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Effect of Parent-child Relationships on Positive Peer Relationships among School-aged Children: Mediating Roles of Empathy and Altruism

February 2016

Graduate School of Seoul National University
Department of Social Welfare
Juyeon Lee
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Advising Professor – Joan P. Yoo
Submitting a master’s thesis of Social Welfare
November 2015

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Confirming the master’s thesis written by
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ABSTRACT

Effect of Parent-child Relationships on Positive Peer Relationships among School-aged Children: Mediating Roles of Empathy and Altruism

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The purpose of this study is to develop a theoretical model for prosocial parent-to-peer pathways and test its validity using nationally representative data of school-aged children in South Korea. To be specific, this study aims to examine (1) the effect of parent-child relationships on positive peer relationships and (2) the mediating effects of children’s empathy and altruism on the association between parent-child relationships and positive peer relationships.
Positive peer relationships, i.e. peer acceptance and friendships, are one of the essential antecedents of school-aged children’s well-being and well-becoming. In line with attachment theory, a substantial body of literature has found that the quality of parent-child relationships is an important predictor of peer acceptance and friendship quality. Yet, a relatively few studies have examined the psychological mechanisms underlying the influence of parent-child relationships on positive peer relationships. Particularly in Korea, little research has been conducted on this positive parent-to-peer pathways, since a focus of childhood research was mainly on negative peer relationships such as peer rejection or bullying.

According to previous research findings, a good quality of relationships with parents is likely to foster children’s prosocial orientation such as empathy and altruism, which in turn promotes positive relationships with peers. The present study develops a research model where the effect of parent-child relationship quality on positive peer relationships can be either direct or indirect via empathy and altruism. The main research hypotheses involve: (1) the quality of parent-child relationships will have a positive effect on positive peer relationships, i.e. peer acceptance and friendship quality, and (2)
children’s empathy and altruism will mediate the effect of parent-child relationship quality on positive peer relationships.

To empirically test the research model and hypotheses, structural equation modeling was performed to analyze the nationally representative data from the 2013 South Korean subsample of the International Survey of Children’s Well-Being. The sample consisted of 4,690 children in 3rd and 5th grade, who are living with at least one parent. All of the major variables were measured using multi-item, self-report indicators.

The analytic results indicate that the research model fits the sample data well and explains 29.3% of variance in peer acceptance and 64.6% in friendship quality. All the research hypotheses are supported: (1) the quality of parent-child relationships does have a positive effect on peer acceptance and friendship quality, and (2) children’s empathy and altruism partially mediate the effect of parent-child relationship quality on positive peer relationships. Despite several limitations due to secondary data analysis, this study has a significance in that it develops a theoretical model for prosocial parent-to-peer pathways and empirically examine its validity with nationally representative data of school-aged children. This study calls for more research on Korean
children’s positive social relationships and the underlying mechanisms of their prosocial development.

**Keywords:** positive peer relationships, peer acceptance, friendships, parent-child relationships, empathy, altruism, structural equation modeling

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CHAPTER I – INTRODUCTION

1. Introduction

All humans are social beings, continuously interacting with others and building a variety of relationships with different individuals over the course of their lives. Forming and maintaining good quality relationships are one of the fundamental human needs. Cacioppo and Patrick (2008, p. 7) state that “the need for meaningful social connection, and the pain we feel without it, are defining characteristics of our species.” A good quality of relationships contributes to human welfare. A body of research has found that the structure and process of relationships have a significant influence on our health and well-being (House, Umberson, & Landis, 1988). The quality of relationships, as D. Howe (1995, p. 1) suggests, can be regarded as “the yardstick by which we measure happiness and contentment.”

Human relationships begin right after birth when an infant and the parent initiate to bond (Van Hasselt & Hersen, 1992). For most children, relationships with parents comprise almost the entirety of the developmental context in infancy and toddlerhood. As children grow, however, their social worlds expand outside the family, and peers take on a greater importance than in the past. Originated from the Latin par,
meaning equal, the term *peer* usually refers to someone in the same year or grade in the literature on peer relationships. Particularly when children enter elementary school, relationships with peers constitute their major developmental context. A good quality of peer relationships contributes to school-aged children’s social and emotional well-being, and provides them with opportunities to acquire a wide range of behaviors, skills, and attitudes that affect their successful adjustment to school life and subsequent positive development in adolescence and adulthood (K. H. Rubin, Bukowski, & Parker, 2006). Therefore, it is indispensable for school-aged children to experience positive peer relationships for both their present happiness, i.e. well-being, and later healthy growth, i.e. well-becoming.

Positive peer relationships have been categorized into two domains: peer acceptance at group level and friendships at dyadic level (Gifford-Smith & Brownell, 2003). Although the ability to relate with others is one of the innate human natures, researchers have observed large differences in peer acceptance and friendship quality among school-aged children. One of the most robust predictors of positive peer relationships was found to be the quality of parent-child relationships (Putallaz & Heflin, 1990). The positive association between parent-child
relationships and peer relationships has been hypothesized and investigated the most actively by attachment theorists, who argue that parent-child attachment is a prototype relationship that lays a foundation for later social development (Berlin & Cassidy, 1999). While they have accumulated much evidence on what is an important precursor of positive peer relationships, the question as to how it affects the quality of peer relationships remains not fully answered. In other words, although the association between parent-child and child-peer relationships has firmly been supported, “the psychological processes underlying this association” have not yet been clearly explored (Thompson, 2006, p. 65).

In attachment theory, the concept of internal working model provides a theoretical explanation for the psychological mechanisms through which the quality of parent-child relationships has an indirect influence on the quality of peer relationships. This concept, however, lacks an empirical validity by itself (Eisenberg, 2006; Schneider, Atkinson, & Tardif, 2001). According to previous research, the internal working model can be reified as a prosocial orientation which refers to “a focus on the needs of others and an inclination to enhance the welfare of others” (Côté et al., 2011, p. 217; Thompson, 2015). In fact, empathy and altruism, two most important components of prosocial orientation,
have been found to be promoted within positive parent-child interactions and to predict positive peer interactions (Eisenberg, Fabes, & Spinrad, 2006; Eisenberg, Huerta, & Edwards, 2012). Thus, it seems reasonable to hypothesize that children’s prosocial orientation such as empathy and altruism would mediate the influence of parent-child relationships on positive peer relationships.

However, few studies have examined the mediating roles of prosocial orientation in positive parent-to-peer pathways (Clark & Ladd, 2000). To fill this gap, this study seeks to develop a theoretically valid model for prosocial parent-to-peer pathways and to test its statistical validity using nationally representative data of school-aged children in South Korea.

2. Problem Statement

This study brings up three problems in the field of childhood research in Korea, which motivate the researcher to conduct the present study. These problems involve a lack of research attention to (1) children’s positive peer relationships, (2) the association between positive parent-child relationships and positive peer relationships, and (3) the mechanisms underlying the positive parent-to-peer pathways.
First of all, more research is required on positive aspects of peer relationships, because children have a fundamental need to form and maintain at least a minimum quality of positive interpersonal relationships (Baumeister & Leary, 1995). Korean literature on peer relationships is at the beginning stage, compared with American and European literature (M. Moon, 2005). Although this area of research is developing in both quantity and diversity, Korean scholars have so far concentrated their attention mainly on negative peer relationships such as peer rejection, bullying, or victimization (M. Moon, 2005; Y. H. Song, 2012). The tendency to focus on peer-related problems is understandable since Korean society has observed a host of destructive effects of school bullying and peer rejection. Research on negative peer relationships has indeed provided valuable evidence for various social interventions to reduce these problems; as a result, an overall decreasing tendency has been reported in terms of the proportion of bullies and victims (Ministry of Education & Korean Educational Development Institution, 2014). Nevertheless, the alleviation or even the absence of serious peer-related problems cannot assure that children are experiencing positive peer relationships. For example, not being rejected nor victimized by peers does not necessarily mean being accepted or maintaining good quality
friendships. Thus, it is needed to more investigate children’s positive peer relationships, which are critical to their present well-being and future well-becoming. A focus on positive aspects of peer relationships is not an attempt to “callously disregard the real pains and struggle,” but rather an effort to “foreswear the ascendancy of psychopathology and deviance” (Saleebey, 2013, p. 3).

Second, it is required to examine the influence of positive parent-child relationships on positive peer relationships, because good quality parent-child relationships are one of the fundamental contextual antecedents of good quality peer relationships. Western researchers have agreed on that early secure relationships with parents and the maintenance of positive parent-child relationships are strong predictors of good quality peer relationships in middle childhood (Thompson, 2006). Although Korean researchers have also emphasized the parental influence on children’s peer relationships, the discussion has been centered on the detrimental influences of negative parent-child relationships such as child maltreatment, poor parenting behaviors, or family conflicts, in association with children’s negative outcomes such as aggression, delinquency, bullying, or victimization (O. Kim & W. Lee, 2001; C. K. Lee & Yang, 2015; S. C. Lee, 2012; Y. H. Oh, 2012; J. H.
Therefore, practical implications of these studies have also revolved around who are at risk of peer-related problems and how to buffer the adverse effects of negative parent-child relationships. Admittedly, the risks of negative parent-child relationships appear more salient than the possible benefits of positive parent-child relationships. But in reality, it may be more difficult to maintain a good quality of parent-child relationships than just to avoid negative parent-child relationships. In Korean society, most parents may recognize the importance of their roles in positive child development, but not all parents could provide affectionate and supportive relationship contexts, in which their children can foster a prosocial orientation that affects in turn the quality of their subsequent social relationships outside the family. In fact, the two domains of child development that Korean parents reported the greatest difficulties in were social and emotional development: parents expressed difficulty helping their children to make friends and cooperate, and raising them to be affectionate and concerned for others (S. O. Park & Kang, 1997). Therefore, more investigations are called for on the influence of parent-child relationship quality on children’s positive peer relationships in
order to improve our understanding about one of the essential promotive factors of children’s social and emotional well-being.

Last but not least, it is necessary to explore psychological processes underlying the association between positive parent-child relationships and positive peer relationships in middle childhood, because understanding the mechanisms that explain the influences of parent-child relationships on positive peer relationships could provide theoretical and practical implications in the field of social work. Even though the impact of parent-child relationships on peer relationships has substantially been investigated in Western literature, the processes underlying this influence have received relatively little attention (Clark & Ladd, 2000). From the review of literature, children’s prosocial orientation such as empathy and altruism can reasonably be hypothesized to play mediating roles in positive parent-to-peer pathways. This expectation comes from the notion that the quality of interpersonal relationships is “responsible for the kinds of individuals we become,” which in turn “determine the kinds of relationships we construct” (Hartup & Laursen, 1999). Recently in Korea, there have been several studies on the mediating roles of aggression, rejection sensitivity, or depression in negative parent-to-peer pathways (Ah & Jeong, 2007;
Hong & Park, 2013; M. H. Jang & Lee, 2011; H. R. Jeon & Lee, 2014; E. J. Kim & Lee, 2009; M. W. Kim & Park, 2012; S. Park & Jin, 2013; Zhang & Kim, 2014). But, there exist few studies investigating prosocial mechanisms underlying the influence of parent-child relationships on children’s positive peer relationships. The study on the mediating roles of prosocial orientation in positive parent-to-peer pathways could add to our current knowledge about positive child development, by scrutinizing “the conditions and processes that contribute to the flourishing or optimal functioning of people” (Gable & Haidt, 2005, p. 104). Also, it could provide evidence for the field of social work about intervention points and strategies to promote positive peer relationships, because most of social work practices and programs primarily aim to bring about changes in psychosocial aspects that lead to the actual target changes (S. G. Lee, 2007).

3. Purpose of the Study

Considering the need for studying prosocial mechanisms underlying the association between parent-child relationship quality and positive peer relationships, this study seeks to examine the effect of parent-child relationships on positive peer relationships among Korean school-aged
children, focusing on the mediating roles of empathy and altruism. To be specific, this study aims to examine (1) the effect of parent-child relationships on peer acceptance and friendship quality, and (2) the mediating effects of empathy and altruism on the association between parent-child relationships and positive peer relationships among Korean school-aged children.

4. Research Question

In this study, two main questions are raised as follows:

(1) Does the quality of parent-child relationships have an effect on positive peer relationships, i.e. peer acceptance and friendship quality, among school-aged children?

(2) Do children’s empathy and altruism mediate the effect of parent-child relationship quality on positive peer relationships among school-aged children?

5. Chapter Outline

In this chapter, the backgrounds to and objectives of the present study have been introduced. In Chapter II, a theoretical framework and empirical evidence are presented in detail. In Chapter III, a conceptual
model and the research hypotheses are proposed. In Chapter IV, research methods to empirically test the proposed model are described. In Chapter V, the results of statistical analyses are reported. In Chapter VI, the findings and the implications thereof are discussed.
CHAPTER II – LITERATURE REVIEW

1. Introduction
In Chapter II, a theoretical framework and empirical evidence are provided to develop a valid research model of this study. This chapter is organized into four sections: (1) positive peer relationships in school-aged children, (2) influence of parent-child relationship quality, (3) processes underlying parent-to-peer pathway, and (4) influence of individual and familial characteristics. In the first section, the current knowledge about positive peer relationships in school-aged children is introduced. In the second section, the influence of parent-child relationship quality on positive peer relationships is explained based on attachment theory. In the third section, theoretical backgrounds to the mediating roles of prosocial orientation, i.e. empathy and altruism, are provided. In the fourth section, empirical findings about the influence of individual and familial characteristics on prosocial orientation and positive peer relationships are reviewed.

2. Positive Peer Relationships in School-aged Children
In this section, literature on positive peer relationships in school-aged children is reviewed. This section is organized into three parts: (1)
development and domains, (2) consequences and importance, and (3) proximal and distal predictors. In the first part, the development of social relationships from early childhood to middle childhood is explicated, and two distinct domains in positive peer relationships are introduced: peer acceptance and friendships. In the second part, the developmental consequences and importance of peer acceptance and friendships are presented. In the third part, proximal and distal predictors of positive peer relationships are reviewed, focusing on children’s social behaviors at individual level and the quality of parent-child relationships at environmental level.

2.1 Development and domains

It might be literally true that we are born alone and we die alone, but we cannot live without being socially connected (Cacioppo & Patrick, 2008). Social relationships are an essential part of human life and welfare. When studying children’s well-being and their healthy development, it is needed to hold an “individual-in-relationships” perspective, in which a child is not regarded as an isolated individual, but as a social being who lives in relational contexts (W. A. Collins, 1999, p. 3).
Infants begin to bond with their caregivers, mostly their parents, immediately after birth. For most children, relationships with parents are the first and most important social context where their genetic traits interact with environment and their basic needs are or are not met (Cacioppo & Patrick, 2008). Although the influence of parent-child relationships continues to be significant, relationships with other children such as siblings or playmates become more frequent and influential as children grow older. Especially in middle childhood, or elementary school years, peer relationships become increasingly important, since time spent outside family lengthens, social interactions involving peers increase, peer groups enlarge, and peer interactions are less supervised by adults. Also, school-aged children become more and more concerned about their place in peer groups and have a stronger need for establishing intimate relationships with friends (K. H. Rubin et al., 2006). In this regard, Gifford-Smith and Brownell (2003, p. 236) state that “it is during middle childhood that children can truly be said to participate in a separate social world of their peers apart from children’s other socialization experiences.”

Researchers in the field of childhood studies have conceptually distinguished two domains of positive peer relationships:
peer acceptance at group level and friendships at dyadic level (Gifford-Smith & Brownell, 2003; Ladd, 1999). This differentiation comes from the notion that human beings have basic needs both “for inclusion in group life and for close relationships” (Asher & Paquette, 2003, p. 75). In general, peer acceptance is defined as the degree to which children are liked by other peers (Bukowski & Hoza, 1989; Ladd, 1999; Oberle, Schonert-Reichl, & Thomson, 2010), whereas friendship is defined as a voluntary and reciprocal form of dyadic relationship that contains a positive affective tie (Bukowski & Hoza, 1989; Ladd, 1999; Newcomb, Bukowski, & Bagwell, 1999). Although peer acceptance and friendships are interrelated to some degree, researchers have found that they constitute different domains of peer relationships: children who are rejected in peer groups may still have friends, whereas some highly accepted children have few or no reciprocal friendships (Gifford-Smith & Brownell, 2003; K. H. Rubin et al., 2006).

2.2 Consequences and importance

Children's positive peer relationships serve both as the context in which their success and happiness are measured and the context in which adaptive social skills and behaviors are fostered (Hartup
& Laursen, 1999). In elementary school years, it is necessary to be accepted by peers and to maintain a good quality of friendships for their present well-being and future well-becoming.

Researchers have reported that peer acceptance has significant impacts on children’s psychological well-being and school adjustment. Peer-rated as well as self-perceived acceptance in childhood have been reported to increase self-esteem and to decrease dysphoria and loneliness (Asher & Paquette, 2003; Brown & Lohr, 1987; Kistner, Balthazor, Risi, & Burton, 1999). Stable peer acceptance is also found to buffer early academic difficulties (O'Neil, Welsh, Parke, Wang, & Strand, 1997). In contrast, longitudinal studies have substantiated that peer rejection predicts loneliness, behavioral problems, academic deficits, and school maladjustment (O'Neil et al., 1997; Parker & Asher, 1987).

Investigators have also supported that the participation in and the quality of friendships predict children’s social and emotional well-being and adjustment during elementary school years. Good quality friendships have been related to higher self-esteem, securer emotion, lower loneliness, better social skills, and school adjustment (Bishop & Inderbitzen, 1995; Furman, 1998; Ladd, Kochenderfer, & Coleman, 1996). Furthermore, friendships are found to buffer the effects of
negative peer relationships, such as rejection or victimization (Hodges, Boivin, Vitaro, & Bukowski, 1999; Schwartz, Dodge, Pettit, & Bates, 2000). On the other hand, having no friends is found to influence loneliness, depression, and maladaptive behaviors in middle childhood and adolescence (Asher & Paquette, 2003).

