristics of specific subtypes of roles with respect to intra- and interpersonal factors as well as contextual factors.

Results suggest that bullying in Korean middle school classrooms is also a group process involving six participant roles (e.g., bully, assistant, reinforcer, defender, outsider, victim), and these roles are closely associated with gender and social status (Study 1). To focus on defender and outsider behaviors among the six roles identified in Study 1, in Study 2 I found subtypes of defender and outsider roles: 1. Assertive defender (10%); 2. Comforting defender (53.4%); 3. Sympathetic outsider (32.9%); 4. Indifferent outsider (3.8%). The differences among these roles could be explained through intrapersonal (i.e., affective empathy, responsibility, self-efficacy), interpersonal (i.e., perceived popularity, likability), and contextual factors (injunctive norms

about peers' anti-bullying attitudes, peers' expectation for intervention), using multilevel multinomial analyses (Study 2). At the individual level, students who had a high level of affective empathy, responsibility for intervention, and self-efficacy were more likely to be assertive defenders, relative to comforting defenders. Furthermore, assertive defenders were more perceived as popular, but less liked by peers, than comforting defenders. On the other hand, students who had a low level of responsibility and anti-bullying attitudes were more likely to be both sympathetic and indifferent outsiders. However, indifferent outsiders lacked peer affiliation, relative to comforting defenders. In addition to individual characteristics, the likelihood to be in one of the outsider roles lessened when students resided in classrooms where peers' prosocial norms were high. Through a multilevel analysis, contextual factors, such as peers' beliefs and expectations for outsider behaviors in bullying situations, explained the variability between classrooms, thereby emphasizing the need for a peer-ecological approach to the study of defending behaviors (Espelage & Swearer, 2004).

Limitations and Future Directions

Although this dissertation has many strengths, there are a few limitations. It is unclear from these cross-sectional data whether students had membership in the assertive defender role because they were perceived as popular or they could attain high social status among their peers by confronting bullies. Directionality is important to understand the reasons for engaging in assertive defending behaviors. The former direction implies that it will be hard for the majority of students who are not popular to convert to the assertive defender role, because attaining popularity from non-popular status is rare in peer groups (Bellmore, Villarreal, & Ho, 2011; Lopes et al., 2002). However, the latter direction implies that attaining popular status in the peer group would be a reward for confronting bully behavior, and this motivates students to become

more willing to confront the bully. In a similar manner, it is necessary to understand whether students had membership in the indifferent outsider role because they lack peer affiliations or they would lose peer affiliations because of their indifferent characteristics. Further longitudinal studies are needed to fully examine the bidirectional relationships between social status in the peer group and specific defender and outsider roles, as well as other determinants of those roles.

Moreover, the main assumption of Study 1 was that each student in the classroom where bullying occurred had at least one primary role. This dissertation identified the most noticeable role students had, though this single-role identification does not necessarily mean that students took on only one role during bullying situations. Considering that peer groups are dynamic, and that social status in a peer group is not stable, the students' primary roles might change in different contexts. Future studies should examine these changeable primary roles and consider what factors could explain the difference between students who have only one role, two roles, or even three roles.

Since my data showed greater variability in membership in outsider roles compared to the comforting defender role between classrooms that varied in peers' prosocial attitudes and expectations for intervention in bullying, it will be important to consider additional ecological factors that may vary at the classroom-level such as teachers' response to bullying. Particularly, teachers can influence the peer ecology, including classroom prosocial norms, through their relationships with students and their instructional practices around grouping students (e.g., Farmer, Lines, & Hamm, 2011; Gest & Rodkin, 2011). Findings on teachers' role in preventing bullying in non-Asian contexts have been mixed, in part because teachers in U.S. and European settings are often unaware of bullying; it is a behavior that occurs most often in places where adult supervision is minimal, such as on playgrounds, in hallways, or in lunchrooms (e.g.,

Veenstra, Linderberg, Huitsing, Sainio, & Salmivalli, 2014). In the U.S. context, moreover, students often are reluctant to report bullying because they question whether their teachers will actually come to their aid (Troop-Gordon, 2015). Because adults tend to be more respected in Asian cultures due to the heavy Confucian influence (Hofstede, 1980), Korean classroom teachers may be in a unique position to help victims of bullying (i.e., adopt a defender role). I believe that more research is needed on factors associated with the likelihood that teachers will intervene to address bullying.

Lastly, unlike my hypothesis that the sympathetic outsider role would be the largest proportion, the comforting defender role represented the highest proportion among the four roles. Since I assumed that a peer rating would ineffectively capture the characteristics of specific role subtypes, self-ratings were used in this dissertation to measure those roles. Given the result that socially desirable responding is most likely to occur with socially sensitive questions, such as the prosocial behaviors (King & Brunner, 2000), the number of students likely to belong to the comforting victim profile was understandably high. In future studies, peer and teacher ratings, in addition to self-ratings, should be used to investigate how well the self-ratings capture participants' behaviors without a social desirability bias.

Implications for Anti-Bullying Interventions

My results have significant implications for advancing anti-bullying interventions. This dissertation refined defender and outsider roles and proposed the need to consider additional roles in the traditional participant role in bullying. This is not the first time empirical literature has suggested that defending behaviors should aim to confront bullies as well as support victims (e.g., Salmivalli, 2010). However, PRQ that has been used for the past 20 years has treated defending behaviors as homogeneous where confronting bully behaviors in bullying situations

appear to have been captured, or students might fail to recognize that protecting victim behavior is also defending behavior. Previous studies documented that defending behaviors were positively associated with affective empathy, anti-bullying attitudes, responsibility, self-efficacy, and perceived popularity. This finding was similar to the nature of assertive defender role identified in Study 2; therefore, it appears that the comforting defender role has been neglected to a certain extent.