In Korea, the dysfunctional effects of negative peer relationships have received great attention in the literature on peer relationships since the late 1990s (M. Moon, 2005; H. Sim & Shin, 2009). Peer rejection has been related to school-aged children’s higher loneliness, lower self-perception, behavioral problems, and school maladjustment (Jung, Rhee, Koh, & Kim, 2001; Y. K. Kim & O. K. Lee, 2001; Rhee, Kim, & Oh, 2001). Peer victimization has also been associated with lower self-esteem, internalized and externalized behaviors, school maladjustment, and suicide ideation in middle childhood and adolescence (S. M. Choi & Kim, 2012; J. Y. Kim & Lee, 2010; H. S. Park, Kim, & Chung, 2014; Seo, 2014). Recently, however, research on the benefits of positive peer relationships has been accumulated: overall, good quality peer relationships have been found to positively influence psychosocial well-being of Korean school-aged

2.3 Proximal and distal predictors

It is unfortunate that not all children are well accepted by other peers or have good quality friendships during elementary school years. There are substantial variations among individual children in terms of the level of peer acceptance and the quality of friendships. During the 1990s, Western researchers were interested in exploring the predictors of children’s positive peer relationships (Ladd, 1999). They have found that children’s peer relationships are likely a product of both children’s individual characteristics and their social environments (K. H. Rubin et al., 2006).

At individual level, children’s social behaviors have extensively been investigated as one of the most proximal correlates of peer acceptance and friendship quality. Social behaviors are often categorized into three groups: moving toward others, i.e. prosocial behaviors; moving against others, i.e. aggressive behaviors; and moving away from others, i.e. withdrawn behaviors (K. H. Rubin et al., 2006; Van Lieshout, Cillessen, & Haselager, 1999). Researchers have found a
relatively robust association between prosocial behaviors and peer acceptance as well as between aggressive behaviors and peer rejection (Crick, 1996; Gifford-Smith & Brownell, 2003; Van Lieshout et al., 1999). Prosocial behaviors were also significantly associated with the gain and the stability of friendships among elementary school children (Bowker, Rubin, Burgess, Booth-LaForce, & Rose-Krasnor, 2006). Aggressive behaviors, on the contrary, have been reported to be negatively related to the quality of friendships, even though aggressive children are just as likely to have friends as non-aggressive children (K. H. Rubin et al., 2006).

The aforementioned findings led researchers to explore the foundations explaining why children exhibit such different behaviors (Ladd, 1999). At environmental level, the quality of parent-child relationships was found to be one of the most important distal antecedents of school-aged children’s social behaviors and peer relationships (Ladd, 1999; Putallaz & Heflin, 1990; K. H. Rubin et al., 2006). Traditionally, parent-child relationships and peer relationships were considered as distinct and separate social contexts of children, but research evidence has supported that these two contexts are highly connected (Hartup, 1979; Z. Rubin & Sloman, 1984; Sroufe, Egeland, &
Carlson, 1999). A body of literature has consistently reported that positive parent-child relationships have great impacts on children’s social and emotional development and well-being (Eisenberg, 2006). Putallaz and Heflin (1990) argued that the influence of parent-child relationships is so important that any theory or intervention which does not include parental roles in children’s social development would be incomplete and compromised.

In Korean literature, the quality of parent-child relationships has also been extensively studied as an important predictor of peer relationships in school-aged children (H. Sim & Shin, 2009). But the focus was more on the association between negative parent-child relationships and negative peer relationships (Y. A. Jang & Lee, 2007; O. Kim & W. Lee, 2001; Y. H. Oh, 2012; Ro & Sim, 2004; Woo, 2013). For instance, child abuse and neglect by parents have been pointed out as risk factors of negative peer relationships, which in turn lead to other problematic outcomes in childhood and adolescence (An, Lee, & Chung, 2013; Bae, 2014; S. Kim, 2015). Yet, some studies indicate that positive parent-child interactions are associated with positive outcomes in peer relationships, just as negative parent-child interactions are related to negative peer relationships (H. J. Kim & Hong, 2015; J. Kim & Nam,
Recently, research interests in the influence of positive parent-child relationships on positive peer relationships in school-aged children appear increasing in Korean literature (S. B. Kim & Lee, 2014; J. I. Lee, Kim, & Han, 2014).

3. Influence of Parent-Child Relationship Quality

In this section, a theoretical framework and empirical evidence for the influence of parent-child relationship quality on positive peer relationships in school-aged children are provided. The section is organized into three parts: (1) direct and indirect influences, (2) attachment theory, and (3) research evidence. In the first part, two different research focuses on parental influence – direct and indirect – are presented, and the current study is situated within the focus of indirect influences. In the second part, attachment theory is introduced as a main theoretical framework for the present study. In the third part, empirical findings supporting the assumptions of attachment theory are suggested.
3.1 Direct and indirect influences

There exist two main groups of researchers explaining the parental influences on peer relationships: one focuses on direct influence, the other on indirect influence (Hartup, 1992; Parke & O'Neil, 1999). The first group of researchers emphasizes parents’ direct influence, i.e. intervention, viewing parents as influencing children’s peer relationships directly and explicitly as instructors, advisors, or supervisors when their children initiate and maintain relationships with other peers. (Parke & O'Neil, 1999; Z. Rubin & Sloman, 1984). They have found that certain types of direct influences, such as arranging and supervising peer-play activities or giving advice about making friends, can be effective for young children to be socially competent, whereas these direct interventions may not function well for older children (Ladd, 1999; Parke et al., 2014).

By contrast, the other group of researchers is interested in parents’ indirect influence, i.e. stage-setting, regarding parents as affecting children’s peer relationships through their relationships with children and parenting practices (Parke & O'Neil, 1999; Z. Rubin & Sloman, 1984). This group of researchers explains that parental influence is indirect because its purpose is not straightforwardly to affect children’s
peer relationships (Parke & O'Neil, 1999). To date, there has been more research evidence supporting parental indirect influences than the direct influences on peer relationships in school-aged children (Ladd, 1999).

Attachment theory and social learning theory are the two main theories explaining how parents indirectly influence children’s peer relationships. According to social learning theory, the manners in which parents engage in interpersonal relationships affect children’s peer relationships, since children learn from or model after how their parents relate to other people (Z. Rubin & Sloman, 1984). Attachment theorists, however, explain that secure and affective relationships with parents enable children to have a positive social orientation and to actively explore their social worlds, thereby helping them form and maintain good quality peer relationships (Z. Rubin & Sloman, 1984). While social learning theorists have emphasized the effects of certain discipline techniques on children’s social behaviors, attachment theorists have underscored the emotional nature of parent-child relationships which are internalized as internal working models and represented in children’s later relationships with others (Bugental & Grusec, 2006; Ladd, 1999; Thompson, 2006).
The present study proposes attachment theory as its main theoretical framework in order to establish a valid research model, since it aims to explore the psychological mechanisms underlying the association between the quality of parent-child relationship and positive peer relationships. In line with attachment theory, the quality of parent-child relationships is hypothesized to have indirect influences on peer acceptance and friendship quality through children’s generalized social orientation.

3.2 Attachment theory

Attachment theory is one of the most influential theories that emphasize the impact of parent-child relationships on human development over the course of life span. According to Bowlby (1907-1990), the founder of attachment theory, the affectionate bond between an infant and the primary caregiver is an evolutionarily adaptive relationship whose principal function is to increase the chances for survival of the child (Bretherton, 1992; McElhaney, Allen, Stephenson, & Hare, 2009). Although Bowlby was influenced by Freudian psychoanalytic theory, there was a noteworthy shift from “the notion of a conflictual relationship between society and child” to “a more positive
view of the adaptive quality of parent-child relationships” (Bugental & Grusec, 2006, p. 368). Ainsworth (1913-1999) is another pioneer of attachment theory, who devised an experiment called *strange situation* and formulated a typology of attachment quality: secure, avoidant, ambivalent or resistant attachment (Grusec & Lytton, 1988).

In attachment theory, parent-child attachment relationship is viewed as a prototype relationship which has a significant impact on children’s subsequent social relationships (Berlin & Cassidy, 1999; England & Sroufe, 1992). Attachment theorists contend that individual differences in attachment quality are explained by parental sensitivity and warmth during infancy, and significantly account for variations in children’s later social development (Thompson, 2006). Parents of securely attached infants have been found to be more responsive, accepting, and cooperative than parents of the insecurely attached (Putallaz & Heflin, 1990).

The concept of internal working model in attachment theory provides an explanation for the mechanism through which early parent-child attachment quality affects children’s later social relationships (Eisenberg, 2006). Internal working models are described as mental representations about previous relationship experiences which are
utilized to make predictions as to how one’s needs can be, or not be, met within interpersonal relationships (Hartup & Laursen, 1999). Internal working models consist of generalized expectations about the self, others, and the relationship between self and others (Hartup & Laursen, 1999). For example, a secure attachment relationship, based on a history of parents’ availability and responsiveness, makes a child develop a sense of self-worth and positive expectations about social interactions, which enables the child to move toward others to build positive social relationships. Conversely, an insecure attachment, following by parents’ insensitive caregiving, leads a child to view the self as unworthy of love and others untrustworthy, which influences the child’s actual social behaviors and the quality of relationships.

### 3.3 Research evidence

A body of literature on children’s social relationships has supported the assumptions and formulations of attachment theory. According to these studies, the quality of early parent-child attachment is strongly related to the quality of subsequent interpersonal relationships, including later parent-child relationships and peer relationships (Thompson, 2006).
First of all, the quality of attachment is found to be one of the most direct and strongest predictors of later parent-child relationships: a secure attachment predicts positive parent-child relationships in childhood and adolescence (Thompson, 2006). From a meta-analysis of the existing longitudinal data, Fraley (2002) concluded that there was a moderate stability of attachment security, versus insecurity, from infancy to late adolescence. However, Thompson (2006) noted that, if parents’ sensitive and supportive care is not maintained for any reason (e.g. due to changes in family ecological conditions), a secure attachment in infancy may not be related to the quality of later parent-child relationships.

The quality of attachment in early childhood is also found to predict children’s later peer relationships. Numerous studies have dealt with the association between parent-child and child-peer relationships since Bowlby argued that there was a strong causal relationship between the quality of parent-child attachment and children’s later capacity to make affectionate bonds (Berlin & Cassidy, 1999). Empirical findings have generally suggested that the quality of attachment successfully predicts children's social competence, peer acceptance, and friendship quality from early childhood to adolescence (England & Sroufe, 1992;
Hartup & Laursen, 1999; Putallaz & Heflin, 1990; Schneider et al., 2001; Sroufe & Fleeson, 1986). Schneider et al. (2001) also reported that this prediction was stronger for peer relationships in middle childhood than in early childhood. In short, previous findings have justified attachment theorists’ argument that the quality of early parent-child relationships sets the stage for successful entry into relationships with others in later life (Sroufe et al., 1999).

However, a secure attachment, if not followed by continuing positive parent-child interactions, is not necessarily a strong predictor of positive peer relationships in the long term (Thompson, 2006). According to Belsky and Fearon (2002), children who were insecurely attached but after were given secure care showed more positive developmental outcomes than children who were securely attached but were not given continued secure care. Since the quality of parent-child relationships is determined by both the past relational history and the current interactional experiences, it might be more sensible to measure the present quality of parent-child relationships, rather than the past attachment quality, when investigating the association between parent-child and child-peer relationships in elementary school years (Thompson, 2006). In fact, a body of research has found that the quality of concurrent
parent-child relationships significantly influences children’s peer relationships in school-aged children (Bohlin, Hagekull, & Rydell, 2000; Ladd, 1999; Thompson, 2006).

In Korean literature, the present quality of parent-child relationships has also been positively related to the quality of peer relationships among preschool children (Y. Lee & Na, 1999), elementary school children (S. B. Kim & Lee, 2014; J. I. Lee et al., 2014; K. S. Lee, Suh, & Shin, 2000; S. H. Moon, 2008), and middle school adolescents (H. J. Jeon & Lee, 2002; Jeong, 2002; Y. Kim & Sim, 2000). But most of these findings had limited implications because the participants of each study were sampled only within a restricted local area. In addition, these studies only suggested the existence of a positive association between parent-child relationships and peer relationships, but could not explain why or how they are interrelated.

4. Processes Underlying Parent-to-Peer Pathway

In this section, a theoretical framework for and empirical findings on the psychological processes underlying the association between parent-child and child-peer relationships are provided. The section is organized into three parts: (1) internal working model and prosocial orientation, (2)
roles of empathy and altruism, and (3) prosocial parent-to-peer pathways. In the first part, the concept of internal working model in attachment theory is reified as prosocial orientation. In the second part, empirical evidence is reviewed on the influences of parent-child relationship quality on children’s empathy and altruism, as well as the influences of empathy and altruism on peer relationships in elementary school years. In the third part, research evidence and the lack thereof on the mediating roles of empathy and altruism on the positive parent-to-peer pathways is described.

4.1 Internal working model and prosocial orientation

From an individual-in-relationships perspective, it is important to understand the continuous interactions between individual characteristics and relationship experiences (W. A. Collins, 1999). As D. Howe (1995) states, the quality of relationships influences individual’s personal characteristics, which in turn affect the later relationship quality.

In attachment theory, the concept of internal working model provides a useful notion about the mechanism of parental influences on children’s peer relationships; yet this concept is too broad and abstract to empirically evaluate its validity (Schneider et al., 2001). One of the ways
attachment theorists have reified this concept is to emphasize the role of children’s social orientation (Thompson, 2015). Social orientation refers to a generalized motivational processes that influence the way in which an individual responds to social environments (Kuperminc & Allen, 2001). Attachment theorists have been more interested in children’s social orientation than specific social behaviors, since internal working models primarily guide children’s psychological processes involving memories, interpretations, and expectations, which, in turn, guide their actual behaviors (Markiewicz, Doyle, & Brendgen, 2001; Putallaz & Heflin, 1990).

According to attachment theorists, a secure attachment establishes a prosocial orientation which helps children to build more positive social relationships with others without being overly concerned with their own needs (Bohlin et al., 2000; Klohnen & John, 1998; Putallaz & Heflin, 1990). *Prosocial orientation* is defined as “a focus on the needs of others and an inclination to enhance the welfare of others” (Côté et al., 2011, p. 217). The term *prosocial* usually collocates with *behaviors* to indicate voluntary and positive actions undertaken to benefit others, such as caring, comforting, sharing, and helping behaviors (Batson & Powell, 2003; Caprara, Alessandri, & Eisenberg, 2012). But
it is also used to refer a type of social orientation that facilitates such prosocial behaviors (Mikulincer & Shaver, 2010). In a broad sense, prosocial behaviors include any behaviors that result in benefiting others regardless of motivations or intentions behind the expressed actions; but prosocial orientation is more an internal characteristic that focuses others’ needs and values others’ well-being (Eisenberg, Spinrad, & Knafo-Noam, 2015).

4.2 Roles of empathy and altruism

In the study of prosocial orientation, empathy and altruism have been studies as two most principal constructs of interest (Batson, Ahmad, Lishner, & Tsang, 2002). Empathy is defined as a cognitive awareness of others’ internal states and the vicarious affective response to others’ emotions (Hoffman, 2001), while altruism refers to a motivation to enhance others’ welfare (Batson & Powell, 2003).

Researchers have suggested that empathy is one of the most fundamental and indispensable factors that enable us to be socially connected with other human beings (Saarni, Campos, Camras, & Witherington, 2006). For most children, empathy begins to emerge by the second year when they become aware of others’ internal states and
able to differentiate others’ perspective from their own one (Hoffman, 2001). Empathy has also been hypothesized to bring about altruism, which in turn leads to prosocial behaviors in actual social interactions (Batson et al., 2002; Eisenberg et al., 2006; Panfile & Laible, 2012; Saarni et al., 2006). As children’s cognitive and emotional understandings mature, empathic responses to others’ distress become more predictive of altruistic orientation and behaviors (Eisenberg et al., 2006; Thompson, 2006).

Researchers have observed large differences among school-aged children in the ability to empathize with others and to show altruistic concerns. It is likely that genetic and biological factors explain some variations in empathy and altruism; but empirical evidence on this issue has so far been very limited. On the other hand, social environments have been found to play a critical role in the origins of empathy and altruism (Eisenberg et al., 2006). Particularly, they have scrutinized parental influences on children’s prosocial development. While social learning theorists emphasize an acquisition of certain prosocial behaviors by parenting practices, attachment theorists underline the emotional quality of parent-child relationships that foster empathy and altruism in children (Zahn-Waxler & Smith, 1992).
A number of studies have supported that a better quality of parent-child relationships predicts higher empathy and altruism in children (N. L. Collins & Feeney, 2000; Eisenberg et al., 2006; Krevans & Gibbs, 1996; Thompson, 2006). Attachment theorists have suggested that empathy is promoted within good quality parent-child relationships that satisfy children’s own needs, encourage their emotional expressions, and discourage excessive self-concerns (Saarni et al., 2006; Zahn-Waxler & Smith, 1992). Also, positive parent-child relationships have been found to help children to be more sensitive to humanistic and unselfish concerns that lead to altruistic behaviors toward others (Mikulincer, Shaver, Gillath, & Nitzberg, 2005; Thompson, 2006). In short, the affectionate relationships between parent and child are “essentially the crucible in which empathy and concern for others' well-being are forged” (Saarni et al., 2006, p. 264).

In Korean literature, several studies have investigated the association between parent-child relationship quality and children’s prosocial orientation. But this association has mostly been examined with preschooler sample: in general, positive parent-child interactions have been related to higher prosocial orientation in young children (M. S. Choi, Moon, Kim, & Lee, 2008; K. H. Kim & Ahn, 2009; Son, 2000).
For school-aged children, however, few studies were conducted on the influence of positive parent-child relationships on prosocial orientation; rather, researchers have focused on the influences of negative parent-child relationships on children’s aggression, social withdrawn, or depression (C. K. Lee & Yang, 2015; Min, 2012; J. H. Park & Lim, 2014).

On the other hand, children’s prosocial orientation appears contributing to their positive peer relationships in school-aged children. As stated in the second section in this chapter, children’s social behaviors are one of the strong predictors at individual level of peer acceptance and friendship quality. Therefore, it seems evident that children’s prosocial orientation behind their prosocial behaviors also influences positive peer relationships in school-aged children. Western researchers have found that empathic and altruistic tendencies significantly predict peer acceptance across the elementary school years (Edwards, Manstead, & Macdonald, 1984; Van Lieshout et al., 1999). Children’s prosocial orientation has also been found to influence their friendship quality, since children who are able to understand others’ emotional states and respond in other-oriented way can easily build and maintain more positive relationships with friends (Eisenberg et al., 2012; Wilson, O’Brien, & Sesma, 2009).
Lately, a Korean study reported a significant cross-sectional and longitudinal relationships between prosocial orientation and peer acceptance among elementary school children (H. Sim, 2005). Following this study, (Yang, Kim, Jung, Cha, & Park, 2007) found that the ability to understand others’ thoughts and emotion was related to higher peer acceptance and lower rejection among school-aged children. Similarly, H. J. Lee (2015) found a positive relationship between empathy and peer acceptance among children in 4th to 6th grade. For middle school children, cognitive and affective empathy were found to influence the quality of peer relationships (Yusun Kang & Park, 2014). The study of J. Y. Lee and Lee (2007) also suggested that altruism affected higher peer acceptance among high school students. However, these researchers could not obtain generalizable findings about the association between prosocial orientation and peer relationships due to the lack of representative data on empathy and altruism in Korean children.

4.3 Prosocial parent-to-peer pathways

In an attachment theoretical framework, children’s prosocial orientation, i.e. empathy and altruism, can be hypothesized to play mediating roles between parent-child relationship quality and positive
peer relationships. This hypothesis appears theoretically plausible because children’s empathy and altruism are found to be fostered within positive parent-child relationships and to predict later peer acceptance and friendship. However, few studies have empirically examined the roles of empathy and altruism as mediators in the parent-to-peer pathways.

Recently, Clark and Ladd (2000, p. 487) proposed a “prosocial-orientation-as-mediator model” within an attachment theoretical framework. They hypothesized that children’s ability to empathize with and willingness to help others would mediate the relationship between parent-child relationships and peer relationships. The results of their path analyses for 192 kindergarten children demonstrated that all the indirect paths from parent-child connectedness through children’s prosocial orientation to peer acceptance, the number of mutual friends, and friendship harmony were positively significant. As hypothesized, children’s prosocial orientation was found to partially mediate the relationship between parent-child connectedness and positive peer relationships. The researchers also evaluated an alternative model called a “prosocial-orientation-as-determinant model,” in which children’s prosocial orientation affects both parent-child relationships
and peer relationships at the same time; but the alternative models were estimated less fit than the originally hypothesized model. Similar to this study, Zhou et al. (2002, p. 898) hypothesized a “parent-driven-socialization model,” in which parental warmth and positive expressivity influence children’s social outcomes by mediating children’s empathy. They found that this model produced better fit than a “child-driven-alternative model” in which children’s empathy determines parental warmth and positive expressivity.

As Clark and Ladd (2000) pointed out, investigators have rarely examined the mediating role of children’s prosocial orientation on the impact of parent-child relationships on children's peer relationships, even though it is theoretically reasonable to hypothesize. On the other hand, a boy of research has examined the mediating role of children’s antisocial orientation, or aggression, in negative parent-to-peer pathways (Denham, Blair, Schmidt, & DeMulder, 2002; Dishion, 1990; Shields & Cicchetti, 2001). Research interests in negative parent-to-peer pathways appear rapidly increasing in Korean literature as well. Recently, a number of studies have explored the psychological mechanisms underlying the association between negative parent-child relationships and negative peer relationships, mainly focusing on children’s

However, a relatively few Korean studies have explored the mechanisms underlying positive parent-to-peer pathways. Despite a general lack of research, some researchers have produced valuable findings. In the study of S. H. Park (2002), significant correlations were found between parental empathic care, children’s helping behaviors, and peer acceptance among children in 5th grade, suggesting that helping behaviors might play a mediating role on the relationship between parental empathic care and peer acceptance. In another study of B. S. Sim and Ko (2008), children’s empathy and cooperation skills were found to partially mediate the negative association between parent-child attachment and peer conflicts among children in 6th grade. They also hypothesized the mediating effects of empathy and cooperation skills on the association between parent-child attachment and peer acceptance, but this hypothesis was not supported. More recent studies have shown that children’s empathy mediated the association between positive parenting behaviors and positive peer relationships (Im & Jin, 2014; S. E. Lee &
Nahm, 2011; J. H. Oh, 2015; Yoon & Jin, 2015). These findings imply that children’s prosocial orientation such as empathy and altruism might play a mediating role on the influence of parent-child relationship quality on positive peer relationships. But these studies have some limitations. First, although research evidence on each hypothesized path was provided, these studies lacked a theoretical background to the mediation model as a whole. Second, the findings of these studies lacked external validity because the sample was not representative.

In summary, from the review of previous literature, more research is needed (1) in an “individual-in-relationships” perspective (W. A. Collins, 1999, p. 3), (2) to overcome “the tendency to focus solely on the study of negative behaviors” (Crick, 1996, p. 2318), and (3) on “the psychological processes underlying” the parent-to-peer pathways (Thompson, 2006, p. 65). Especially in Korea, it is needed to conduct more theory-based studies on the mechanisms of positive parent-to-peer pathways with larger and representative sample of school-aged children. In this regard, this study aims to develop a theoretical model for prosocial parent-to-peer pathways and test its statistical validity using nationally representative data of school-aged children. To be specific, this study seeks to examine (1) the effect of parent-child relationships on peer
acceptance and friendship quality, and (2) the mediating effects of empathy and altruism on the association between parent-child relationships and positive peer relationships among Korean school-aged children.

5. Influence of Individual and Familial Characteristics

To examine the relationships among constructs of interest more accurately, it is required to control for the influences of other variables. In this section, the influences of individual and familial characteristics on children’s prosocial orientation and positive peer relationships are reviewed. The section is organized into two parts: (1) individual characteristics and (2) familial characteristics. In the first part, the influences of age, gender, and academic competence on empathy, altruism, peer acceptance, and friendship quality are explicated. In the second part, the influences of having siblings and family socioeconomic status on empathy, altruism, peer acceptance, and friendship quality are described.
5.1 Individual characteristics

Age

In attachment theory, internal working models are considered as changing with age (Thompson, 2006). As reviewed in the previous section, empathy and altruism are also found to develop as children grow. Overall, prosocial orientation and behaviors tend to increase with age, but in middle childhood, there exist inconsistent findings: some observation studies reported that older children showed less, or no more, empathic and altruistic behaviors than younger children (Eisenberg et al., 2006; Jo, 2011; Zahn-Waxler & Smith, 1992; Zarbatany, Hartmann, & Gelfand, 1985).

On the other hand, age differences in positive peer relationships have been investigated mainly between developmental stages, i.e. early childhood, middle childhood, and adolescence (K. H. Rubin et al., 2006). As reviewed in the first section, the importance of peer acceptance and friendships increases as children grow. Although there is little research on the age differences in peer acceptance and friendship quality during elementary school years, the effects of parent-child relationships on peer relationships might be moderated by age,
since dependency on parents significantly decrease from lower to higher grade in elementary school (Lieberman, Doyle, & Markiewicz, 1999).

**Gender**

Gender differences in children’s prosocial orientation have extensively been investigated by many researchers in the field of childhood studies (Zahn-Waxler & Smith, 1992). Although there exist inconsistent findings depending on designs and measures, school-aged girls were generally found to show more empathic response and altruistic behaviors than boys (Bar-Tal, 1976; Beutel & Johnson, 2004; Feshbach, 1982; Jo, 2011; Ma, Cheung, & Shek, 2007; C. O. Park & Ghim, 2010; Zahn-Waxler & Smith, 1992). But it should be noted that the observed gender differences were weak, and their origins have not yet been clearly explored (Eisenberg, 2006; Eisenberg et al., 2006; S. H. Park, 2002).

Gender differences in children's friendships have also received great attention (Schneider, Wiener, & Murphy, 1994). In elementary school years, children are likely to interact and form friendships primarily with same-sex peers (Rose & Smith, 2009). Researchers have generally not found a significant gender difference in the quantity of friendships; but as for the quality of friendships, girls’
friendships have been characterized as more intimate and collaborative, while boys’ friendships as more assertive and competitive (Parker & Asher, 1993; Rose & Smith, 2009; Schneider et al., 1994).

On the other hand, there has been a lack of research on gender differences in peer acceptance despite the widespread interests in gender issue in child development (K. H. Rubin et al., 2006). This topic has been studied specifically with regard to the association between children’s sex and gender-stereotyped behaviors: boys who display female-stereotyped behaviors tend to be rejected, whereas girls who display male-stereotyped behaviors are generally accepted (K. H. Rubin et al., 2006). In some studies, girls’ higher empathy was found to predict peer acceptance; but, for boys, the influence of empathy on peer acceptance was weaker or even negative (H. J. Lee, 2015; Oberle et al., 2010). These results suggest that the relationship between prosocial orientation and peer acceptance might be moderated by children’s gender.

*Academic competence*

Cognitive competence, in addition to emotional competence, comprises a fundamental part of prosocial development, especially of empathy development (Saarni et al., 2006; Thompson, 2006). Therefore,
academic competence might be positively associated with prosocial orientation of school-aged children (Eisenberg et al., 2006). Academic competence has also generally been reported to have a positive association with peer acceptance and, though weaker, with friendships as well (Van Lieshout et al., 1999; Wentzel, 2009).

However, when longitudinally examined, academic competence might rather be an outcome than a predictor of prosocial orientation and positive peer relationships. A recent study demonstrated that children’s prosocial behaviors in 3rd grade strongly predicted academic achievement in 8th grade, after controlling for prior academic achievement (Caprara, Barbaranelli, Pastorelli, Bandura, & Zimbardo, 2000). Moreover, there exist substantial evidence on the beneficial effects of peer acceptance and friendships on academic achievement in school-aged children (Wentzel, 2009).

5.2 Familial characteristics

Existence of siblings

Characterized by both commonality and complementarity, sibling relationships may provide a different social context from the context provided by parent-child relationships (Teti, 1992). Having
siblings, especially for older siblings, may foster empathy and altruism, since they are more likely to be involved in understanding others’ emotion and giving help and care to others in need from early childhood (Eisenberg et al., 2006; S. H. Park, 2002).

Also, the existence of siblings, for both older and younger siblings, has generally been found to influence peer acceptance and friendship quality, because sibling relationships function as “a natural laboratory” for learning about the social worlds (N. Howe & Recchia, 2014).

However, having siblings can contribute to aggression or negative peer relationships if the quality of sibling relationships is conflictual (Zahn-Waxler & Smith, 1992). Since the quality of sibling relationships was found to be predicted by the quality of parent-child relationships, the quality of sibling relationships may mediate the association between parent-child relationships and peer relationships (Ross & Howe, 2009; Volling & Belsky, 1992). Taken together, if children have good quality relationships with their parents, it is probable that having siblings contribute to prosocial orientation and positive peer relationships.
**Family socioeconomic status**

Family socioeconomic status (SES) has extensively investigated in association with a wide array of children’s developmental outcomes, including social and emotional development: overall, low-SES children tend to show poorer, or less optimal, psychological and behavioral outcomes (Bradley & Corwyn, 2002). However, findings are inconsistent about the association between various indicators of family SES (e.g. family structure, parental education, household income) and children’s prosocial orientation or positive peer relationships (Eisenberg et al., 2006; S. H. Park, 2002). This association, if any, has generally been hypothesized as indirect rather than direct, through more proximal environmental factors like the quality of parent-child relationships (Clark & Ladd, 2000; Eisenberg et al., 2006; Thompson, 2006).

In summary, at individual level, children’s age, gender, and academic competence are likely to be somehow related to prosocial orientation and positive peer relationships. At familial level, the existence of siblings and family socioeconomic status such as family structure, parental education, or household income might be related to prosocial orientation and positive peer relationships. Thus, it is necessary to control for the influences of these individual and environmental
characteristics when examining the influences of parent-child relationship quality on empathy, altruism, peer acceptance and friendship quality.

6. Conclusion

In this chapter, the constructs of interest and the relationships among them have been explicated within an attachment theoretical framework. In view of previous literature, this study seeks to answer the following research questions:

(1) Does the quality of parent-child relationships have an effect on positive peer relationships, i.e. peer acceptance and friendship quality, among school-aged children?

(2) Do children’s empathy and altruism mediate the effect of parent-child relationship quality on positive peer relationships among school-aged children?
CHAPTER III – RESEARCH MODEL

1. Introduction

In Chapter III, a research model of this study is proposed. This chapter is organized into two sections: (1) conceptual model and (2) research hypotheses. In the first section, a conceptual model is proposed based on the previous literature review. The research hypotheses about the relationships among variables are stated in the second section.

2. Conceptual Model

In order to examine the effect of parent-child relationships on peer acceptance and friendship quality, and the mediating effects of empathy and altruism, a conceptual model is established as demonstrated in Figure 1. The proposed model consists of five major variables. Peer acceptance and friendship quality are two distinct but correlated dependent variables indicating positive peer relationships. The quality of parent-child relationships is a major independent variable. Empathy and altruism are two distinct but correlated mediating variables, which are explained by the independent variable and explaining the dependent variables at the same time.
In addition, children’s individual and familial characteristics which could be related to mediators and dependent variables are inserted as control variables in the model. Those variables consist of three children’s individual characteristics, i.e. grade, gender, and academic competence, and four familial characteristics, i.e. existence of siblings, family structure, parental education, and household income level.

3. Research Hypotheses

In order to answer the research questions of this study, two main hypotheses and four sub-hypotheses are developed as follows:
(1) The quality of parent-child relationships will have a positive effect on positive peer relationships.

(1-1) The quality of parent-child relationships will have a positive effect on peer acceptance.

(1-2) The quality of parent-child relationships have a positive effect on friendship quality.

(2) Children’s empathy and altruism will mediate the effect of parent-child relationship quality on positive peer relationships.

(2-1) Children’s empathy and altruism will mediate the effect of parent-child relationship quality on peer acceptance.

(2-2) Children’s empathy and altruism will mediate the effect of parent-child relationship quality on friendship quality.

4. Conclusion

A conceptual model and research hypotheses have been proposed in this chapter. In this study, it is expected to answer the research questions by examining an empirical validity of the proposed model and testing research hypotheses.
CHAPTER IV – METHODS

1. Introduction

In Chapter IV, the quantitative methods to appropriately answer the research questions are explained. This chapter is organized into three sections: (1) data and sample, (2) measurement, and (3) analysis techniques. In the first section, the data to be analyzed and the sample of this study are introduced. In the second section, operational definitions and measures of variables are explained. Lastly, the major techniques for analysis are described in the third section.

2. Data and Sample

This study seeks to statistically test the proposed conceptual model and research hypotheses with large-scale representative data of Korean school-aged children in order to produce precise and generalizable findings. In this study, the data from the South Korean subsample of the International Survey of Children’s Well-Being (ISCWeB) were analyzed. The ISCWeB investigates children’s own perceptions and evaluations of their well-being in 15 countries. Each country’s data consist of a large-scale representative sample of children in three separate school year groups from middle childhood to early adolescence (Rees & Main, 2015).
In 2013, nationally representative South Korean data of the ISCWeB were collected from 7,337 pairs of parents and children in 3rd, 5th, and 7th grade using multi-cluster random sampling method (B. J. Lee et al., 2015). The survey was conducted by the Institute of Social Welfare at Seoul National University with an approval from the Institutional Review Board (IRB) at Seoul National University.\(^1\) The present study was exempted from the IRB oversight, since it involves the analysis of existing data collected in ways that individual subjects can never be identified.\(^2\)

A distribution of grade and family structure of the total participants in the South Korean ISCWeB study is presented in Table 1.

<table>
<thead>
<tr>
<th></th>
<th>3rd grade</th>
<th>5th grade</th>
<th>7th grade</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both parents</td>
<td>2,124</td>
<td>2,181</td>
<td>2,316</td>
<td>6,621 (90.2)</td>
</tr>
<tr>
<td>Single parent</td>
<td>183</td>
<td>202</td>
<td>264</td>
<td>649 (8.8)</td>
</tr>
<tr>
<td>Others</td>
<td>16</td>
<td>24</td>
<td>27</td>
<td>67 (0.9)</td>
</tr>
<tr>
<td><strong>Total (%)</strong></td>
<td><strong>2,323 (31.7)</strong></td>
<td><strong>2,407 (32.8)</strong></td>
<td><strong>2,607 (35.5)</strong></td>
<td><strong>7,337 (100.0)</strong></td>
</tr>
</tbody>
</table>

In the present study, only the data collected from the subsample of children in 3rd (n=2,323) and 5th grade (n=2,407) are

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\(^1\) SNU IRB Approval No. 1310/001-003

\(^2\) SNU IRB Exemption No. E1504/001-003
utilized, since the research focus is on school-aged children. In addition, forty children who do not live with any of their parent are excluded in the analysis, since the independent variable is the quality of parent-child relationships. Therefore, the sample of this study comprises 4,690 children in 3rd and 5th grade who are living with at least one parent.

3. Measurement

The conceptual model of the present study comprises five major variables and seven control variables. The definitions and measures of these variables are explicated in this section. The major variables are measured using indicators developed by Child Trends and Children’s Worlds. The quality of translation was verified by a back translation method when developing the questionnaire for the South Korean ISCWeB study. The control variables are measured using additional

3 Child Trends is a U.S. nonprofit research center that provides valuable information and insights on the well-being of children and youth (See more at: www.childtrends.org).

4 Children’s Worlds is a worldwide research projects on children’s subjective well-being, conducting the International Survey of Children’s Well-Being (ISCWeB) (See more at: http://www.isciweb.org).
indicators for children’s individual and familial background characteristics.

3.1 Dependent variables

Peer acceptance, one of the dependent variables, is defined as the degree to which a child is accepted or liked by other peers (K. H. Rubin et al., 2006). The indicator of this construct was developed by Children’s World, consisting of 2 items: ‘my friends are usually nice to me’ and ‘I have enough friends.’ These self-reported items are measured by five-point Likert scales which range from ‘1=do not agree’ to ‘5=totally agree.’ The original Cronbach’s alpha of these items is unknown. But the Cronbach’s alpha in this data is .81.

The other dependent variable, friendship quality, is defined as “having peer relationships characterized by the mutual experience of support, encouragement, affect, companionship, loyalty/standing up for one another, and trust” (Lippman et al., 2014, p. 13). Its indicator consists of 5 items: ‘I support my friends when they do the right thing,’ ‘I encourage my friends to be the best they can be,’ ‘I help close friends feel good about themselves,’ ‘I am there when my friends need me,’ and ‘I would stand up for my friend if another kid was causing them trouble.’
These self-reported items are measured by five-point Likert scales which range from ‘1=do not agree’ to ‘5=totally agree.’ When originally developed by Child Trends, the Cronbach’s alpha of these items was .91. The Cronbach’s alpha in this data is .88.