Emphasis on the comforting defender role in anti-bullying intervention is quite significant, because the risks associated with the majority of students who are not popular in the peer group can be far less when they engage in comforting victim behavior than when they directly confront bullies. Comforting victim behavior, therefore, can be a safer defending behavior, and more students could participate without having to face potential risks. This strategy may be able to mobilize more students to engage in the comforting defender role in safe ways, even though it may not immediately change bullies' behaviors. It is necessary for us to educate students that comforting victim behaviors are as important as confronting bully behaviors, therefore, and we also need to encourage students that they ought to become defenders in bullying situations.

Among the six roles, while participants assigned as bullies, assistants, reinforcers, defenders, and victims were well aware of their respective participant roles, outsiders—who made up the largest part of the participant role—failed to realize their own role. These students might misunderstand and claim that they are not involved with bullying at all, because they are not bullies, victims, or followers of bullies. The fact that those students failed to realize their own role as outsiders may be the main reason that they remain as passive bystanders; thus, raising awareness of their own role in bullying situations is important. Introducing the different participant roles and having students reflect on their own role in bullying situations are helpful

exercises (Salmivalli, 2014). Further, raising outsiders' awareness of their own role may make it easier to enhance anti-bullying attitudes or responsibility for intervention.

Given the results that subtypes of roles were also associated not only with social status and peer norms in the classrooms, but also with individuals' characteristics, interventions should target the classroom rather than solely aiming at individual levels. Consistent with results of previous studies that students developed specific behaviors considered to be desirable characteristics of their peers (Wentzel, Barry, & Caldwell, 2004), both sympathetic and indifferent outsiders demonstrated less outsider tendencies when peers expected to intervene under bullying situations. Furthermore, when anti-bullying attitudes in classrooms became more elevated, students were less likely to become sympathetic outsiders. Descriptive norms about defending behavior, however, did not affect whether someone was sympathetic- or indifferent outsiders.

Consistent with previous studies (see Wentzel, 2014), the current study found that peers are an important influence on prosocial behavior. The quality of friendship is important because its association helps a person to understand the attitudes of peers, which leads to that person demonstrating prosocial tendencies, such as helping (Eisenberg, Fabes, & Spinrad, 1998). Improving the quality of peer relationships, therefore, may be a significant factor in anti-bullying interventions. Accordingly, the enhancement of the quality of peer relationships through group activities with all classmates should be a primary goal of anti-bullying interventions. These group activities should try to raise students' awareness of their own roles in the bullying situation and to convert their roles to the defender role. Subsequently, students will hopefully realize that peers do have high anti-bullying attitudes as well as expectations for interventions; these associations are expected to further enhance the quality of peer relationships.

To advance anti-bullying interventions using a tailored-made approach, it is necessary to understand the heterogeneity of defender and outsider roles and distinct characteristics of each role in respect to intrapersonal, interpersonal, and contextual factors. Rather than taking a separate approach for each role, however, all classmates should participate in a broadly tailored-made intervention that embraces all defender and outsider roles to improve quality of peer relationships. In other words, the main goal of anti-bullying interventions is not to hold umbrellas of different colors over each role separately, but to use one large umbrella made of all different colors.

Implications for Bullying in Racially/Ethnically Diverse Contexts

Although the current study was carried out in a racially homogeneous Korean school context, we believe that the findings can aid our understanding of bullying in the U.S. context where schools and classrooms are much more racially and ethnically diverse. Although studies that focus specifically on the ethnic context of bullying are limited, the numerical representation of different ethnic groups is a critical factor (see Graham & Echols, 2018). Students who are members of numerical minority ethnic groups are particularly vulnerable to being the victims of bullying, whereas classroom and school diversity—more ethnic groups of relatively equal size—are a protective factor (Juvonen, Kogachi, & Graham, 2017).

Extending these findings to the context of defending behavior, it would be important to examine how ethnicity might moderate the relations among intrapersonal, interpersonal, and contextual factors considered simultaneously in a multilevel framework. At the individual level, race/ethnicity of potential defenders as well as the numerical representation of their ethnic group should be considered. It is less likely that even the most empathic student will come to the aid of a victim if their group is a numerical minority. Regarding social status, numerical size will

contribute to perceived popularity given well-established ingroup preferences, just as the group norms are likely to be more powerful when they are endorsed by members of one's own racial/ethnic group (see Graham & Echols, 2018). In other words, the processes that I examined here can contribute to a more nuanced understanding of the dynamics of defending behavior in a multiethnic context where the representation of different ethnic groups varies. A growing number of diversity indices are now available to model ethnic representation at the level of individuals as well as classroom and school contexts (Graham, 2016). At the same time, most Asian countries, Korea included, are undergoing ethnic transformation with the influx of more immigrant populations (see Ha & Jang, 2015). The ways in which U.S. researchers conceptualize ethnic diversity in bullying contexts can be a valuable starting point for thinking about defending behavior in a country of shifting numerical power balances. Thus, programs of research on defending behavior in the U.S. and Korean contexts can be mutually beneficial.

Conclusion

By acknowledging that bullying is a group process involving multiple participant roles, anti-bullying programs often focus on encouraging bystanders to become defenders who are willing to come to the aid of victimized peers. Despite the increasing attention to the group process underlying bullying, the current literature on the participant roles is still limited. To comprehend defending behavior, it is necessary to understand both defender and outsider roles; what makes some children stick up for the victim or remain uninvolved, and also how their skills could be used in prosocial ways to combat bullying. No study, however, had examined the characteristics of both defenders and outsiders, their motivations, or what contextual factors in the peer ecology explain defender or outsider roles. First, I refined the traditionally defined defender and outsider roles by modifying measures that have been used for the past 20 years.