3.2 Independent variable

The quality of parent-child relationships is defined as the quality of interactions between a parent and his/her child, “including identification with a parent, affective connection, positive interactions, and constructive communication” (Lippman et al., 2014, pp. 12-13). Its indicator consists of 6 items: ‘my parent shows me he/she is proud of me,’ ‘my parent takes an interest in my activities,’ ‘my parent listens to me when I talk to him/her,’ ‘I can count on my parent to be there when I need him/her,’ ‘my parent and I talk about the things that really matter,’ and ‘I am comfortable sharing my thoughts and feelings with my parent.’ All these child self-reported items are measured by five-point Likert scales which range from ‘1=none of the time’ to ‘5=all the time.’ When originally developed by Child Trends, the Cronbach’s alpha of these items was .92. The Cronbach’s alpha in this data is .90.
3.3 Mediating variables

Empathy, one of the mediating variables, is defined as “the affective and cognitive ability to feel and understand what someone else is feeling” (Lippman et al., 2014, p. 12). The indicator of this construct consists of 4 items: ‘I feel bad when someone gets their feelings hurt,’ ‘I understand how those close to me feel,’ ‘It is important to me to understand how other people feel,’ and ‘I am happy when others succeed.’ These self-reported items are measured by five-point Likert scales which range from ‘1=not all like me’ to ‘5=exactly like me.’ When originally developed by Child Trends, the Cronbach’s alpha of these items was .84. The Cronbach’s alpha in this data is .86.

Altruism, the other mediating variable, is defined as “showing unselfish concern for the welfare of others in one’s thoughts and actions” (Lippman et al., 2014, p. 15). Its indicator consists of 4 items: ‘I go out of my way to help others,’ ‘I help others even if it requires a lot of my time,’ ‘I help others even if the person is a total stranger,’ and ‘I help others even if it is hard for me.’ These self-reported items are measured by five-point Likert scales which range from ‘1=not all like me’ to ‘5=exactly like me.’ When originally developed by Child Trends,
the Cronbach’s alpha of these items was .80. The Cronbach’s alpha in this data is .90.

3.4 Control variables

Children’s self-reported individual characteristics, i.e. grade, gender, academic competence, and parent-reported family characteristics, i.e. existence of siblings, family structure, parental education, household income level, are included as control variables. All of these variables are dichotomous except for children’s academic competence, which is computed as the mean score of self-reported academic achievement in Korean, math, and English. Each of these items is measured by a five-point Likert scale which ranges from ‘1=very poor’ to ‘5=very good.’

Existence of siblings is measured by whether the child is living with ‘0=no siblings’ or ‘1=one or more siblings.’ Family structure is measured by whether the child is living with ‘0=two parents or ‘1=a single parent.’ Parental education is measured by whether the child’s mother or father is ‘0= lower than college graduate’ or ‘1=college graduate or higher.’ Household income level is measured by whether the income-to-need ratio, or the ratio of household income to family size, is ‘0=above 120%’ or ‘1=120% and below’ of the 2013 minimum cost of
living, and whether the household is ‘1= receiving assistances under the National Basic Living Security Act.’ The measures of five major variables and seven control variables are summarized in Table 2. The Korean version questionnaire which was originally used to measure those variables is provided in Appendix (p.136).
### Table 2 Measures of variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Item/Indicator</th>
<th>Scale/Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer acceptance</td>
<td>v1_nice, v2_enough</td>
<td>5-point Likert (α=.81)</td>
</tr>
<tr>
<td>Friendship quality</td>
<td>v1_support, v2_encourage, v3_feel good, v4_there, v5_stand up</td>
<td>5-point Likert (α=.88)</td>
</tr>
<tr>
<td>Parent-child relationship</td>
<td>v1_proud, v2_interest, v3_listen to, v4_count on, v5_talk about, v6_share</td>
<td>5-point Likert (α=.90)</td>
</tr>
<tr>
<td>Empathy</td>
<td>v1_feel bad, v2_understand, v3_important, v4_happy</td>
<td>5-point Likert (α=.86)</td>
</tr>
<tr>
<td>Altruism</td>
<td>v1_go out, v2_time, v3_stranger, v4_hard</td>
<td>5-point Likert (α=.90)</td>
</tr>
<tr>
<td>Grade</td>
<td>Grade in school</td>
<td>0=3rd grade, 1=5th grade</td>
</tr>
<tr>
<td>Gender</td>
<td>Gender of the child</td>
<td>0=boy, 1=girl</td>
</tr>
<tr>
<td>Academic competence</td>
<td>Mean score of child-reported academic achievement in Korean, Math, and English</td>
<td>5-point Likert (α=.68)</td>
</tr>
<tr>
<td>Family structure</td>
<td>Whether the child lives with single parent</td>
<td>0=two parents, 1=single parent</td>
</tr>
<tr>
<td>Parental education</td>
<td>Whether the parent had higher education</td>
<td>0=lower than college, 1=college or higher</td>
</tr>
<tr>
<td>Existence of siblings</td>
<td>Whether the child lives with one or more siblings</td>
<td>0=no sibling, 1=having siblings</td>
</tr>
<tr>
<td>Household income level</td>
<td>Whether the income-to-need ratio is 120% and below of minimum cost of living and/or the household receives national assistances</td>
<td>0=not in poverty, 1=in poverty</td>
</tr>
</tbody>
</table>
4. Analysis Techniques

In order to examine the validity of the conceptual model and test the research hypotheses, Structural Equation Modeling is employed in this study. Structural Equation Modeling (SEM), also called “path analysis with latent variables,” is a statistical method now widely used to represent dependent relationship in multivariate data in social sciences (McDonald & Ho, 2002, p. 64). The main characteristics that distinguish SEM from other multivariate analysis techniques includes (1) the ability to estimate “a series of separate, but interdependent, multiple regression equations simultaneously,” and (2) the ability to represent theoretical concepts as latent variables and “account for measurement error in the estimation process” (Hair, Black, Babin, & Anderson, 2010, p. 617).

Especially when examining a mediation model with multiple mediators or outcome variables, SEM is preferable to conducting several regression analyses as suggested Baron and Kenny (1986), because it simplifies the complicated hypotheses testing into a single analysis and produces more accurate estimates with lower possibility of Type I error (Gunzler, Chen, Wu, & Zhang, 2013). Also, SEM has an advantage over regression analysis in that it estimates...
structural coefficients more accurately, accounting for measurement error (Hair et al., 2010). In this study, SEM is employed as a main technique of analysis for three reasons: (1) to test the validity of the conceptual model including one independent variable, two mediators, and two outcome variables, (2) to test mediating effects of empathy and altruism, and (3) to account for measurement errors of the five major variables, which is measured with multiple items.

Prior to analyzing data with SEM, the issue of missing data due to the nonresponse should be properly addressed. The extent of missing data for individual indicators and cases is reported in Table 3. All items measuring major variables have approximately 1% of missing data, except for the second item of peer acceptance having 2.5%. On the other hand, household income level has more than 10% of missing data, and parental education more than 5%. Of the total sample, 1,023 (21.81%) cases have at least one missing data, which indicates that the extent of missing data cannot be simply ignored.
## Table 3 Missing data for individual indicators and cases

<table>
<thead>
<tr>
<th>Variable</th>
<th>Indicator</th>
<th>Number of missing data</th>
<th>Percent of missing data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Peer acceptance</strong></td>
<td>v1_nice</td>
<td>62</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>v2_enough</td>
<td>117</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>v1_support</td>
<td>45</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>v2_encourage</td>
<td>49</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Friendship quality</strong></td>
<td>v3_feel good</td>
<td>82</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>v4_there</td>
<td>63</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>v5_stand up</td>
<td>68</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Parent-child relationship</strong></td>
<td>v1_proud</td>
<td>39</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>v2_interest</td>
<td>43</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td>v3_listen</td>
<td>56</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>v4_count on</td>
<td>54</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>v5_talk</td>
<td>69</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>v6_share</td>
<td>66</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Empathy</strong></td>
<td>v1_feel bad</td>
<td>34</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td>v2_understand</td>
<td>42</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td>v3_important</td>
<td>50</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td>v4_happy</td>
<td>43</td>
<td>0.9</td>
</tr>
<tr>
<td><strong>Altruism</strong></td>
<td>v1_go out</td>
<td>51</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td>v2_time</td>
<td>53</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td>v3_stranger</td>
<td>53</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td>v4_hard</td>
<td>56</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>Grade</strong></td>
<td></td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Academic competence</strong></td>
<td></td>
<td>73</td>
<td>1.6</td>
</tr>
<tr>
<td><strong>Existence of siblings</strong></td>
<td></td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Family structure</strong></td>
<td></td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Parental education</strong></td>
<td></td>
<td>278</td>
<td>5.9</td>
</tr>
<tr>
<td><strong>Household income level</strong></td>
<td></td>
<td>485</td>
<td>10.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of missing data per case</th>
<th>Number of cases</th>
<th>Percent of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 5</td>
<td>969</td>
<td>20.66</td>
</tr>
<tr>
<td>6 – 10</td>
<td>20</td>
<td>0.43</td>
</tr>
<tr>
<td>11 – 15</td>
<td>17</td>
<td>0.36</td>
</tr>
<tr>
<td>16 – 20</td>
<td>9</td>
<td>0.19</td>
</tr>
<tr>
<td>21 – 25</td>
<td>8</td>
<td>0.17</td>
</tr>
<tr>
<td>Total</td>
<td>1,023</td>
<td>21.81</td>
</tr>
</tbody>
</table>
In order to determine the appropriate remedy, the level of randomness of missing data was examined. The Little’s MCAR test shows that the data were not missing at completely random ($\chi^2 = 3071.104$, df=2107, p<.001). Following the suggestions by Hair et al. (2010), the Expectation-Maximization approach was applied to impute numeric variables. For nonmetric dichotomous variables, i.e. parental education, household income level, missing data is directly incorporated into the analysis by creating new dummy variables, where missing values are recoded into 1 and all the other valid values into 0.

Another procedure before performing SEM involves examining the statistical assumptions underlying multivariate analysis. This examination will be discussed when interpreting descriptive statistics of individual variables.

In the process of SEM analysis, following the recommendation of Anderson and Gerbing (1988) for a two-step approach, the measurement model is estimated separately prior to the simultaneous estimation of the measurement and structural models. All the procedures of statistical analysis are performed with the SPSS 21.0 and the AMOS 21.0.
The validity of the measurement or structural models is assessed using four model fit indices: chi-square ($\chi^2$), Comparative Fit Index (CFI), Tucker Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Residual (SRMR). The criteria for assessing the goodness-of-fit when the sample size is larger than 1,000 are summarized in Table 4 (Hair et al., 2010).

Table 4 Criteria for assessing goodness-of-fit

<table>
<thead>
<tr>
<th>Index</th>
<th>m &lt; 12</th>
<th>12 ≤ m &lt; 30</th>
<th>m ≥ 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$</td>
<td>Insignificant p-value</td>
<td>Significant p-value expected</td>
<td></td>
</tr>
<tr>
<td>CFI or TLI</td>
<td>&gt;.95</td>
<td>&gt;.92</td>
<td>&gt;.90</td>
</tr>
<tr>
<td>RMSEA</td>
<td>&lt;.07</td>
<td>&lt;.07</td>
<td>&lt;.07</td>
</tr>
<tr>
<td>SRMR</td>
<td>Biased upward</td>
<td>&lt;.08</td>
<td>&lt;.08</td>
</tr>
</tbody>
</table>

Note: m is the number of observed variables

5. Conclusion

In this chapter, data and sample, measurement of variables, and analysis techniques have been explained. By analyzing the data using SEM, it is expected to examine the validity of the proposed model and test the research hypotheses.
CHAPTER V – RESULTS

1. Introduction

In Chapter V, the results of analysis according are reported to the sequence of statistical analysis. This chapter is organized into three sections: (1) descriptive statistics, (2) analysis of measurement model, and (3) analysis of structural model. In the first section, descriptive statistics are reported and statistical assumptions are examined. In the second section, analytical results of the measurement model are demonstrated. In the third section, analytical results of the structural model are reported.

2. Descriptive Statistics

In this section, descriptive statistics of five major variables and seven control variables are presented. Also, after examining normality assumption underlying SEM, the measures to deal with the violations of assumption are explained.

2.1 Individual and familial characteristics

Descriptive statistics of control variables show individual and familial characteristics of the sample. In Table 5, frequency and
percent of each category are reported for nonmetric variables; mean and standard deviation are presented for numeric variables.

Table 5 Descriptive statistics of control variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category / Range</th>
<th>Frequency (%)</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade</td>
<td>0=3rd grade</td>
<td></td>
<td>2,307 (49.2)</td>
</tr>
<tr>
<td></td>
<td>1=5th grade</td>
<td></td>
<td>2,383 (50.8)</td>
</tr>
<tr>
<td>Gender</td>
<td>0=boy</td>
<td>2,306 (49.2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1=girl</td>
<td>2,384 (50.8)</td>
<td></td>
</tr>
<tr>
<td>Academic competence</td>
<td>1=very poor to 5=very good</td>
<td></td>
<td>3.77 (.83)</td>
</tr>
<tr>
<td>Existence of siblings</td>
<td>0=no sibling</td>
<td>726 (15.5)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1=having siblings</td>
<td>3,964 (84.5)</td>
<td></td>
</tr>
<tr>
<td>Family structure</td>
<td>0=both parents</td>
<td>4,305 (91.8)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1=single parent</td>
<td>385 (8.2)</td>
<td></td>
</tr>
<tr>
<td>Parental education</td>
<td>0=high school or lower</td>
<td>1,202 (25.6)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1=college or higher</td>
<td>3,210 (68.4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1=missing</td>
<td>278 (5.9)</td>
<td></td>
</tr>
<tr>
<td>Household income level</td>
<td>0=not in poverty</td>
<td>3,807 (81.2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1=in poverty</td>
<td>398 (8.5)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1=missing</td>
<td>485 (10.3)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>4,690 (100.0)</td>
<td></td>
</tr>
</tbody>
</table>

As for grade and gender, the sample was almost equally distributed: 50.8% were in 5th grade, and 50.8% were girls. Children’s self-reported academic competence in three major subjects (M=3.77, SD=.83) was higher than ‘3=average’ but slightly lower than ‘4=good.’ In terms of familial characteristics, 84.5% living with one or more siblings, and 91.8% of children were living with two parents. The number of children whose mother or father had higher education was
3,210 (68.4%). The number of children living in an economically poor family were 398 (8.5%).

### 2.2 Distributions of major variables

Next, descriptive statistics of major variables show the univariate distributions of the observed indicators. In Table 6, minimum and maximum, mean and standard deviation, skewness and kurtosis of 21 items measuring five major variables are presented.

<table>
<thead>
<tr>
<th>Table 6 Descriptive statistics of major variables</th>
<th>Min</th>
<th>Max</th>
<th>Mean (SD)</th>
<th>Skewness (SE)</th>
<th>Kurtosis (SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer acceptance</td>
<td>v1_nice</td>
<td>1-5</td>
<td>4.05 (.97)</td>
<td>-0.95 (.04)</td>
<td>0.44 (.07)</td>
</tr>
<tr>
<td>v2_enough</td>
<td>1-5</td>
<td>4.21 (1.00)</td>
<td>-1.22 (.04)</td>
<td>0.85 (.07)</td>
<td></td>
</tr>
<tr>
<td>Friendship quality</td>
<td>v1_support</td>
<td>1-5</td>
<td>3.64 (1.06)</td>
<td>-0.46 (.04)</td>
<td>-0.38 (.07)</td>
</tr>
<tr>
<td>v2_encourage</td>
<td>1-5</td>
<td>3.53 (1.08)</td>
<td>-0.34 (.04)</td>
<td>-0.57 (.07)</td>
<td></td>
</tr>
<tr>
<td>v3_feel good</td>
<td>1-5</td>
<td>3.51 (1.12)</td>
<td>-0.33 (.04)</td>
<td>-0.62 (.07)</td>
<td></td>
</tr>
<tr>
<td>v4_there</td>
<td>1-5</td>
<td>3.80 (1.08)</td>
<td>-0.63 (.04)</td>
<td>-0.37 (.07)</td>
<td></td>
</tr>
<tr>
<td>v5_standup</td>
<td>1-5</td>
<td>3.88 (1.12)</td>
<td>-0.75 (.04)</td>
<td>-0.28 (.07)</td>
<td></td>
</tr>
<tr>
<td>Parent-child relationship</td>
<td>v1_proud</td>
<td>1-5</td>
<td>4.24 (.98)</td>
<td>-1.16 (.04)</td>
<td>0.56 (.07)</td>
</tr>
<tr>
<td>v2_interest</td>
<td>1-5</td>
<td>4.20 (1.03)</td>
<td>-1.17 (.04)</td>
<td>0.55 (.07)</td>
<td></td>
</tr>
<tr>
<td>v3_listen</td>
<td>1-5</td>
<td>4.16 (1.02)</td>
<td>-1.04 (.04)</td>
<td>0.22 (.07)</td>
<td></td>
</tr>
<tr>
<td>v4_count</td>
<td>1-5</td>
<td>4.39 (.92)</td>
<td>-1.50 (.04)</td>
<td>1.65 (.07)</td>
<td></td>
</tr>
<tr>
<td>v5_talk</td>
<td>1-5</td>
<td>3.99 (1.21)</td>
<td>-0.98 (.04)</td>
<td>-0.11 (.07)</td>
<td></td>
</tr>
<tr>
<td>v6_share</td>
<td>1-5</td>
<td>4.05 (1.17)</td>
<td>-1.07 (.04)</td>
<td>0.17 (.07)</td>
<td></td>
</tr>
<tr>
<td>Empathy</td>
<td>v1_feel bad</td>
<td>1-5</td>
<td>3.47 (1.17)</td>
<td>-0.40 (.04)</td>
<td>-0.68 (.07)</td>
</tr>
<tr>
<td>v2_understand</td>
<td>1-5</td>
<td>3.73 (1.09)</td>
<td>-0.54 (.04)</td>
<td>-0.44 (.07)</td>
<td></td>
</tr>
<tr>
<td>v3_important</td>
<td>1-5</td>
<td>3.68 (1.13)</td>
<td>-0.51 (.04)</td>
<td>-0.55 (.07)</td>
<td></td>
</tr>
<tr>
<td>v4_happy</td>
<td>1-5</td>
<td>3.78 (1.13)</td>
<td>-0.63 (.04)</td>
<td>-0.45 (.07)</td>
<td></td>
</tr>
<tr>
<td>Altruism</td>
<td>v1_go out</td>
<td>1-5</td>
<td>3.47 (1.11)</td>
<td>-0.23 (.04)</td>
<td>-0.75 (.07)</td>
</tr>
<tr>
<td>v2_time</td>
<td>1-5</td>
<td>3.26 (1.18)</td>
<td>-0.11 (.04)</td>
<td>-0.86 (.07)</td>
<td></td>
</tr>
<tr>
<td>v3_stranger</td>
<td>1-5</td>
<td>2.86 (1.28)</td>
<td>0.17 (.04)</td>
<td>-0.98 (.07)</td>
<td></td>
</tr>
<tr>
<td>v4_hard</td>
<td>1-5</td>
<td>3.21 (1.21)</td>
<td>-0.05 (.04)</td>
<td>-0.94 (.07)</td>
<td></td>
</tr>
</tbody>
</table>
The range of all items was 4. The lowest mean score was that of the third item of altruism (M=2.86, SD=1.28): ‘I help others even if the person is a total stranger.” By contrast, the highest mean score was that of the fourth item of parent-child relationship quality (N=4.39, SD=.92): ‘I can count on my parent to be there when I need him/her.’ All items were skewed to the left except the third one from altruism. Two-third of items were platykurtic, while the others leptokurtic.