Then, taking a multilevel approach, I examined intrapersonal, interpersonal, and contextual factors associated with subtypes of defender and outsider roles simultaneously. This dissertation was conducted with a large sample of early adolescents in South Korea, an ideal cultural context for testing the intrapersonal, interpersonal, and classroom level factors examined here. Although Korea is still a racially homogeneous country, the findings can shed light on defender and outsider roles in more racially and ethnically diverse societies. School bullying and efforts to reduce it are global challenges. Understanding what is universal and nation-specific to the social experiences of youth can greatly enrich our field.

Appendix A

Participant Role Questionnaire (PRQ): Peer-Ratings

The bully scale

How often does each of your classmates behave in the ways described in the bullying situation?

[illegible]

The Assistant scale

How often does each of your classmates behave in the ways described in the bullying situation?

[illegible]

The Reinforcer scale

How often does each of your classmates behave in the ways described in the bullying situation?

	Comes around to see the situation			Laughs			Incites the bully by shouting or saying: "Show him/her!"		
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The defender scale

How often does each of your classmates behave in the ways described in the bullying situation?

	Comforts the victim or encourages him/her to tell the teacher about the bullying			Tells the others to stop bullying			Tries to make stop bullying		
	Never	Sometimes	Often	Never	Sometimes	Often	Never	Sometimes	Often
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Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐					

The outsider scale

How often does each of your classmates behave in the ways described in the bullying situation?

	It not usually present in bullying situations			Stays outside the situation			Doesn't take sides with anyone		
	Never	Someti mes	Often	Never	Someti mes	Often	Never	Someti mes	Often
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐	☐	☐	☐	☐	☐
Classmate	☐	☐	☐	☐					

Appendix B

Participant Role Questionnaire (PRQ): Self-Ratings

How often do you behave in the ways described in the bullying situation?

	Never	Sometimes	Often
1. Starts bullying	☐	☐	☐
2. Make the others join in the bullying	☐	☐	☐
3. Always finds new ways of harassing the victim	☐	☐	☐
4. Join the bullying, when someone else has started it	☐	☐	☐
5. Assists the bully	☐	☐	☐
6. Helps the bully, may be by catching the victim	☐	☐	☐
7. Comes around to see the situation	☐	☐	☐
8. Laughs	☐	☐	☐
9. Incites the bully by shouting or saying: "Show him/her!"	☐	☐	☐

	Never	Sometimes	Often
10. Comforts the victim or encourages him/her to tell the teacher about the bullying	☐	☐	☐
11. Tells the others to stop bullying	☐	☐	☐
12. Tries to make stop bullying	☐	☐	☐
13. It not usually present in bullying situations	☐	☐	☐
14. Stays outside the situation	☐	☐	☐
15. Doesn't take sides with anyone	☐	☐	☐

Appendix C

Victimization: Self-Ratings

When Other Kids Say or Do Mean Things to You...

Lots of middle school students report that sometimes other kids in their school say or do mean things to them. How often anybody in your school done any of the following mean things to you since the beginning of this school year?

Since the beginning of the school year, how often has someone...	Never	Sometimes	Often
1. threatened you?	☐	☐	☐
2. spread nasty rumors about you?	☐	☐	☐
3. hit, kicked, or pushed you?	☐	☐	☐
4. made fun of you in front of others?	☐	☐	☐
5. called you bad names?	☐	☐	☐
6. tried to keep you out of the group?	☐	☐	☐
7. ignored you on purpose to try to make you feel bad?	☐	☐	☐

Appendix D

New Defender and Outsider Roles: Self-Ratings

How often do you behave in the ways described in the bullying situation?

	Never	Sometimes	Often
1. Attack the bully to defend the victim.	☐	☐	☐
2. Take revenge on the bully for the victim.	☐	☐	☐
3. Call the bullies names to defend the victim.	☐	☐	☐
4. Say to the victim, "Don't care about them"	☐	☐	☐
5. Comfort the victim afterwards.	☐	☐	☐
6. Stay with the victim during breaks	☐	☐	☐
7. Although I feel sorry for the victim, I avoid bullying situations because I think the teacher will help the victim.	☐	☐	☐
8. I know bullying is bad, but I don't get involved because I am afraid of getting hurt by bullies myself.	☐	☐	☐
9. I want to help the victims, but I don't think I can really do anything.	☐	☐	☐

	Never	Sometimes	Often
10. Although I feel sorry for the victim, I avoid bullying situations because I think the victim's friends will intervene.	☐	☐	☐
11. I ignore bullying because it's none of my business.	☐	☐	☐
12. I avoid bullying situations because I am not friends with the victims.	☐	☐	☐
13. I do not get involved in bullying situations because I do not think bullying is a serious problem.	☐	☐	☐

Appendix E

Anti-bullying Attitudes (Salmivalli & Voeten, 2004)

How much do you agree with each statement?

	Strongly Disagree	Disagree	Un- decided	Agree	Strongly Agree
	1	2	3	4	5
1. One should try to help the bullied victims.	☐	☐	☐	☐	☐
2. Bullying may be fun sometimes. (–)	☐	☐	☐	☐	☐
3. It is the victims' own fault that they are bullied. (–)	☐	☐	☐	☐	☐
4. Bullying is stupid.	☐	☐	☐	☐	☐
5. Joining in bullying is a wrong thing to do.	☐	☐	☐	☐	☐
6. It is not that bad if you laugh with others when someone is being bullied. (–)	☐	☐	☐	☐	☐
7. One should report bullying to the teacher.	☐	☐	☐	☐	☐
8. Making friends with the bullied victim is the right thing to do.	☐	☐	☐	☐	☐
9. It is funny, when someone ridicules a classmate over and over again. (–)	☐	☐	☐	☐	☐
10. Bullying makes the victim feel bad.	☐	☐	☐	☐	☐

Note. (–) = reverse score.

Appendix F

Affective and Cognitive Empathy (Davis, 1980)

How much do you agree with each statement?

	Strongly Disagree	Disagree	Un- decided	Agree	Strongly Agree
	1	2	3	4	5
1. I often have tender, concerned feelings for people less fortunate than me. (EC)	○	○	○	○	○
2. I sometimes find it difficult to see things from the "other guy's" point of view. (PT) (–)	○	○	○	○	○
3. Sometimes I don't feel very sorry for other people when they are having problems. (EC) (–)	○	○	○	○	○
4. I try to look at everybody's side of a disagreement before I make a decision. (PT)	○	○	○	○	○
5. When I see someone being taken advantage of, I feel kind of protective towards them. (EC)	○	○	○	○	○

	Strongly Disagree	Disagree	Un-decided	Agree	Strongly Agree
	1	2	3	4	5
6. I sometimes try to understand my friends better by imagining how things look from their perspective. (PT)	☐	☐	☐	☐	☐
7. Other people's misfortunes do not usually disturb me a great deal. (EC) (-)	☐	☐	☐	☐	☐
8. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments. (PT) (-)	☐	☐	☐	☐	☐
9. When I see someone being treated unfairly, I sometimes don't feel very much pity for them. (EC) (-)	☐	☐	☐	☐	☐
10. I am often quite touched by things that I see happen. (EC)	☐	☐	☐	☐	☐
11. I believe that there are two sides to every question and try to look at them both. (PT)	☐	☐	☐	☐	☐

	Strongly Disagree	Disagree	Un- decided	Agree	Strongly Agree
	1	2	3	4	5
12. I would describe myself as a pretty soft-hearted person. (EC)	☐	☐	☐	☐	☐
13. When I'm upset at someone, I usually try to "put myself in his shoes" for a while. (PT)	☐	☐	☐	☐	☐
14. Before criticizing somebody, I try to imagine how I would feel if I were in their place. (PT)	☐	☐	☐	☐	☐

Note. (EC) = empathic concern subscale. (PT) = perspective taking subscale. (–) = reverse score.

Appendix G

Responsibility (Pozzoli & Gini, 2010)

How much do you agree with each statement?

	Strongly Disagree	Disagree	Un- decided	Agree	Strongly Agree
	1	2	3	4	5
1. Helping classmates who are repeatedly teased, hit or left out is my responsibility	○	○	○	○	○
2. In my classroom, if someone is surrounded by mindless gossip, pushed or threatened I don't have to do anything" (–)	○	○	○	○	○
3. It is my responsibility to find a way so that in the classroom nobody is insulted, excluded or attacked	○	○	○	○	○
4. It's not up to me doing something so that in my classroom nobody is repeatedly offended, pushed or leaved on one's own" (–)	○	○	○	○	○

Note. (–) = reverse score.

Appendix H

General Self-Efficacy (Schwarzer & Jerusalem, 1995)

How much do you agree with each statement?

	Strongly Disagree	Disagree	Un- decided	Agree	Strongly Agree
	1	2	3	4	5
1. I can always manage to solve difficult problems if I try hard enough.	☐	☐	☐	☐	☐
2. If someone opposes me, I can find means and ways to get what I want.	☐	☐	☐	☐	☐
3. It is easy for me to stick to my aims and accomplish my goals.	☐	☐	☐	☐	☐
4. I am confident that I could deal efficiently with unexpected events.	☐	☐	☐	☐	☐
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.	☐	☐	☐	☐	☐
6. I can solve most problems if I invest the necessary effort.	☐	☐	☐	☐	☐
7. I can remain calm when facing difficulties because I can rely on my coping abilities.	☐	☐	☐	☐	☐

	Strongly Disagree	Disagree	Un- decided	Agree	Strongly Agree
	1	2	3	4	5
8. When I am confronted with a problem, I can usually find several solutions.	☐	☐	☐	☐	☐
9. If I am in trouble, I can usually think of something to do.	☐	☐	☐	☐	☐
10. No matter what comes my way, I'm usually able to handle it.	☐	☐	☐	☐	☐

Appendix I

THE KIDS IN MY CLASSROOM

Name students from the classroom who fit the following descriptions. You can list as many names as you want for each question and the same name can be used for more than one question. Please write clearly, first and last names. The classmate list helps you remember the spelling of the names.

From the classmate list...

1. Who do you like the most?

2. Who do you like the least?

3. Who is the most popular?

4. Who is the least popular?

5. Who is victimized by getting pushed/hit/kicked, or by having nasty things said about them, rumors spread about them, being neglected or excluded?

6. Who starts fights, says mean things, and/or teases others?

7. Who has the most power-everyone notices them and pays attention to them?

Appendix J

Perception of Peers' Anti-Bullying Attitudes

How much do YOUR CLASSMATES agree with each statement?