2.3 Examination of normality assumption

SEM analysis requires the fulfillment of multivariate normality assumption. First of all, univariate normality assumption is examined using the critical ratios for skewness and kurtosis. When each estimate of skewness was divided by its standard error, all the absolute values were greater than 1.96 except for the fourth item measuring altruism. Similarly, all critical ratios for kurtosis exceeded 1.96 except for the fifth item of parent-child relationship quality. Moreover, most control variables are dichotomous, which are not normally distributed by definition. Since univariate normality is not assumed, the assumptions of multivariate normality underlying SEM analysis are also violated. The
lack of normality could lead to other problems such as heteroscedasticity or the existence of univariate and/or multivariate outliers.

Therefore, when estimating parameters and testing mediating effects, an assumption-free bootstrap method which draws a large number of subsamples is employed, because it is known for providing “best” estimates and their standard error (Hair et al., 2010, p. 2). In the following SEM analysis, parameters are estimated by Bootstrap Maximum Likelihood with 1,000 bootstrap samples and the statistical significance of parameters are tested using a 95% bias-corrected percentile method. Also, chi-square model fit is assessed with the Bollen-Stine bootstrap p-value.

3. Analysis of Measurement Model

The structural relationships among constructs cannot be validly examined and interpreted without valid measures (Hair et al., 2010). The five major variables in the conceptual model were measured by 21 items. It is required to confirm the validity of measurement model prior to analyzing structural relationships among variables. In this section, overall measurement model fit and construct validity are assessed.
3.1 Overall measurement model fit

The measurement model of this study is hypothesized to be congeneric as presented in Figure 2. It consists of five unidimensional latent variables with all cross-loadings constrained to zero and all covariance between or within measurement errors fixed at zero. Factor loadings of the first items on each variables were fixed at 1 to set the scale of latent variables.
Figure 2 Measurement model
As the measurement model comprises 21 observed items, it is expected to have a significant values of $\chi^2$, CFI or TLI over .92, RMSEA under .07, and SRMR under .08. The model fit indices for the proposed measurement model are presented in Table 7. As expected, $\chi^2$ was significant at the .001 level, while all the other indices met the aforementioned criteria. These results suggest that the measurement model fits well to the sample data.

Table 7 Measurement model fit

<table>
<thead>
<tr>
<th>$\chi^2$ (DF, P)</th>
<th>CFI</th>
<th>TLI</th>
<th>RMSEA (90% CI)</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>2339.250 (179, .001)</td>
<td>.964</td>
<td>.958</td>
<td>.051 (.049 - .053)</td>
<td>.040</td>
</tr>
</tbody>
</table>

Note: P-value for chi-square is adjusted with Bollen-Stine bootstrap.

3.2 Construct validity

After confirming the validity of the overall measurement model, convergent and discriminant validity of constructs were examined, following suggestions of Hair et al. (2010). First, convergent validity was assessed with factor loadings, average variance extracted, and construct reliability. As shown in Table 8, all the standardized factor loadings were significant and higher than .70 except for the fifth items of friendship quality with .62. All values for average variance extracted
(AVE) were higher than .50, and all values for construct reliability (CR) higher than .80.

Table 8 Estimates of convergent validity

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Estimate</th>
<th>Standardized Estimate</th>
<th>Bootstrap SE</th>
<th>P</th>
<th>AVE*</th>
<th>CR**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer acceptance (PA)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v1_nice</td>
<td>1.000</td>
<td>0.855</td>
<td>0</td>
<td>0</td>
<td>.676</td>
<td>.812</td>
</tr>
<tr>
<td>v2_enough</td>
<td>0.946</td>
<td>0.788</td>
<td>0.027</td>
<td>0.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friendship quality (FQ)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v1_support</td>
<td>1.000</td>
<td>0.751</td>
<td>0</td>
<td>0</td>
<td>.594</td>
<td>.859</td>
</tr>
<tr>
<td>v2_encourage</td>
<td>1.152</td>
<td>0.846</td>
<td>0.019</td>
<td>0.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v3_feelgood</td>
<td>1.188</td>
<td>0.849</td>
<td>0.020</td>
<td>0.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v4_there</td>
<td>1.039</td>
<td>0.764</td>
<td>0.021</td>
<td>0.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v5_standup</td>
<td>0.874</td>
<td>0.623</td>
<td>0.022</td>
<td>0.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent-child relationship quality (PCRQ)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v1_proud</td>
<td>1.000</td>
<td>0.770</td>
<td>0.02</td>
<td>0.03</td>
<td>.615</td>
<td>.894</td>
</tr>
<tr>
<td>v2_interest</td>
<td>1.096</td>
<td>0.770</td>
<td>0.02</td>
<td>0.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v3_listen</td>
<td>1.135</td>
<td>0.803</td>
<td>0.021</td>
<td>0.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v4_count</td>
<td>0.968</td>
<td>0.836</td>
<td>0.021</td>
<td>0.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v5_talk</td>
<td>1.171</td>
<td>0.795</td>
<td>0.029</td>
<td>0.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v6_share</td>
<td>1.181</td>
<td>0.732</td>
<td>0.027</td>
<td>0.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empathy (EM)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v1_feelbad</td>
<td>1.000</td>
<td>0.762</td>
<td>0</td>
<td>0</td>
<td>.611</td>
<td>.831</td>
</tr>
<tr>
<td>v2_understand</td>
<td>1.001</td>
<td>0.822</td>
<td>0.017</td>
<td>0.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v3_important</td>
<td>1.041</td>
<td>0.820</td>
<td>0.019</td>
<td>0.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v4_happy</td>
<td>0.913</td>
<td>0.718</td>
<td>0.018</td>
<td>0.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Altruism (AL)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v1_goout</td>
<td>1</td>
<td>0.805</td>
<td>0</td>
<td>0</td>
<td>.683</td>
<td>.858</td>
</tr>
<tr>
<td>v2_time</td>
<td>1.163</td>
<td>0.882</td>
<td>0.016</td>
<td>0.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v3_stranger</td>
<td>1.087</td>
<td>0.762</td>
<td>0.021</td>
<td>0.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v4_hard</td>
<td>1.152</td>
<td>0.852</td>
<td>0.018</td>
<td>0.01</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Average Variance Extracted = \( \frac{\sum_{i=1}^{n} \lambda_i^2}{n} \) **Construct Reliability = \( \frac{\left( \sum_{i=1}^{n} \lambda_i\right)^2}{\left( \sum_{i=1}^{n} \lambda_i\right)^2 + \left( \sum_{i=1}^{n} \epsilon_i\right)} \)

Note: P-values are reported as bias-corrected two-tailed significance.

Second, discriminant validity was assessed by comparing the values for average variance extracted with the squared correlation
between any two latent variables. In Table 9, estimates of correlation are presented below the diagonal, and squared correlation above the diagonal. All average variance extracted estimates in Table 8 were greater than the squared correlation estimates between corresponding variables in Table 9. Taken together, these results support that, in this measurement model, a set of measured items adequately reflects the latent variable they intended to measure.

**Table 9 Estimates of correlation and squared correlation**

<table>
<thead>
<tr>
<th></th>
<th>PA</th>
<th>FQ</th>
<th>PCRQ</th>
<th>EM</th>
<th>AL</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA</td>
<td></td>
<td>.265</td>
<td>.213</td>
<td>.165</td>
<td>.147</td>
</tr>
<tr>
<td>FQ</td>
<td>.515***</td>
<td></td>
<td>.332</td>
<td>.529</td>
<td>.494</td>
</tr>
<tr>
<td>PCRQ</td>
<td>.462***</td>
<td>.576***</td>
<td></td>
<td>.282</td>
<td>.218</td>
</tr>
<tr>
<td>EM</td>
<td>.406***</td>
<td>.727***</td>
<td>.531***</td>
<td></td>
<td>.506</td>
</tr>
<tr>
<td>AL</td>
<td>.383***</td>
<td>.703***</td>
<td>.467***</td>
<td>.711***</td>
<td></td>
</tr>
</tbody>
</table>

*** p<.001
Note: Below the diagonal are correlation estimates; above the diagonal are squared correlation.

**4. Analysis of Structural Model**

Correlation estimates in Table 9 suggest that all of the bivariate relationships were positively significant. But more accurate estimates of structural relationships among variables should be examined by analyzing the structural model. In this section, overall structural model fit is assessed and the results of hypotheses testing are reported.
4.1 Overall structural model fit

The structural model of this study is specified as presented in Figure 3. The key five variables are included as latent variables, and control variables are included as observed variables.

Figure 3 Structural model

In this structural model, the quality of parent-child relationships is hypothesized to directly influence empathy, altruism, peer acceptance, and friendship quality. Empathy and altruism are each hypothesized to directly influence peer acceptance and friendship quality.
Also, all the control variables are hypothesized to directly influence empathy, altruism, peer acceptance, and friendship quality. The independent and control variables are hypothesized to each have covariance with others.

As the structural model comprises 30 observed variables, it is expected to have a significant values of $\chi^2$, CFI or TLI over .90, RMSEA under .07, and SRMR under .08. The model fit indices for the proposed structural model are reported in Table 10. As expected, $\chi^2$ was significant at the .001 level, while all the other indices met the aforementioned criteria. These results suggest the proposed structural model fits the sample data well.

<table>
<thead>
<tr>
<th>Table 10 Structural model fit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$ (DF, P)</td>
</tr>
<tr>
<td>3025.836 (323, .001)</td>
</tr>
</tbody>
</table>

Note: P-value for chi-square is adjusted with Bollen-Stine bootstrap.

In the structural model, the fraction of variance in endogenous variables that is accounted for by a set of influencing variables is represented by the value of squared multiple correlation. The squared multiple correlation values of dependent and mediating variables are reported in Table 11. In this model, the proportion of
explained variance in peer acceptance was 28.3%, while friendship quality was 64.6%. The analytic model explained 31.4% of variance in empathy and 23.6% of variance in altruism.

**Table 11 Estimates of squared multiple correlation**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Squared multiple correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer acceptance</td>
<td>.283</td>
</tr>
<tr>
<td>Friendship quality</td>
<td>.646</td>
</tr>
<tr>
<td>Empathy</td>
<td>.314</td>
</tr>
<tr>
<td>Altruism</td>
<td>.236</td>
</tr>
</tbody>
</table>

**4.2 Parameter estimation**

After confirming the validity of the overall structural model, individual parameter estimates and their statistical significance are examined. The main results are summarized in Table 12 and Figure 4.

**Table 12 Estimates of relationships among major variables**

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized estimate</th>
<th>Standardized estimate</th>
<th>Bootstrap SE</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>EM ← PCRQ</td>
<td>0.573</td>
<td>0.484</td>
<td>.023</td>
<td>.001</td>
</tr>
<tr>
<td>AL ← PCRQ</td>
<td>0.506</td>
<td>0.428</td>
<td>.022</td>
<td>.003</td>
</tr>
<tr>
<td>PA ← EM</td>
<td>0.104</td>
<td>0.112</td>
<td>.028</td>
<td>.003</td>
</tr>
<tr>
<td>← AL</td>
<td>0.113</td>
<td>0.121</td>
<td>.024</td>
<td>.001</td>
</tr>
<tr>
<td>← PCRQ</td>
<td>0.214</td>
<td>0.203</td>
<td>.018</td>
<td>.002</td>
</tr>
<tr>
<td>FQ ← EM</td>
<td>0.309</td>
<td>0.346</td>
<td>.022</td>
<td>.002</td>
</tr>
<tr>
<td>← AL</td>
<td>0.302</td>
<td>0.338</td>
<td>.019</td>
<td>.003</td>
</tr>
</tbody>
</table>

Note: P-values are reported as bias-corrected two-tailed significance.
The direct effects of parent-child relationship quality on peer acceptance (β=.303, p=.003) and friendship quality (β=.203, p=.002) were positively significant, suggesting that children having better quality parent-child relationships have more positive peer relationships. The effects of parent-child relationship quality on empathy (β=.484, p=.001) and altruism (β=.428, p=.003) were also positively significant, which signifies that children having better quality parent-child relationships show higher empathy and altruism.

The effects of empathy on peer acceptance (β=.112, p=.003) and friendship quality (β=.346, p=.002) were positively significant, which means that children with higher empathy are better accepted by peers and have better quality friendships. The effects of altruism on peer
acceptance ($\beta=.121, p=.001$) and friendship quality ($\beta=.338, p=.003$) were positively significant as well, indicating that children with higher altruism are better accepted by peers and have better quality friendships.

On the other hand, the effects of control variables on mediating and dependent variables are reported in Table 13. To summarize the relationships that were significant at the .05 level, children in 5th grade have higher empathy ($\beta=.037, p=.009$) and higher altruism ($\beta=.065, p=.002$) than children in 3rd grade. They are also better accepted by peers ($\beta=.060, p=.001$) but have worse quality friendships ($\beta=-.027, p=.011$) than younger children. Girls have higher empathy ($\beta=.118, p=.002$), are better accepted by peers ($\beta=.056, p=.003$), and have better quality friendships ($\beta=.043, p=.001$) than boys. Academic competence is positively associated with empathy ($\beta=.128, p=.002$), altruism ($\beta=.112, p=.002$), peer acceptance ($\beta=.135, p=.001$), and friendship quality ($\beta=.096, p=.001$). Children who have one or more siblings are better accepted by peers ($\beta=.055, p=.003$) than those who do not have siblings. Children whose mother or father had higher education have higher empathy ($\beta=.037, p=.009$) and better quality friendship ($\beta=.023, p=.037$). In this model, living with a single parent or in an
economically poor family did not have a direct effect on children’s prosocial orientation nor positive peer relationships.

**Table 13 Estimates of relationships between major and control variables**

<table>
<thead>
<tr>
<th></th>
<th>→ EM</th>
<th>→ AL</th>
<th>→ PA</th>
<th>→ FQ</th>
<th>↔ PCRQ</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standardized Estimates (P)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade</td>
<td>0.037</td>
<td>0.065</td>
<td>0.060</td>
<td>-0.027</td>
<td>0.017</td>
</tr>
<tr>
<td></td>
<td>(.009)</td>
<td>(.002)</td>
<td>(.001)</td>
<td>(.011)</td>
<td>(.246)</td>
</tr>
<tr>
<td>Gender</td>
<td>0.118</td>
<td>0.024</td>
<td>0.056</td>
<td>0.043</td>
<td>0.039</td>
</tr>
<tr>
<td></td>
<td>(.002)</td>
<td>(.079)</td>
<td>(.003)</td>
<td>(.001)</td>
<td>(.017)</td>
</tr>
<tr>
<td>Academic competence</td>
<td>0.128</td>
<td>0.112</td>
<td>0.135</td>
<td>0.096</td>
<td>0.301</td>
</tr>
<tr>
<td></td>
<td>(.002)</td>
<td>(.002)</td>
<td>(.001)</td>
<td>(.001)</td>
<td>(.001)</td>
</tr>
<tr>
<td>Existence of siblings</td>
<td>0.004</td>
<td>0.018</td>
<td>0.055</td>
<td>0.013</td>
<td>-0.020</td>
</tr>
<tr>
<td></td>
<td>(.701)</td>
<td>(.159)</td>
<td>(.003)</td>
<td>(.227)</td>
<td>(.181)</td>
</tr>
<tr>
<td>Family structure</td>
<td>0.009</td>
<td>-0.017</td>
<td>-0.008</td>
<td>0.014</td>
<td>-0.080</td>
</tr>
<tr>
<td></td>
<td>(.576)</td>
<td>(.300)</td>
<td>(.690)</td>
<td>(.307)</td>
<td>(.002)</td>
</tr>
<tr>
<td>Parental education</td>
<td>0.037</td>
<td>0.019</td>
<td>-0.029</td>
<td>0.023</td>
<td>0.108</td>
</tr>
<tr>
<td></td>
<td>(.009)</td>
<td>(.170)</td>
<td>(.053)</td>
<td>(.037)</td>
<td>(.002)</td>
</tr>
<tr>
<td>Parental education missing</td>
<td>0.011</td>
<td>-0.001</td>
<td>0.002</td>
<td>-0.001</td>
<td>-0.030</td>
</tr>
<tr>
<td></td>
<td>(.568)</td>
<td>(.900)</td>
<td>(.926)</td>
<td>(.887)</td>
<td>(.086)</td>
</tr>
<tr>
<td>Household income level</td>
<td>-0.005</td>
<td>-0.004</td>
<td>-0.025</td>
<td>-0.007</td>
<td>-0.072</td>
</tr>
<tr>
<td></td>
<td>(.722)</td>
<td>(.798)</td>
<td>(.121)</td>
<td>(.575)</td>
<td>(.002)</td>
</tr>
<tr>
<td>Household income missing</td>
<td>0.015</td>
<td>0.024</td>
<td>-0.013</td>
<td>-0.013</td>
<td>-0.019</td>
</tr>
<tr>
<td></td>
<td>(.281)</td>
<td>(.083)</td>
<td>(.340)</td>
<td>(.287)</td>
<td>(.207)</td>
</tr>
</tbody>
</table>

Note: P-values are reported as bias-corrected two-tailed significance.