My classmates think that...	Strongly Disagree	Disagree	Un-decided	Agree	Strongly Agree
	1	2	3	4	5
1. One should try to help the bullied victims.	☐	☐	☐	☐	☐
2. Bullying may be fun sometimes. (–)	☐	☐	☐	☐	☐
3. It is the victims' own fault that they are bullied. (–)	☐	☐	☐	☐	☐
4. Bullying is stupid.	☐	☐	☐	☐	☐
5. Joining in bullying is a wrong thing to do.	☐	☐	☐	☐	☐
6. It is not that bad if you laugh with others when someone is being bullied. (–)	☐	☐	☐	☐	☐
7. One should report bullying to the teacher.	☐	☐	☐	☐	☐
8. Making friends with the bullied victim is the right thing to do.	☐	☐	☐	☐	☐
9. It is funny, when someone ridicules a classmate over and over again. (–)	☐	☐	☐	☐	☐
10. Bullying makes the victim feel bad.	☐	☐	☐	☐	☐

Note. (–) = reverse score.

Appendix K

Peer Expectation (Pozzoli & Gini, 2010; Rigby and Johnson, 2006)

“If in my classroom someone repeatedly bullies another classmate, according to my classmates I should...”

	Not at all	Very Little	Somewhat	Extremely
1. ...intervene to help the victim.	○	○	○	○
2. ...apprise an adult of what is happening so that he/she intervene.	○	○	○	○
3. ...do nothing because it's not my business. (–)	○	○	○	○
4. ...do nothing because I could get into trouble. (–)	○	○	○	○

Note. (–) = reverse score.

Appendix L

Model Formulation of the Unconditional LPA Model

If there are M continuous latent class indicators; $y_1, y_2, y_3, \dots, y_M$, observed on n participants, where y_{mi} is the observed response to item m for participant i . It is assumed for the unconditional LPA that there is an underlying unordered categorical latent class variable, denoted by c , with K classes, where $c_i = k$ if individual i belong to Class k . The proportion of individuals in Class k , $\Pr(c = k)$, is denoted by π_k . The K classes are exhaustive and mutually exclusive such that each individual in the proportion has membership in exactly one of the K latent classes and $\sum \pi_k = 1$. Thus, the relationship between the observed responses on the M items and the latent class variable, c , is expressed as

$$f(y_i) = \sum_{k=1}^K [\pi_k \cdot f_k(y_i)],$$

where $y_i = (y_{1i}, y_{2i}, \dots, y_{Mi})$, $f(y_i)$ is the multivariate probability density function for the overall population, and $f_k(y_i) = f(y_i | c_i = k)$ is the class-specific density function of Class k . Accordingly, the LPA measurement model specifies that the overall joint distribution of the M continuous indicators is the result of a mixing of K component distributions of the M indicators, with $f_k(y_i)$ representing the component-specific joint distribution for y_i . Thus, the within-class distribution of the continuous indicator variables is assumed to be multivariate normal.

$$[y_i | c_i = k] \sim \text{MVN}(\alpha_k, \Sigma_k),$$

where α_k is the vector of the Class $_k$ means for the y_s and Σ_k is the Class $_k$ variance-covariance matrix for the y_s . Accordingly, the parameters in LPA are the class-specific means and variances-covariances of the indicator variables.

Regarding the within-class variance-covariance structure of LPA, there are four main structures that may be specified for Σ_k , being uniquely identified for each class, these are the 1) class-invariant, diagonal Σ_k , 2) class-varying, diagonal Σ_k , 3) class-invariant, unrestricted Σ_k and 4) class-varying, unrestricted Σ_k . A brief overview of these four covariance structures are given below:

1. The class-invariant, diagonal Σ_k is the most parsimonious,

$$\Sigma_k = \begin{bmatrix} \theta_{11} & & & \\ 0 & \theta_{22} & & \\ \vdots & \vdots & \ddots & \\ 0 & 0 & \dots & \theta_{MM} \end{bmatrix}$$

where the variances are constrained to be equal across the latent classes, and covariances between indicators are fixed at zero. This model would result in the estimation of M variances and no covariances. As this within-class variance-covariance structure is the default in *Mplus* (Muthén & Muthén, 1998 - 2017), most studies in the literature use this structure.

2. The class-varying, diagonal Σ_k is a more complex model than the class-invariant one,

$$\Sigma_k = \begin{bmatrix} \theta_{11k} & & & \\ 0 & \theta_{22k} & & \\ \vdots & \vdots & \ddots & \\ 0 & 0 & \dots & \theta_{MMk} \end{bmatrix}$$

where the variances are now allowed to differ across latent classes, but the covariances between the indicators are fixed at zero. This model would result in the estimation of $M \times K$ variances and no covariances.

3. The class-invariant, unrestricted Σ_k has the form,

$$\Sigma_k = \begin{bmatrix} \theta_{11} & & & \\ \theta_{21} & \theta_{22} & & \\ \vdots & \vdots & \ddots & \\ \theta_{M1} & \theta_{m1} & \dots & \theta_{MM} \end{bmatrix}$$

such that all indicator variables are allowed to covary within class, and the variances and covariances are constrained to be equal across the latent classes (class-invariant). This model would result in the estimation of M variances and M covariances.

4. The class-varying, unrestricted Σ_k is the least restrictive and most complex variance-covariance structure,

$$\Sigma_k = \begin{bmatrix} \theta_{11k} & & & \\ \theta_{21k} & \theta_{22k} & & \\ \vdots & \vdots & \ddots & \\ \theta_{M1k} & \theta_{M2k} & \dots & \theta_{MMk} \end{bmatrix}$$

where θ_{MMk} is the variance of item m in Class $_k$ and $\theta_{mj k}$ is the covariance between item m and j in Class $_k$. Both variances and covariances are allowed to vary across classes. That is, all the indicator variables are allowed to covary within class. This model would result in the estimation of $M \times K$ variances and $M \times K$ covariances.