The covariance estimates between the quality of parent-child relationships and other control variables are also presented in Table 13. Among children’s individual characteristics, being a girl and having higher academic competence are related to a better quality of parent-
child relationships. Among familial characteristics, living with two parents, having a parent with higher education, and not living in an economically poor family are also related to better quality relationships with parent.

4.3 Decomposition of effects

To test the research hypotheses of the study, the total effects of parent-child relationship quality on peer acceptance and friendship quality were decomposed into direct and indirect effects with bootstrap method. The estimates of total, direct, and indirect effects as well as their statistical significances are demonstrated in Table 14.

**Table 14 Estimates of total, direct, and indirect effects**

<table>
<thead>
<tr>
<th></th>
<th>Total effect Estimate</th>
<th>SE</th>
<th>Direct effect Estimate</th>
<th>SE</th>
<th>Indirect effect Estimate</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA ← PCRQ</td>
<td>0.453** 0.028 (0.409)</td>
<td></td>
<td>0.335** 0.024 (0.303)</td>
<td></td>
<td>0.117** 0.013 (0.106)</td>
<td></td>
</tr>
<tr>
<td>FQ ← PCRQ</td>
<td>0.544** 0.019 (0.515)</td>
<td></td>
<td>0.214** 0.018 (0.203)</td>
<td></td>
<td>0.330** 0.015 (0.312)</td>
<td></td>
</tr>
</tbody>
</table>

Note: Values in parenthesis are standardized estimates and standard errors. P-values are reported as bias-corrected two-tailed significance.

The total effect of parent-child relationship quality on peer acceptance (β=.409, p=.003) was positively significant. This result support the hypothesis 1-1: the quality of parent-child relationships has
a positive effect on peer acceptance. Also, the total effect of parent-child relationship quality on friendship quality ($\beta=.515$, $p=.002$) was positively significant. This result support the hypothesis 1-2: the quality of parent-child relationships has a positive effect on friendship quality. Taken together, these results support the first main hypothesis: the quality of parent-child relationships has a positive effect on positive peer relationships.

On the other hand, the indirect effect of parent-child relationship quality on peer acceptance ($\beta=.106$, $p=.002$) was positively significant. This result support the hypothesis 2-1: children’s empathy and altruism mediate the effect of parent-child relationship quality on peer acceptance. Also, the indirect effect of parent-child relationship quality on friendship quality ($\beta=.312$, $p=.002$) was positively significant. This result support the hypothesis 2-2: children’s empathy and altruism mediate the effect of parent-child relationship quality on friendship quality. But given the significant direct effects of parent-child relationship quality on peer acceptance and friendship quality, the mediating effects of empathy and altruism are a partial mediation. Taken together, these results support the second main hypothesis: children’s
empathy and altruism partially mediate the effect of parent-child relationship quality on positive peer relationships.

5. Conclusion

In this chapter, the results of statistical analysis have been reported. The analytical results supported the research hypotheses on (1) the effects of parent-child relationship quality on positive peer relationships, and (2) the mediating effects of empathy and altruism. In conclusion, the research questions of this study can be answered as follows:

(1) The quality of parent-child relationships has a positive effect on peer acceptance and friendship quality among Korean school-aged children.

(2) Children’s empathy and altruism partially mediate the effect of parent-child relationship quality on positive peer relationships among Korean school-aged children.
CHAPTER VI – CONCLUSION

1. Introduction

In Chapter VI, the results of the study are discussed within a larger context. This chapter is organized into four sections: (1) findings, (2) theoretical implications, (3) practical implications, and (4) limitations and suggestions. In the first section, main findings from the model testing are recapitulated and discussed. In the second section, theoretical implications of the present study are stated. In the third section, practical implications for Korean parents, policy makers, and social workers are stated. In the fourth section, limitations of the present study and suggestions for future study are described.

2. Findings

The purpose of this study was to examine (1) the effect of parent-child relationships on peer acceptance and friendship quality, and (2) the mediating effects of empathy and altruism on the association between parent-child relationships and positive peer relationships among Korean school-aged children. Based on the attachment theoretical framework and empirical evidence, the research model for prosocial parent-to-peer pathways was developed and empirically tested by analyzing nationally
representative data of children in 3rd and 5th grade. In this section, four main findings from the model testing are summarized and discussed with regard to previous research findings.

**Effect of parent-child relationships on empathy and altruism**

First of all, the quality of parent-child relationships was found to have positive effects on children’s empathy and altruism. This result concurs with previous findings that a better quality of parent-child relationships predicts higher empathy and altruism in children (N. L. Collins & Feeney, 2000; Eisenberg et al., 2006; Krevans & Gibbs, 1996; Thompson, 2006). Korean literature on the association between parent-child relationship quality and children’s prosocial orientation has mainly focused on children in early childhood (M. S. Choi et al., 2008; K. H. Kim & Ahn, 2009; Son, 2000). But this study shows that the quality of parent-child relationships does matter to school-aged children as well.

In addition, the post hoc pairwise comparisons confirmed that the effects of parent-child relationship quality on empathy and altruism were significantly larger than the effects of any control
variables. This result suggests that, even after considering diverse individual and familial characteristics, the quality of parent-child relationships is one of the most influential factors explaining school-aged children’s empathy and altruism. This finding is inconsistent with a previous Korean exploratory study, in which school-aged children’s prosocial orientation was only significantly associated with age and gender, but not with other individual and environmental variables including the quality of parent-child interactions (Jo, 2011). However, the results of the aforementioned study could not be generalized to all Korean children because a relatively small number of its participants (n=108) were sampled in just one elementary school. With nationally representative large-scale data, the present study found that the quality of parent-child relationships had stronger effects on empathy and altruism than other significant variables such as grade, gender, academic competence, and parental education. In sum, good quality relationships with parents can be considered as one of the essential conditions where Korean children’s prosocial orientation is fostered.

5 The critical ratios for difference between estimates ranged from 7.22 to 15.98.
Effect of empathy and altruism on positive peer relationships

Secondly, children’s empathy and altruism were found to have positive effects on peer acceptance and friendship quality. These results support the previous findings that empathic ability and altruistic tendency are significantly related to peer acceptance and friendship quality in middle childhood (Edwards et al., 1984; Eisenberg et al., 2012; Eugene Han, 2005; H. Sim, 2005; Van Lieshout et al., 1999; Wilson et al., 2009).

According to previous literature, the association between prosocial orientation and positive peer relationships can be mediated by actual prosocial behaviors: that is, empathic understanding on peers’ needs and a concern for their well-being may bring about actual behaviors that benefit other peers, thereby contributing good quality peer relationships (Mikulincer & Shaver, 2010; K. H. Rubin et al., 2006). Admittedly, prosocial behaviors in a certain situation are not determined solely by an individual’s prosocial orientation, but influenced by various other factors (Eisenberg et al., 2015). But the results of this study show that school-aged children’s prosocial orientation, in general, contributes to positive peer relationships. As Saarni et al. (2006) suggested, prosocial orientation can be regarded as an indispensable characteristics that enable children to positively relate with other peers.
In the meantime, the post hoc pairwise comparisons following the second hypothesis testing reported unexpected but interesting findings about the differences between peer acceptance and friendship quality: the effects of empathy and altruism on friendship quality were significantly larger than their effects on peer acceptance. These results suggest that children’s prosocial orientation might be a stronger predictor of friendship quality than of peer acceptance. The quality of friendships is likely to be primarily influenced by personal characteristics of the self and friends, because friendships, by definition, are dyadic peer relationships characterized by a positive affection tie; but peer acceptance can be influenced both by personal characteristics and peer group contexts since it is a group-level relationship (Gifford-Smith & Brownell, 2003). In fact, the squared multiple correlation of peer acceptance (28.3%) was much smaller than that of friendship quality (64.6%). This result indicates that peer acceptance is more likely to be determined by peer-group-related contextual factors. In the present model, for example, the effect of academic competence on peer acceptance

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6 For empathy, the critical ratio for difference between its effects on peer acceptance and friendship quality was 7.47, while for altruism, the critical ratio was 7.49.
acceptance ($\beta=.135$, $p=.001$) was not significantly different from the effects of empathy ($\beta=.104$, $p=.003$) and altruism ($\beta=.113$, $p=.001$) on peer acceptance. These results might be interpreted within Korean school context where academic achievement is a major standard by which children evaluate each other (Chen, ChunG, & Hsiao, 2009).

In Korea, several studies have reported the positive association between prosocial orientation and peer acceptance in elementary school (H. J. Lee, 2015; C. O. Park & Ghim, 2010; H. Sim, 2005). Surprisingly, however, there exist little empirical research on the association between prosocial orientation and friendship quality, although prosocial orientation seems to be more closely related to friendship quality than to peer acceptance. Also, there has rarely been empirical research in Korea on the similarities and differences in predictors between peer acceptance and friendship quality. Distinguishing peer acceptance and friendship quality, this study provides more detailed findings about the association between prosocial orientation and two domains of positive peer relationships among school-aged children. Further studies are called for to explain the mechanisms behind the differences between peer acceptance and friendship quality.
**Indirect effect of parent-child relationships on positive peer relationships**

Thirdly, children’s empathy and altruism were found to partially mediate the effects of parent-child relationship quality on peer acceptance and friendship quality. This result supports the “prosocial-orientation-as-mediatior model” proposed by Clark and Ladd (2000, p. 487). This finding provides valuable evidence on the mechanisms underlying positive parent-to-peer pathways among South Korean children. This study empirically examined the speculation of S. H. Park (2002) that prosocial characteristics would mediate the relationship between positive parenting and peer acceptance. Also, the present study complements the findings of B. S. Sim and Ko (2008) that failed to support the hypothesis that children’s empathy and cooperation skills would mediate the association between parent-child attachment and peer acceptance. The observed significant indirect pathways from parent-child relationships through children’s prosocial orientation to positive peer relationships are generally consistent with recent findings on the mediating roles of children’s empathy between positive parenting and positive peer relationships (Im & Jin, 2014; S. E. Lee & Nahm, 2011; J. H. Oh, 2015;
Yoon & Jin, 2015). But the present study has unique strengths over these studies: the research model was developed based on solid theoretical backgrounds and was statistically examined with large-scale representative data. In summary, this study provides one possible explanation with scientific rigor to the question on how the quality of parent-child relationships affects the quality of peer relationships among South Korean school-aged children.

**Direct effect of parent-child relationships on positive peer relationships**

Lastly, it should be noted that the direct effects of parent-child relationships on positive peer relationships still remained significant after accounting for the indirect effects through empathy and altruism. These results can be explained in two ways: first, the quality of parent-child relationships does directly influence positive peer relationships, and second, there exist other significant but omitted variables that mediate the influences of parent-child relationship quality on positive peer relationships. As for the second hypothesis, it might be possible that there are different mediators other than children’ prosocial orientation in positive parent-to-peer pathways. For example, several Korean researchers have investigated the mediating roles of emotion regulation
on the association between parent-child relationships and peer relationships in middle childhood (Y. S. Choi & Park, 2015; M. H. Jang & Lee, 2011; Kwon & Jin, 2014; Nam & Lee, 2014). These studies suggest that school-aged children’s emotional competence, in concert with prosocial orientation, may also explain the psychological mechanisms through which parent-child relationship quality influences positive peer relationships.

Furthermore, a significant difference was observed in the direct effects of parent-child relationship quality between two domains of positive peer relationships: the direct effect of parent-child relationship quality was significantly larger on peer acceptance than on friendship quality. This result implies that the omitted mediators, if any, are more likely to explain the pathways from parent-child relationship quality to peer acceptance. Taken together, more studies are needed on social and emotional mechanisms through which parent-child relationship quality has an impact on peer acceptance and friendship quality among school-aged children.

7 The critical ratio for difference between the direct effects on peer acceptance and friendship quality was 5.17.
3. Theoretical Implications

This study may be one of the first studies in Korea that develop a theoretical model for prosocial parent-to-peer pathways and empirically examine its validity with large-scale representative data. In this section, theoretical implications of the present study are stated.

**Perspectives**

First of all, this study has brought attention to the research needs for studying children’s peer relationships from an “individual-in-relationships” perspective (W. A. Collins, 1999). Also, this study attempted to focus on positive rather than negative peer relationships from a perspective that “the absence of problems or failures does not necessarily indicate proper growth and success” (Ben-Arieh, 2006, p. 804). In this study, two domains of peer relationships are differentially investigated with some interesting findings. By scrutinizing positive peer relationships, this study calls for more research efforts to deflect the mainstream of research attention away from “fascination with problems and pathology” (Saleebey, 2013, p. 2).
Theoretical framework and research model

Also, this study has suggested attachment theory as a main theoretical framework and empirically tested its validity. The structural model of this study was statistically fit to the data collected from the representative sample of South Korean children in 3rd and 5th grade living with at least one parent. This result indicates that the attachment theoretical framework and the proposed conceptual model can be validly applied to explain the mechanisms underlying the association between parent-child relationship quality and positive peer relationships among South Korean school-aged children.

Although attachment theory is one of the basic theories explaining children’s social development. There has been no study in Korean literature that conceptualized prosocial orientation as a form of internal working models within an attachment theoretical framework. However, this study provides a piece of evidence that children’s prosocial orientation such as empathy and altruism might function as one form of internal working models, which are developed by the quality of parent-child relationships and guide children’s psychological processes behind their actual behaviors, which in turn influence the quality of peer
relationships (Markiewicz et al., 2001; Putallaz & Heflin, 1990). By modeling and examining prosocial parent-to-peer pathways, this study provides one plausible theoretical model for understanding Korean school-aged children’s prosocial development.

4. Practical Implications

The findings of the study also have practical implications for parents, policy makers, and social workers within broader Korean social contexts.

**Implications for parents**

First, this study brings attention to the importance of maintaining good quality parent-child relationships in prosocial development during elementary school years. The majority of Korean parents want and try to raise their children to be happy and competent. When children enter school, however, many parents tend to only focus on children’s academic achievement and spend substantial resources to make them stay ahead at school, hoping to ensure the best possible opportunities for them to succeed in school life and in the future (Sharma, 2013). But, it may deteriorate the quality of parent-child relationships during the school-age years. A longitudinal study that analyzed the data
from Korea Youth Panel Study (KYPS), in fact, reported that parent-child attachment relationship linearly decreased from middle childhood to early adolescence (Eunyoung Han, 2014).

In this context, it is noteworthy that the quality of parent-child relationships has direct and indirect influences on school-aged children’s positive peer relationships, which function as the contexts where children’s present happiness is measured, and their adaptive skills and behaviors for later successful development are fostered (Hartup & Laursen, 1999). If parents neglect the importance of good quality parent-child relationships and regard children’s prosocial development as peripheral to cognitive development, their effort to raise happy and competent children could go in vain, contrary to their expectations. One of the most important legacies that parents can leave to their children would be a history of positive parent-child relationships, such as affective connections and constructive communications. Good quality parent-child relationships would provide children with a foundation for the ability to empathize with and care about others, thereby enabling them to flourish in positive social relationships.
Implications for policy makers

Second, this study highlights the need for changes in Korean educational and social environments in a way that encourages positive peer relationships in schools and positive parent-child relationships in families.

In educational environments where student abilities are measured, evaluated, and compared mostly by one’s test scores and ranks, it would be hard to experience positive peer relationships to the fullest extent. In fact, in an international comparison study, Korean children expressed an ambivalence about peers between source of joy and competing rival, and reported the lowest satisfaction with peer relationships among four countries (K. Moon, Kim, Kim, Lee, et al., 2008; K. Moon, Kim, Kim, & Min, 2008). The aforementioned tendency of Korean parents to emphasize children’s academic achievement may also be relevant to this competitive education climate.

However, the goal of education is not solely on students’ academic achievement, but should involve developing personally fulfilled and socially responsible citizens (Gordon, 2009). Recently, the National Assembly of the Republic of Korea passed a Character Education Promotion Act, which requires all Korean schools to teach
students how to develop personal qualities and competencies necessary for living with others, in community, and in nature. The legislation has a significance in that it can set grounds for promoting children’s prosocial characteristics in school settings. But this law may be ineffective if it does not affect the overall educational environments where competition between peers and individual academic achievement are still most highly valued. Moreover, prosocial characteristics such as empathy and altruism cannot be merely taught by means of formal school lessons, but can be fostered in positive social contexts, primarily within a good quality of parent-child relationships.

On the other hand, in social environments where parents have to work for long hours under stressful conditions, it would be hard for them to have enough time and energy available for positive interactions with their children. Unfortunately, Korea has consistently been ranked among the top in OECD countries for annual and weekly working hours (OECD, 2015). A lack of family-friendly atmosphere at large could also be a serious impediment to positive child development. Thus, our society should make policy efforts to improve working parents’ work-family balance and encourage them to foster positive relationships
with their children. These changes in our social environments would indirectly help more children flourish in their social relationships.

**Implications for social workers**

Finally, this study provides useful evidence to develop preventive and promotive programs for enhancing positive peer relationships in school-aged children by focusing on their prosocial orientation. As S. G. Lee (2007) noted, the majority of social work practice aims to change clients’ psychosocial aspects, which in turn can bring about the actual target changes. Hence, investigations on the psychological mechanisms could inform social workers of where and how to intervene. In Korea, a number of social work practices have targeted at reducing children’s aggressive or withdrawn orientation and behaviors in order to solve and prevent peer-related problems. But, our society needs to implement more social interventions focusing on prosocial orientation in order to help children flourish in peer relationships.

These interventions could be a preventive program for children at risk of negative or low quality parent-child relationships. Although good quality parent-child relationships are crucial for positive
peer relationships, it might be hard for social workers to directly intervene in parent-child relationships to promote children’s peer relationships, since the quality of parent-child relationships is likely to be influenced by various factors, such as parental physical and mental health or family SES, which are harder to change just by social work practices (Clark & Ladd, 2000; Eisenberg et al., 2006; Thompson, 2006). Rather, social workers can intervene in more proximal predictors of positive peer relationships – children’s prosocial orientation. This intervention strategy can contribute to the efforts of social work field to provide all children with the best and equal opportunity for positive development.