Class Enumeration

Statistical power to detect the correct number of latent classes in a latent profile model depends heavily on the selection processes with various criterion. For the current study, to decide the best LPA model, I compared K classes for each of the four within-class variance-covariance specifications ($K \times 4$ models) using *Mplus* Version 8 (Muthén & Muthén, 2017) and full information maximum likelihood estimation to accommodate missing data (Enders, 2013). As there is no consensus in the literature about comparing models with differing numbers of latent classes (Muthén & Asparouhov, 2006; Masyn, 2013; Nylund et al., 2007; Tofighi & Enders, 2006; Yang, 2006), a number of indices were taken into account simultaneously in making decisions about the optimal number of profiles (Lanza & Cooper, 2016; Masyn, 2013; Muthén, 2003). Most of the common methods for deciding on the number of classes fall into three

categories: (1) information-theoretic methods; (2) likelihood ratio (LR) statistical test methods; (3) entropy-based criterion (Tein, Cox, & Chan, 2013).

(1) Information-theoretic methods (Absolute values)

The *log-likelihood* (LL) of the final parameter estimate is used as a measure of model fit with higher values (i.e., closer to 0) indicating better fit than lower values. To specify the same number of classes, more complex models (e.g., the class-varying, unrestricted Σ_k) will always fit the data better than more simplistic models (e.g., class-invariant, diagonal Σ_k), which have higher LL values.

Akaike information criterion (AIC ; Akaike, 1973, 1987) is one of the most commonly used information-theoretic methods for model selection. AIC is calculated based on the LL and the number of estimated parameters (d). The equation is as follows,

$$AIC = -2LL + 2d.$$

Along with AIC , the *Bayesian information criterion* (BIC ; Schwartz, 1978) is the other most commonly used information-theoretic methods for model selection. This criterion is calculated using not only LL and d but also the number of observations (n).

$$BIC = -2LL + d\log(n),$$

Many other ICs have been derived from these two ICs (i.e., AIC , BIC) by adjusting the penalty term (i.e., $-2LL + \text{penalty}$) (Tein et al., 2013). For example,

Consistent Akaike's information criterion ($CAIC$; Bozdogan, 1987)

$$CAIC = -2LL + d[\log(n) + 1].$$

Sample-size adjusted BIC ($saBIC$; Sclove, 1987)

$$saBIC = -2LL + d\log[n \times ((n+2)/24)]$$

Approximate Weight of Evidence Criterion (AWE ; Banfield & Raftery, 1993).

$$AWE = -2LL + 2d[\log(n) + 1.5].$$

In terms of the information-theoretic methods, higher values of the log-likelihood and lower values of AIC, BIC, CAIC, saBIC, and AWE are indications of better model fit. However, these relative fit indices do not test hypotheses and therefore do not provide tests of significance.

(2) Ratio (*LR*) statistical test methods (Relative Values)

These tests compare the relative fit of two models that differ by a set of parameter restrictions. The *Lo–Mendell–Rubin* likelihood ratio test (LMR; Lo, Mendell, & Rubin, 2001) approximates the χ^2_{diff} distribution when comparing a *K* class to *K*-1 class finite mixture model. In addition, the *Bootstrap Likelihood Ratio Test* (BLRT; McCutcheon, 1987; McLachlan & Peel, 2000) also derives the bootstrap sampling distribution of χ^2_{diff} . BLRT has been considered to determine the optimal number of latent classes (Jung & Wickrama, 2008; Nylund, Asparouhov, & Muthén, 2007). A significant *p*-value for both LMR and BLRT tests mean that a model with *K* classes fit the data significantly better than a model with *K*-1 classes.

(3) Entropy-Based Criterion

Entropy (Ramasway, DeSarbo, Reibstein, & Robinson, 1993) is an index of how well the latent class can be distinguished across all the latent classes, with values ranging from 0 to 1, with higher values indicating more separation among the latent classes. Thus, entropy = 1 means perfect posterior class probability.

In summary, a combination of (1) higher values LL and entropy (values closer to 1), (2) smaller values of the AIC, BIC, CAIC, saBIC, and AWE, and (3) significant *p*-values of LMR-LRT and the BLRT are indications of a good fitting model for determining the number of latent classes.

Classification Diagnostics

Regarding statistical power for LPA, it is necessary to evaluate how much K latent classes in the selected finalized model separate enough from each other and represent a distinct subpopulation. For distinct and optimally interpretable latent classes, it is important for the finalized model to have a high degree of class homogeneity (low within-class variability) and a high degree of class separation (high between-class variability) (Collins & Lanza, 2010; Masyn, 2013).

Class Homogeneity. It is assumed that all individuals of a given class in LPA draw from a single population. Thus, individuals belonging to the same class are more similar to each other in terms of values for specific indicator variables than individuals in other classes. To evaluate the degree of class homogeneity, compare the model-estimated within-class variances, $\hat{\theta}_{mk}$ for each indicator m of the specific K class against the total overall sample variance, $\hat{\theta}_{mm}$ for all continuous indicators. For homogenous classes, it is expected that the within-class variances will be notably smaller than the overall variance for the indicators.