Also, social interventions focusing on prosocial orientation could be a universal program for general population. In Western society, a number of school-based or community-based programs whose objective is to increase prosocial orientation and behaviors have been developed and tested with general children from early childhood to adolescence (Caprara et al., 2014; Gordon, 2003; Ramaswamy & Bergin, 2009; Schonert-Reichl, Smith, Zaidman-Zait, & Hertzman, 2012; Solomon, Watson, Delucchi, Schaps, & Battistich, 1988). In Korea, there exist some evidence-based programs targeting preschoolers’ prosocial
orientation and behaviors, but few exist for elementary school children (S. M. Song et al., 2015). But, some researchers have recently attempted to develop and implement classroom-based programs to promote children’s prosocial orientation (Y. H. Kim & Lee, 2012; S. M. Song et al., 2015). The present study provides empirical evidence for such programs by focusing on the roles of empathy and altruism. These kinds of social interventions targeting prosocial orientation would contribute to the fields’ efforts not only to bring children up “from negative eight to zero” but also to make them “rise from zero to positive eight” (Gable & Haidt, 2005, p. 103).

5. Limitations and Suggestions
This study has several limitations due to secondary data analysis. First, because of the absence of panel data, this study could only explore the cross-sectional relationships among variables which can actually vary across time. Although the directions of influences between variables are specified based on theories and previous research, longitudinal data analysis is required to increase the internal validity of this study. Especially when testing mediated relationships, longitudinal analysis is
essential to ascertain causal relationships among variables (Eisenberg et al., 2006).

Second, the results of the study may have been affected by common method bias due to the use of child self-reported measures. Peer acceptance was not rated by other peers; friendship quality was not mutually measured with friend-reported measures; parent-child relationship quality was also not mutually measured with parent-reported measures. These problems are attributable to intrinsic limitations of a large-scale, self-report survey method. Although convergent and discriminant validity of the measurement model was assessed before analyzing the structural relationships among variables, this study could not perfectly rule out the possibility of common method bias. In the following studies, appropriate remedies are needed to avoid or minimize possible common method bias from data collection to data analysis.

Third, the research model of this study may have omitted some important variables explaining school-aged children’s positive peer relationships, particularly peer acceptance. The structural model explained a relatively substantial amount of variances in friendship quality (64.6%) but not large peer acceptance (28.3%). These results imply that some significant variables explaining peer acceptance were
not included in the research model. In the following studies, it is needed to find a better model for explaining peer acceptance and to compare similarities and differences in predictors and the mechanisms thereof between peer acceptance and friendships among school-aged children.

6. Conclusion

This study provides a simple but significant conclusion: children who have grown within good quality relationships with parents are likely to be more empathic and altruistic toward others, thereby being better accepted by peers and having better friendships during elementary school years. This study calls for more future studies on Korean children’s prosocial orientation and positive peer relationships with more scientific rigor and practical relevance. As Gordon (2009, p. 100) claims, the illiterate in the next generation would not be “those who don't know how to read” but “those who don't know how to relate.” Supporting parents to maintain good quality relationships and providing all children with good opportunities for prosocial development would be one of the most powerful measures to make our children flourish in their social lives, and raise them to be caring and responsible adults in the future.
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APPENDIX

Korean Version Questionnaire

1. Peer acceptance

<table>
<thead>
<tr>
<th>다음에 대해 얼마나 찬성하나요?</th>
<th>찬성하지 않음</th>
<th>약간 찬성</th>
<th>어느 정도 찬성</th>
<th>상당히 찬성</th>
<th>완전히 찬성</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) 내 친구들은 대체로 나에게 잘 대해준다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(2) 나는 친구들이 충분히 많이 있다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

2. Friendship quality

<table>
<thead>
<tr>
<th>다음의 문장들이 자신의 모습을 얼마나 잘 설명하는지 표시해주세요.</th>
<th>전혀 비슷하지 않다</th>
<th>약간 비슷하다</th>
<th>비슷한 편이다</th>
<th>상당히 비슷하다</th>
<th>매우 비슷하다</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) 나는 옳은 일을 하고 있는 친구들을 응원하고 지원한다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(2) 나는 친구들이 최고가 될 수 있도록 격려한다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(3) 나는 친한 친구들이 스스로에 대해 자긍심을 갖도록 돕는다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(4) 친구가 나를 필요로 할 때 거기에 있어준다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(5) 다른 아이가 친구를 괴롭히면 나는 친구의 편을 들어준다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
3. Parent-child relationship quality

<table>
<thead>
<tr>
<th>다음과 같은 일이 얼마나 자주 일어나는지 표시해주세요.</th>
<th>거의 그렇지 않다</th>
<th>가끔 그렇다</th>
<th>그런 편이다</th>
<th>자주 그렇다</th>
<th>항상 그렇다</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) 부모님은 나를 자랑스럽게 여긴다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(2) 부모님은 내가 하는 일에 관심을 가진다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(3) 내가 부모님께 이야기할 때면, 부모님은 내 말을 잘 들어준다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(4) 내가 부모님의 도움을 필요로 할 때</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>부모님이 도와주실 것이라고 믿는다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(5) 부모님과 나는 심각한 문제에 대해서도 이야기를 나눈다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(6) 나는 부모님께 내 생각과 감정을 편하게 이야기할 수 있다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
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</table>

4. Empathy

<table>
<thead>
<tr>
<th>다음의 문장들이 자신의 모습을 얼마나 잘 설명하는지 표시해주세요.</th>
<th>전혀 비슷하지 않다</th>
<th>약간 비슷하다</th>
<th>비슷한 편이다</th>
<th>상당히 비슷하다</th>
<th>매우 비슷하다</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) 다른 사람들의 감정이 상처받을 때면 나도 마음이 아프다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(2) 나와 가까운 사람들이 느끼는 감정을 이해한다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(3) 나에게 다른 사람들의 감정을 이해하는 것이 중요하다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(4) 나는 다른 사람들이 성공하는 것을 보면 행복하다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
5. Altruism

<table>
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<tr>
<th>다음의 문장들이 자신의 모습을 얼마나 잘 설명하는지 표시해주세요.</th>
<th>전혀 비슷하지 않다</th>
<th>약간 비슷하다</th>
<th>비슷한 편이다</th>
<th>상당히 비슷하다</th>
<th>매우 비슷하다</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) 나는 남을 돕기 위해 앞장서서 노력한다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<td>(3) 나는 잘 모르는 사람의 일이라도 돕는다</td>
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<td>(4) 나는 나에게 힘든 일이라도 남을 돕는다</td>
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6. Control variables

Q. 학생의 성별은 무엇인가요?  ① 남자  ② 여자

<table>
<thead>
<tr>
<th>Q. 본인의 학업성적은 어떻게습니까?</th>
<th>매우 못함</th>
<th>보통 이하</th>
<th>보통</th>
<th>보통 이상</th>
<th>아주 잘함</th>
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<tbody>
<tr>
<td>(1) 전교적으로</td>
<td>1</td>
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<td>(2) 국어</td>
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<tr>
<td>(3) 수학</td>
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<td>4</td>
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</tr>
<tr>
<td>(4) 영어</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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</tr>
</tbody>
</table>

Q. 귀댁 자녀가 현재 함께 살고 있는 가족은 어떻게 됩니까? 아래 해당되는 번호에 모두 체크해 주십시오. (※ 해외, 지방 출장 등의 이유로 일시적으로 떨어져 지내는 가족도 포함하여 주십시오.)
① 어머니                  ② 아버지   ③ (외)할머니    ④ (외)할아버지
⑤ 형제 · 자매 · 남매   ⑥ 다른 아이들   ⑦ 다른 어른들
Q. 귀댁 자녀의 아버지는 학교를 어디까지 다니셨습니까? (※ 아동의 아버지가 계실 경우에만 응답해주십시오.)

① 초등학교 졸업 이하(중학교 중퇴 포함)
② 중학교 졸업(고등학교 중퇴 포함)
③ 고등학교 졸업(대학교 중퇴 포함)
④ 전문대학 졸업
⑤ 대학교 졸업(4 년제 이상)
⑥ 대학원 이상

Q. 귀댁 자녀의 어머니는 학교를 어디까지 다니셨습니까? (※ 아동의 어머니가 계실 경우에만 응답해주십시오.)

① 초등학교 졸업 이하(중학교 중퇴 포함)
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③ 고등학교 졸업(대학교 중퇴 포함)
④ 전문대학 졸업
⑤ 대학교 졸업(4 년제 이상)
⑥ 대학원 이상

Q. 현재 귀댁 자녀가 함께 살고 있는 가족은 모두 몇 명입니까? (_______명)
(※ 해당자녀를 포함한 가족 전체 인원을 적어 주십시오. 해외, 지방 출장 등의 이유로 일시적으로 떠어져 지내는 가족도 포함하여 주십시오)

Q. 귀댁 자녀가 속한 가구의 지난 3개월간의 월평균 총 가구 소득은 대략 어느 정도입니까? 금액을 써 주십시오. (월 평균 소득 (세전) ___________ 만원)
(※ 가구원 전체의 근로소득, 이자소득, 재산 및 임대소득과 연금, 각종 보조금, 개인적으로 받은 돈 등을 모두 합산한 금액을 기입해 주십시오.)
국문 초록

학령기 아동의 부모자녀관계가 긍정적 또래관계에 미치는 영향에서 공감과 이타심의 매개 역할

서울대학교 대학원
사회복지학과
이주연

본 연구의 목적은 첫째, 학령기 아동의 부모-자녀관계가 긍정적인 또래관계에 미치는 영향을 확인하고, 둘째, 이러한 영향 관계에서 아동의 공감과 이타심이 매개 효과를 가지는지 검증하는 것이다. 또래수용과 우정으로 대표되는 긍정적 또래관계는 학령기 아동의 행복한 삶과 바람직한 성장의 주요 예측 요인이다. 애착 이론을 기반으로 한 다수의 선행 연구는 부모-자녀관계의 질이 학령기 아동의 또래수용 및 우정의 질에 중대한 영향을 미치는 변인임을 밝혀 왔다. 그러나 이러한 영향력의 구체적인 기제를 탐색한 연구는 상대적으로 부족했다. 특히 국내에서는 아동기 또래관계에 대한 대부분의 연구가 또래거부나 괴롭힘 같은 부정적인 또래관계에
초점을 두고 있었기에, 긍정적인 또래관계의 영향 요인과 그 매개 경로를 탐색한 연구는 거의 없었다.

애착 이론의 ‘내적 작동 모델’ 개념과 아동의 친사회적 발달에 관한 선행 연구들에 의하면, 긍정적인 부모-자녀관계는 아동의 공감, 이타심 등의 친사회적 성향을 증진하여 또래수용, 우정과 같은 긍정적인 또래관계를 촉진하는 것으로 가정될 수 있다. 이에 따라 본 연구에서는 부모-자녀관계의 질이 공감과 이타심을 매개하여 또래수용과 우정의 질에 영향을 미치는 연구 모형을 설정하였으며, 개인 특성 변인과 가정 환경 변인을 통제하여 주요 변수의 영향 관계를 보다 정밀하게 파악하고자 하였다. 본 연구의 주요 가설은 다음과 같다. 첫째, 부모-자녀관계의 질은 학령기 아동의 긍정적 또래관계에 정적인 영향을 미칠 것이다. 둘째, 아동의 공감과 이타심은 부모-자녀관계의 질이 긍정적 또래관계에 미치는 영향을 매개할 것이다.

연구 모형과 가설을 검증하기 위해, 본 연구는 ‘2013년 한국 아동의 삶의 질 지수 국내 및 국제 비교 연구’에 참여한 전국의 초등학교 3학년 및 5학년 아동 4,690명의 설문조사 자료를 활용하여 구조방정식모형 분석을 실시하였다.
분석 결과, 본 연구에서 설정한 연구 모형은 전반적으로 한국 학령기 아동의 친사회적 발달 경로를 설명하기에 타당한 것으로 판단되었으며, 또래수용에 대해 29.3%의 설명력, 우정의 질에 대해 64.6%의 설명력을 가졌다. 연구 가설 역시 모두 지지되었으며, 그 결과를 요약하면 다음과 같다. 첫째, 부모-자녀관계의 질은 전반적으로 또래수용과 우정의 질에 정적인 영향을 미쳤다. 즉, 부모와의 관계가 긍정적인 아동일수록 또래 집단으로부터 잘 수용되고 다른 또래들과 좋은 우정 관계를 가진다는 것이다. 둘째, 아동의 공감과 이타심은 부모-자녀관계의 질이 긍정적 또래관계에 미치는 영향을 부분적으로 매개했다. 즉, 부모와의 관계가 긍정적인 아동일수록 공감과 이타심이 높게 나타나, 결과적으로 또래 집단으로부터 잘 수용되고 다른 또래들과 좋은 우정 관계를 가진다는 것이다.

본 연구의 의의는 다음과 같다. 첫째, 아동을 사회적 관계 속에서 발달하는 존재로 바라보았으며, 또래관계의 부정적인 측면만이 아니라 긍정적인 측면을 연구해야 할 필요성을 제기하였다. 둘째, 애착 이론과 선행 연구 결과를 토대로 부모-자녀관계의 질이 또래수용 및 우정에 영향을 주는 이론적 모형을 설정하였고, 이를
전국 대표성을 가진 자료를 통해 실증적으로 검증함으로써 일반화 가능성을 높였다. 셋째, 부모-자녀관계의 질이 긍정적 또래관계에 미치는 영향에서 아동의 공감과 이타심의 매개 역할을 검증함으로써, 학령기 아동의 친사회적 발달 경로에 대한 지식 확장에 기여하였고 사회복지 실천에의 함의를 제공하였다. 후속 연구에서 횡단 자료 및 자기보고식 측정 도구의 한계를 보완하고, 학령기 아동의 또래수용과 우정의 질에 중요한 영향을 미칠 수 있는 다른 변인들을 고려한다면, 이론적으로나 실천적으로 더욱 크게 기여할 수 있을 것이다.

주요어: 긍정적 또래관계, 또래수용, 우정, 부모-자녀관계, 공감, 이타심, 구조방정식모형

학번: 2013-22835
저작자표시-비영리-변경금지 2.0 대한민국

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Effect of Parent-child Relationships on Positive Peer Relationships among School-aged Children: Mediating Roles of Empathy and Altruism

February 2016

Graduate School of Seoul National University
Department of Social Welfare
Juyeon Lee
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Advising Professor – Joan P. Yoo
Submitting a master’s thesis of Social Welfare
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ABSTRACT

Effect of Parent-child Relationships on Positive Peer Relationships among School-aged Children: Mediating Roles of Empathy and Altruism

Juyeon Lee
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The purpose of this study is to develop a theoretical model for prosocial parent-to-peer pathways and test its validity using nationally representative data of school-aged children in South Korea. To be specific, this study aims to examine (1) the effect of parent-child relationships on positive peer relationships and (2) the mediating effects of children’s empathy and altruism on the association between parent-child relationships and positive peer relationships.
Positive peer relationships, i.e. peer acceptance and friendships, are one of the essential antecedents of school-aged children’s well-being and well-becoming. In line with attachment theory, a substantial body of literature has found that the quality of parent-child relationships is an important predictor of peer acceptance and friendship quality. Yet, a relatively few studies have examined the psychological mechanisms underlying the influence of parent-child relationships on positive peer relationships. Particularly in Korea, little research has been conducted on this positive parent-to-peer pathways, since a focus of childhood research was mainly on negative peer relationships such as peer rejection or bullying.

According to previous research findings, a good quality of relationships with parents is likely to foster children’s prosocial orientation such as empathy and altruism, which in turn promotes positive relationships with peers. The present study develops a research model where the effect of parent-child relationship quality on positive peer relationships can be either direct or indirect via empathy and altruism. The main research hypotheses involve: (1) the quality of parent-child relationships will have a positive effect on positive peer relationships, i.e. peer acceptance and friendship quality, and (2)
children’s empathy and altruism will mediate the effect of parent-child relationship quality on positive peer relationships.

To empirically test the research model and hypotheses, structural equation modeling was performed to analyze the nationally representative data from the 2013 South Korean subsample of the International Survey of Children’s Well-Being. The sample consisted of 4,690 children in 3rd and 5th grade, who are living with at least one parent. All of the major variables were measured using multi-item, self-report indicators.

The analytic results indicate that the research model fits the sample data well and explains 29.3% of variance in peer acceptance and 64.6% in friendship quality. All the research hypotheses are supported: (1) the quality of parent-child relationships does have a positive effect on peer acceptance and friendship quality, and (2) children’s empathy and altruism partially mediate the effect of parent-child relationship quality on positive peer relationships. Despite several limitations due to secondary data analysis, this study has a significance in that it develops a theoretical model for prosocial parent-to-peer pathways and empirically examine its validity with nationally representative data of school-aged children. This study calls for more research on Korean
children’s positive social relationships and the underlying mechanisms of their prosocial development.

**Keywords:** positive peer relationships, peer acceptance, friendships, parent-child relationships, empathy, altruism, structural equation modeling

**Student Number:** 2013-22835
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CHAPTER I – INTRODUCTION

1. Introduction

All humans are social beings, continuously interacting with others and building a variety of relationships with different individuals over the course of their lives. Forming and maintaining good quality relationships are one of the fundamental human needs. Cacioppo and Patrick (2008, p. 7) state that “the need for meaningful social connection, and the pain we feel without it, are defining characteristics of our species.” A good quality of relationships contributes to human welfare. A body of research has found that the structure and process of relationships have a significant influence on our health and well-being (House, Umberson, & Landis, 1988). The quality of relationships, as D. Howe (1995, p. 1) suggests, can be regarded as “the yardstick by which we measure happiness and contentment.”

Human relationships begin right after birth when an infant and the parent initiate to bond (Van Hasselt & Hersen, 1992). For most children, relationships with parents comprise almost the entirety of the developmental context in infancy and toddlerhood. As children grow, however, their social worlds expand outside the family, and peers take on a greater importance than in the past. Originated from the Latin par,
meaning equal, the term *peer* usually refers to someone in the same year or grade in the literature on peer relationships. Particularly when children enter elementary school, relationships with peers constitute their major developmental context. A good quality of peer relationships contributes to school-aged children’s social and emotional well-being, and provides them with opportunities to acquire a wide range of behaviors, skills, and attitudes that affect their successful adjustment to school life and subsequent positive development in adolescence and adulthood (K. H. Rubin, Bukowski, & Parker, 2006). Therefore, it is indispensable for school-aged children to experience positive peer relationships for both their present happiness, i.e. well-being, and later healthy growth, i.e. well-becoming.