Class Separation. To evaluate the degree of class separation, the distance between the class specific means with respect to their values on the indicator is assessed. However, simply calculating the raw differences in estimated means is not enough, because the degree of overlap between two normal distributions depends not only on the distance between the means but also on the variances of the distributions. Thus, it is necessary to compute a standardized mean difference, adapting the formula for Cohen's d (Cohen, 1988), considering means ($\hat{\alpha}$) and variances ($\hat{\theta}$) between Class _{j} and Class _{k} with respect to a particular item m ,

$$\hat{d}_{mjk} = \frac{\hat{\alpha}_{mj} - \hat{\alpha}_{mk}}{\sqrt{\frac{\hat{\theta}_{mj} + \hat{\theta}_{mk}}{2}}},$$

where $\hat{\sigma}_{mjk}$ is a pooled standard deviation given by,

$$\hat{\sigma}_{mjk} = \sqrt{\frac{(\hat{\pi}_j)(\hat{\theta}_{mmj}) + (\hat{\pi}_k)(\hat{\theta}_{mmk})}{(\hat{\pi}_j + \hat{\pi}_k)}}.$$

In this study, I adopt Masyn (2013)'s suggestion that $|\hat{d}_{mjk}|$ be greater than 2.0, indicating high separation between the Class j and Class k with respect to Item m . A $|\hat{d}_{mjk}|$ less than 0.8 corresponds to low separation (Masyn, 2013).

Results

Latent Profile Analysis

Class Enumeration. In conducting the class enumeration process, six unconditional models were fitted with $K = 1$ to $K = 5$ classes for each of four within-class variance-covariance specifications (Σ_k): 1) class-invariant, diagonal Σ_k , 2) class-varying, diagonal Σ_k , 3) class-invariant, unrestricted Σ_k , and 4) class-varying, unrestricted Σ_k . Table 2 displays the results from the set of class enumerations for each of the Σ_k 's, where only the results from the well-identified models are presented. After $K = 5$, the models for the class-invariant, diagonal and class-invariant, unrestricted Σ_k specifications ceased to be well identified, as was the case after $K = 2$ for class-varying, unrestricted Σ_k and after $K=1$ for class-varying, diagonal Σ_k . As I mentioned above, $K = 1$ for unrestricted Σ_k specification is the minimum-goodness-of-fit benchmark model.

To decide the best fitting model among 14 models, nine indices were used (i.e., LL, AIC, CAIC, BIC, saBIC, AWE, LMR, BLRT, entropy). Figure 1 shows four panels with plots of the (1) LL, (2) BIC, (3) CAIC, and (4) AWE values. Each panel has three plot lines, class-invariant, diagonal Σ_k , class-invariant, unrestricted Σ_k , class-varying, unrestricted Σ_k . The double

horizontal line corresponds to the index value of the minimum-goodness-of-fit benchmark model of the $K=1$ for unrestricted $\sum_k$ specification.

Among the models presented in Table 1, class-invariant, diagonal and class-invariant, unrestricted $\sum_k$ with greater than or equal to two classes clearly improved over the benchmark model. The class-invariant, unrestricted $\sum_k$ models, especially, had lower values on AIC, BIC, saBIC, and AWE and higher value on LL. Although there was slight “elbow” in the AIC, BIC, and AWE plot at $K=4$, indicating big difference values between $K=3$ and $K=4$, those values still decrease at $K=5$ and $K=6$. However, LMR p -values revealed that the $K = 4$ model fit better than the $K= 3$ model ($p < .001$), but the $K= 5$ model was not significantly better than the $K= 4$ model ($p = .961$). Furthermore, the entropy value (.90), which is closer to 1, shows the classification accuracy of four classes with respect to class-invariant, unrestricted $\sum_k$. Considering combinations of all information above, $K = 4$ for class-invariant, unrestricted $\sum_k$ was selected as the optimal unconditional latent profile model (see Figure 2).

Classification Diagnostics. Based on the above results, four latent classes would result in the best classification. This means that the individual variability with respect to the indicator variables within the same classes should be minimized and the between-class variability should be maximized. Accordingly, to evaluate the precision of the latent class assignment for individuals by the finalized unconditional latent profile classes, it is necessary to examine not only the within-class homogeneity but also across-class separation.

Class Homogeneity. To investigate within-class homogeneity, the model-estimated within-class variance, $\hat{\theta}_{mk}$ was compared to total overall sample variance, $\hat{\theta}_{mm}$. As our finalized model was the class-invariant, unrestricted $\sum_k$ specification, where the variances were constrained to be equal across the latent classes, all classes had the same variances of four indicators (see Table 2).

As expected, four classes had substantial homogeneity with respect to all four indicator variables, with less variability than in the overall sample. More specifically, every class showed homogeneity with respect to the BO_S (bully-oriented defending behavior scale) and IO_S (indifferent outsider behavior scale) indicators.

Class Separation. To determine class separation for the two classes, I examined the standardized differences in means for each pairwise class comparison on each of the four indicators. I define “well-separated” as pairwise differences in means between classes that range from moderate (i.e., equal to or greater than 0.8) to large (i.e., equal to or greater than 2.0) estimated distances ($|\hat{d}_{mjk}|$) on at least one of the four indicators (see Table 3). Specifically, except for the distance between Class 2 and Class 3, all classes were well-separated for the IO_S (indifferent outsider behavior scale) indicator with the greatest distance between classes compared to the other three indicators. Class 2 and Class 3 had a large distance between their means for the BO_S (bully-oriented defending behavior scale) indicator and a moderate distance between their means for the VO_S (victim-oriented defending behavior scale) indicator. Class 1 and the other three classes were well-separated with respect to the IO_S (indifferent outsider scale) indicator. Class 1 and Class 2 had a large distance between their means for the BO_S (bully-oriented defending behavior scale) indicator and a moderate distance between their means for the VO_S (victim-oriented defending behavior scale) indicator. Class 3 and Class 4 had a large distance between means on the BO_S (bully-oriented defending behavior scale) and VO_S (victim-oriented defending behavior scale) indicators and moderate distance on the PO_S (pro-victim outsider scale) indicator. Finally, Class 1 and Class 4 had a large distance between their means only for the BO_S (bully-oriented defending behavior scale) indicator.

Table 1

Model Fit Indices for Exploratory Latent Profile Analysis using Four Different Within-Class Variance-Covariance Structure Specifications (Σ_k).

Σ_k	K	LL	npar	AIC	CAIC	BIC	saBIC	AWE	p -value of LMRT	p -value of BLRT	Entropy
Class-Invariant, Diagonal	1	-2094.92	8	4205.83	4250.82	4242.82	4217.41	4319.80			
	2	-1894.764	13	3815.53	3888.62	3875.62	3834.34	4000.72	< .001	< .001	0.764
	3	-1760.164	18	3556.33	3657.54	3639.54	3582.38	3812.75	< .001	< .001	0.763
	4	-1695.031	23	3436.06	3565.39	3542.39	3469.35	3763.71	< .01	< .001	0.849
	5	-1602.958	28	3261.92	3419.35	3391.35	3302.44	3660.79	< .05	< .001	0.929
Class-Varying, Diagonal	1	-2094.918	8	4205.84	4250.82	4242.82	4217.42	4319.80			
Class-Invariant, Unrestricted	1	-1807.127	14	3642.25	3720.97	3706.97	3662.52	3841.69			
	2	-1733.484	19	3504.97	3611.80	3592.80	3532.47	3775.63	0.058	< .001	0.826
	3	-1654.48	24	3356.96	3491.91	3467.91	3391.70	3698.85	< .001	< .001	0.925
	4	-1611.89	29	3281.78	3444.84	3415.84	3323.75	3694.90	< .01	< .001	0.900
	5	-1504.422	34	3076.84	3268.02	3234.02	3126.05	3561.19	0.181		0.961
Class-Varying, Unrestricted	1	-1807.127	14	3642.25	3720.97	3706.97	3662.52	3841.69			
	2	-1626.525	29	3311.05	3474.11	3445.11	3353.02	3724.17	< .01	< .01	0.776

Note: K = number of classes, LL = Log-Likelihood, npar = number of parameters, AIC = Akaike Information Criterion, CAIC = Consistent Akaike Information Criterion, BIC = Bayesian Information Criterion, saBIC = Sample-size adjusted BIC, AWE = Approximate Weight of Evidence Criterion, LMR = the adjusted Lo-Mendell-Rubin likelihood ratio test, BLRT = the parametric bootstrapped likelihood ratio test. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 2

Model-Estimated Class-Specific Means, Minimum/Maximum and Variances for the Four-Class Latent Profile Analysis with Class-Invariant, Unrestricted Σ_k .

Class	Variable	Mean ($\hat{\alpha}_{mk}$)	Minimum/ Maximum	Variance ($\hat{\theta}_{mk}$)
Overall (100%)	1) BO_S	0.32	0.00/ 2.00	0.14
	2) VO_S	0.79	0.00/2.00	0.32
	3) PO_S	0.68	0.00/2.00	0.30
	4) IO_S	0.45	0.00/2.00	0.24
Class 1 (3.8%)	1) BO_S	0.10	0.00/0.67	0.08
	2) VO_S	0.22	0.00/1.00	0.28
	3) PO_S	1.14	0.00/2.00	0.24
	4) IO_S	1.80	1.33/2.00	0.04
Class 2 (9.9%)	1) BO_S	1.15	1.00/2.00	0.08
	2) VO_S	1.40	0.00/2.00	0.28
	3) PO_S	0.32	0.00/1.50	0.24
	4) IO_S	0.17	0.00/0.67	0.04
Class 3 (53.4%)	1) BO_S	0.25	0.00/0.67	0.08
	2) VO_S	0.81	0.00/2.00	0.28
	3) PO_S	0.50	0.00/2.00	0.24
	4) IO_S	0.12	0.00/0.33	0.04
Class 4 (32.9%)	1) BO_S	0.25	0.00/1.33	0.08
	2) VO_S	0.66	0.00/2.00	0.28
	3) PO_S	0.99	0.00/2.00	0.24
	4) IO_S	0.89	0.67/1.33	0.04

Note: BO_S = bully-oriented defending behavior scale, VO_S = victim-oriented defending behavior scale, PO_S = Pro-victim outsider behavior scale, IO_S = Indifferent Outsider behavior scale.

Table 3

Estimated Distances (i.e., standardized differences in means) in Class-Specific Indicator Means for the Five-Class Latent Profile Analysis with Class-Invariant, Unrestricted Σ_k .

Variable	Class1 Vs. Class2	Class1 Vs. Class3	Class1 Vs. Class4	Class2 Vs. Class3	Class2 Vs. Class4	Class3 Vs. Class4
1) BO_S	-3.75	0.53	0.53	3.21	3.21	0
2) VO_S	-2.22	-1.11	-0.83	1.11	1.40	0.28
3) PO_S	1.67	1.31	0.31	-0.37	-1.37	1.02
4) IO_S	8.15	8.40	4.55	0.25	4.55	3.85

Note: BO_S = bully-oriented defending behavior scale, VO_S = victim-oriented defending behavior scale, PO_S = Pro-victim outsider behavior scale, IO_S = Indifferent Outsider behavior scale.

Figure 1. Plots of models (a) LL, (b) BIC, (c) CAIC, and (d) AWE values comparing the latent class enumeration ($K=1, 2, 3, 4, 5, 6$) across four different within-class variance-covariance structure specifications.
Note: CID: the class-invariant, diagonal Σ_k , CVD: the class-varying, diagonal Σ_k , CIU: the class-invariant, unrestricted Σ_k , CVU: the class-varying, unrestricted Σ_k .

Figure 2. Estimated Means of the Four Classes

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