Positive peer relationships have been categorized into two domains: peer acceptance at group level and friendships at dyadic level (Gifford-Smith & Brownell, 2003). Although the ability to relate with others is one of the innate human natures, researchers have observed large differences in peer acceptance and friendship quality among school-aged children. One of the most robust predictors of positive peer relationships was found to be the quality of parent-child relationships (Putallaz & Heflin, 1990). The positive association between parent-child
relationships and peer relationships has been hypothesized and investigated the most actively by attachment theorists, who argue that parent-child attachment is a prototype relationship that lays a foundation for later social development (Berlin & Cassidy, 1999). While they have accumulated much evidence on what is an important precursor of positive peer relationships, the question as to how it affects the quality of peer relationships remains not fully answered. In other words, although the association between parent-child and child-peer relationships has firmly been supported, “the psychological processes underlying this association” have not yet been clearly explored (Thompson, 2006, p. 65).

In attachment theory, the concept of internal working model provides a theoretical explanation for the psychological mechanisms through which the quality of parent-child relationships has an indirect influence on the quality of peer relationships. This concept, however, lacks an empirical validity by itself (Eisenberg, 2006; Schneider, Atkinson, & Tardif, 2001). According to previous research, the internal working model can be reified as a prosocial orientation which refers to “a focus on the needs of others and an inclination to enhance the welfare of others” (Côté et al., 2011, p. 217; Thompson, 2015). In fact, empathy and altruism, two most important components of prosocial orientation,
have been found to be promoted within positive parent-child interactions and to predict positive peer interactions (Eisenberg, Fabes, & Spinrad, 2006; Eisenberg, Huerta, & Edwards, 2012). Thus, it seems reasonable to hypothesize that children’s prosocial orientation such as empathy and altruism would mediate the influence of parent-child relationships on positive peer relationships.

However, few studies have examined the mediating roles of prosocial orientation in positive parent-to-peer pathways (Clark & Ladd, 2000). To fill this gap, this study seeks to develop a theoretically valid model for prosocial parent-to-peer pathways and to test its statistical validity using nationally representative data of school-aged children in South Korea.

2. Problem Statement

This study brings up three problems in the field of childhood research in Korea, which motivate the researcher to conduct the present study. These problems involve a lack of research attention to (1) children’s positive peer relationships, (2) the association between positive parent-child relationships and positive peer relationships, and (3) the mechanisms underlying the positive parent-to-peer pathways.
First of all, more research is required on positive aspects of peer relationships, because children have a fundamental need to form and maintain at least a minimum quality of positive interpersonal relationships (Baumeister & Leary, 1995). Korean literature on peer relationships is at the beginning stage, compared with American and European literature (M. Moon, 2005). Although this area of research is developing in both quantity and diversity, Korean scholars have so far concentrated their attention mainly on negative peer relationships such as peer rejection, bullying, or victimization (M. Moon, 2005; Y. H. Song, 2012). The tendency to focus on peer-related problems is understandable since Korean society has observed a host of destructive effects of school bullying and peer rejection. Research on negative peer relationships has indeed provided valuable evidence for various social interventions to reduce these problems; as a result, an overall decreasing tendency has been reported in terms of the proportion of bullies and victims (Ministry of Education & Korean Educational Development Institution, 2014). Nevertheless, the alleviation or even the absence of serious peer-related problems cannot assure that children are experiencing positive peer relationships. For example, not being rejected nor victimized by peers does not necessarily mean being accepted or maintaining good quality
friendships. Thus, it is needed to more investigate children’s positive peer relationships, which are critical to their present well-being and future well-becoming. A focus on positive aspects of peer relationships is not an attempt to “callously disregard the real pains and struggle,” but rather an effort to “foreswear the ascendancy of psychopathology and deviance” (Saleebey, 2013, p. 3).

Second, it is required to examine the influence of positive parent-child relationships on positive peer relationships, because good quality parent-child relationships are one of the fundamental contextual antecedents of good quality peer relationships. Western researchers have agreed on that early secure relationships with parents and the maintenance of positive parent-child relationships are strong predictors of good quality peer relationships in middle childhood (Thompson, 2006). Although Korean researchers have also emphasized the parental influence on children’s peer relationships, the discussion has been centered on the detrimental influences of negative parent-child relationships such as child maltreatment, poor parenting behaviors, or family conflicts, in association with children’s negative outcomes such as aggression, delinquency, bullying, or victimization (O. Kim & W. Lee, 2001; C. K. Lee & Yang, 2015; S. C. Lee, 2012; Y. H. Oh, 2012; J. H.
Park & Lim, 2014; Ro & Sim, 2004; Woo, 2013). Therefore, practical implications of these studies have also revolved around who are at risk of peer-related problems and how to buffer the adverse effects of negative parent-child relationships. Admittedly, the risks of negative parent-child relationships appear more salient than the possible benefits of positive parent-child relationships. But in reality, it may be more difficult to maintain a good quality of parent-child relationships than just to avoid negative parent-child relationships. In Korean society, most parents may recognize the importance of their roles in positive child development, but not all parents could provide affectionate and supportive relationship contexts, in which their children can foster a prosocial orientation that affects in turn the quality of their subsequent social relationships outside the family. In fact, the two domains of child development that Korean parents reported the greatest difficulties in were social and emotional development: parents expressed difficulty helping their children to make friends and cooperate, and raising them to be affectionate and concerned for others (S. O. Park & Kang, 1997). Therefore, more investigations are called for on the influence of parent-child relationship quality on children’s positive peer relationships in
order to improve our understanding about one of the essential promotive factors of children’s social and emotional well-being.

Last but not least, it is necessary to explore psychological processes underlying the association between positive parent-child relationships and positive peer relationships in middle childhood, because understanding the mechanisms that explain the influences of parent-child relationships on positive peer relationships could provide theoretical and practical implications in the field of social work. Even though the impact of parent-child relationships on peer relationships has substantially been investigated in Western literature, the processes underlying this influence have received relatively little attention (Clark & Ladd, 2000). From the review of literature, children’s prosocial orientation such as empathy and altruism can reasonably be hypothesized to play mediating roles in positive parent-to-peer pathways. This expectation comes from the notion that the quality of interpersonal relationships is “responsible for the kinds of individuals we become,” which in turn “determine the kinds of relationships we construct” (Hartup & Laursen, 1999). Recently in Korea, there have been several studies on the mediating roles of aggression, rejection sensitivity, or depression in negative parent-to-peer pathways (Ah & Jeong, 2007;
Hong & Park, 2013; M. H. Jang & Lee, 2011; H. R. Jeon & Lee, 2014; E. J. Kim & Lee, 2009; M. W. Kim & Park, 2012; S. Park & Jin, 2013; Zhang & Kim, 2014). But, there exist few studies investigating prosocial mechanisms underlying the influence of parent-child relationships on children’s positive peer relationships. The study on the mediating roles of prosocial orientation in positive parent-to-peer pathways could add to our current knowledge about positive child development, by scrutinizing “the conditions and processes that contribute to the flourishing or optimal functioning of people” (Gable & Haidt, 2005, p. 104). Also, it could provide evidence for the field of social work about intervention points and strategies to promote positive peer relationships, because most of social work practices and programs primarily aim to bring about changes in psychosocial aspects that lead to the actual target changes (S. G. Lee, 2007).

3. Purpose of the Study

Considering the need for studying prosocial mechanisms underlying the association between parent-child relationship quality and positive peer relationships, this study seeks to examine the effect of parent-child relationships on positive peer relationships among Korean school-aged
children, focusing on the mediating roles of empathy and altruism. To be specific, this study aims to examine (1) the effect of parent-child relationships on peer acceptance and friendship quality, and (2) the mediating effects of empathy and altruism on the association between parent-child relationships and positive peer relationships among Korean school-aged children.

4. Research Question

In this study, two main questions are raised as follows:

(1) Does the quality of parent-child relationships have an effect on positive peer relationships, i.e. peer acceptance and friendship quality, among school-aged children?

(2) Do children’s empathy and altruism mediate the effect of parent-child relationship quality on positive peer relationships among school-aged children?

5. Chapter Outline

In this chapter, the backgrounds to and objectives of the present study have been introduced. In Chapter II, a theoretical framework and empirical evidence are presented in detail. In Chapter III, a conceptual
model and the research hypotheses are proposed. In Chapter IV, research methods to empirically test the proposed model are described. In Chapter V, the results of statistical analyses are reported. In Chapter VI, the findings and the implications thereof are discussed.
CHAPTER II – LITERATURE REVIEW

1. Introduction

In Chapter II, a theoretical framework and empirical evidence are provided to develop a valid research model of this study. This chapter is organized into four sections: (1) positive peer relationships in school-aged children, (2) influence of parent-child relationship quality, (3) processes underlying parent-to-peer pathway, and (4) influence of individual and familial characteristics. In the first section, the current knowledge about positive peer relationships in school-aged children is introduced. In the second section, the influence of parent-child relationship quality on positive peer relationships is explained based on attachment theory. In the third section, theoretical backgrounds to the mediating roles of prosocial orientation, i.e. empathy and altruism, are provided. In the fourth section, empirical findings about the influence of individual and familial characteristics on prosocial orientation and positive peer relationships are reviewed.

2. Positive Peer Relationships in School-aged Children

In this section, literature on positive peer relationships in school-aged children is reviewed. This section is organized into three parts: (1)
development and domains, (2) consequences and importance, and (3) proximal and distal predictors. In the first part, the development of social relationships from early childhood to middle childhood is explicated, and two distinct domains in positive peer relationships are introduced: peer acceptance and friendships. In the second part, the developmental consequences and importance of peer acceptance and friendships are presented. In the third part, proximal and distal predictors of positive peer relationships are reviewed, focusing on children’s social behaviors at individual level and the quality of parent-child relationships at environmental level.

2.1 Development and domains

It might be literally true that we are born alone and we die alone, but we cannot live without being socially connected (Cacioppo & Patrick, 2008). Social relationships are an essential part of human life and welfare. When studying children’s well-being and their healthy development, it is needed to hold an “individual-in-relationships” perspective, in which a child is not regarded as an isolated individual, but as a social being who lives in relational contexts (W. A. Collins, 1999, p. 3).
Infants begin to bond with their caregivers, mostly their parents, immediately after birth. For most children, relationships with parents are the first and most important social context where their genetic traits interact with environment and their basic needs are or are not met (Cacioppo & Patrick, 2008). Although the influence of parent-child relationships continues to be significant, relationships with other children such as siblings or playmates become more frequent and influential as children grow older. Especially in middle childhood, or elementary school years, peer relationships become increasingly important, since time spent outside family lengthens, social interactions involving peers increase, peer groups enlarge, and peer interactions are less supervised by adults. Also, school-aged children become more and more concerned about their place in peer groups and have a stronger need for establishing intimate relationships with friends (K. H. Rubin et al., 2006). In this regard, Gifford-Smith and Brownell (2003, p. 236) state that “it is during middle childhood that children can truly be said to participate in a separate social world of their peers apart from children's other socialization experiences.”

Researchers in the field of childhood studies have conceptually distinguished two domains of positive peer relationships:
peer acceptance at group level and friendships at dyadic level (Gifford-Smith & Brownell, 2003; Ladd, 1999). This differentiation comes from the notion that human beings have basic needs both “for inclusion in group life and for close relationships” (Asher & Paquette, 2003, p. 75). In general, peer acceptance is defined as the degree to which children are liked by other peers (Bukowski & Hoza, 1989; Ladd, 1999; Oberle, Schonert-Reichl, & Thomson, 2010), whereas friendship is defined as a voluntary and reciprocal form of dyadic relationship that contains a positive affective tie (Bukowski & Hoza, 1989; Ladd, 1999; Newcomb, Bukowski, & Bagwell, 1999). Although peer acceptance and friendships are interrelated to some degree, researchers have found that they constitute different domains of peer relationships: children who are rejected in peer groups may still have friends, whereas some highly accepted children have few or no reciprocal friendships (Gifford-Smith & Brownell, 2003; K. H. Rubin et al., 2006).

2.2 Consequences and importance

Children's positive peer relationships serve both as the context in which their success and happiness are measured and the context in which adaptive social skills and behaviors are fostered (Hartup
& Laursen, 1999). In elementary school years, it is necessary to be accepted by peers and to maintain a good quality of friendships for their present well-being and future well-becoming.

Researchers have reported that peer acceptance has significant impacts on children’s psychological well-being and school adjustment. Peer-rated as well as self-perceived acceptance in childhood have been reported to increase self-esteem and to decrease dysphoria and loneliness (Asher & Paquette, 2003; Brown & Lohr, 1987; Kistner, Balthazor, Risi, & Burton, 1999). Stable peer acceptance is also found to buffer early academic difficulties (O'Neil, Welsh, Parke, Wang, & Strand, 1997). In contrast, longitudinal studies have substantiated that peer rejection predicts loneliness, behavioral problems, academic deficits, and school maladjustment (O'Neil et al., 1997; Parker & Asher, 1987).

Investigators have also supported that the participation in and the quality of friendships predict children’s social and emotional well-being and adjustment during elementary school years. Good quality friendships have been related to higher self-esteem, securer emotion, lower loneliness, better social skills, and school adjustment (Bishop & Inderbitzen, 1995; Furman, 1998; Ladd, Kochenderfer, & Coleman, 1996). Furthermore, friendships are found to buffer the effects of
negative peer relationships, such as rejection or victimization (Hodges, Boivin, Vitaro, & Bukowski, 1999; Schwartz, Dodge, Pettit, & Bates, 2000). On the other hand, having no friends is found to influence loneliness, depression, and maladaptive behaviors in middle childhood and adolescence (Asher & Paquette, 2003).

In Korea, the dysfunctional effects of negative peer relationships have received great attention in the literature on peer relationships since the late 1990s (M. Moon, 2005; H. Sim & Shin, 2009). Peer rejection has been related to school-aged children’s higher loneliness, lower self-perception, behavioral problems, and school maladjustment (Jung, Rhee, Koh, & Kim, 2001; Y. K. Kim & O. K. Lee, 2001; Rhee, Kim, & Oh, 2001). Peer victimization has also been associated with lower self-esteem, internalized and externalized behaviors, school maladjustment, and suicide ideation in middle childhood and adolescence (S. M. Choi & Kim, 2012; J. Y. Kim & Lee, 2010; H. S. Park, Kim, & Chung, 2014; Seo, 2014). Recently, however, research on the benefits of positive peer relationships has been accumulated: overall, good quality peer relationships have been found to positively influence psychosocial well-being of Korean school-aged

2.3 Proximal and distal predictors

It is unfortunate that not all children are well accepted by other peers or have good quality friendships during elementary school years. There are substantial variations among individual children in terms of the level of peer acceptance and the quality of friendships. During the 1990s, Western researchers were interested in exploring the predictors of children’s positive peer relationships (Ladd, 1999). They have found that children’s peer relationships are likely a product of both children’s individual characteristics and their social environments (K. H. Rubin et al., 2006).

At individual level, children’s social behaviors have extensively been investigated as one of the most proximal correlates of peer acceptance and friendship quality. Social behaviors are often categorized into three groups: moving toward others, i.e. prosocial behaviors; moving against others, i.e. aggressive behaviors; and moving away from others, i.e. withdrawn behaviors (K. H. Rubin et al., 2006; Van Lieshout, Cillessen, & Haselager, 1999). Researchers have found a
relatively robust association between prosocial behaviors and peer acceptance as well as between aggressive behaviors and peer rejection (Crick, 1996; Gifford-Smith & Brownell, 2003; Van Lieshout et al., 1999). Prosocial behaviors were also significantly associated with the gain and the stability of friendships among elementary school children (Bowker, Rubin, Burgess, Booth-LaForce, & Rose-Krasnor, 2006). Aggressive behaviors, on the contrary, have been reported to be negatively related to the quality of friendships, even though aggressive children are just as likely to have friends as non-aggressive children (K. H. Rubin et al., 2006).

The aforementioned findings led researchers to explore the foundations explaining why children exhibit such different behaviors (Ladd, 1999). At environmental level, the quality of parent-child relationships was found to be one of the most important distal antecedents of school-aged children’s social behaviors and peer relationships (Ladd, 1999; Putallaz & Heflin, 1990; K. H. Rubin et al., 2006). Traditionally, parent-child relationships and peer relationships were considered as distinct and separate social contexts of children, but research evidence has supported that these two contexts are highly connected (Hartup, 1979; Z. Rubin & Sloman, 1984; Sroufe, Egeland, &
Carlson, 1999). A body of literature has consistently reported that positive parent-child relationships have great impacts on children’s social and emotional development and well-being (Eisenberg, 2006). Putallaz and Heflin (1990) argued that the influence of parent-child relationships is so important that any theory or intervention which does not include parental roles in children’s social development would be incomplete and compromised.

In Korean literature, the quality of parent-child relationships has also been extensively studied as an important predictor of peer relationships in school-aged children (H. Sim & Shin, 2009). But the focus was more on the association between negative parent-child relationships and negative peer relationships (Y. A. Jang & Lee, 2007; O. Kim & W. Lee, 2001; Y. H. Oh, 2012; Ro & Sim, 2004; Woo, 2013). For instance, child abuse and neglect by parents have been pointed out as risk factors of negative peer relationships, which in turn lead to other problematic outcomes in childhood and adolescence (An, Lee, & Chung, 2013; Bae, 2014; S. Kim, 2015). Yet, some studies indicate that positive parent-child interactions are associated with positive outcomes in peer relationships, just as negative parent-child interactions are related to negative peer relationships (H. J. Kim & Hong, 2015; J. Kim & Nam,
Recently, research interests in the influence of positive parent-child relationships on positive peer relationships in school-aged children appear increasing in Korean literature (S. B. Kim & Lee, 2014; J. I. Lee, Kim, & Han, 2014).

3. Influence of Parent-Child Relationship Quality

In this section, a theoretical framework and empirical evidence for the influence of parent-child relationship quality on positive peer relationships in school-aged children are provided. The section is organized into three parts: (1) direct and indirect influences, (2) attachment theory, and (3) research evidence. In the first part, two different research focuses on parental influence – direct and indirect – are presented, and the current study is situated within the focus of indirect influences. In the second part, attachment theory is introduced as a main theoretical framework for the present study. In the third part, empirical findings supporting the assumptions of attachment theory are suggested.
3.1 Direct and indirect influences

There exist two main groups of researchers explaining the parental influences on peer relationships: one focuses on direct influence, the other on indirect influence (Hartup, 1992; Parke & O'Neil, 1999). The first group of researchers emphasizes parents’ direct influence, i.e. intervention, viewing parents as influencing children’s peer relationships directly and explicitly as instructors, advisors, or supervisors when their children initiate and maintain relationships with other peers. (Parke & O'Neil, 1999; Z. Rubin & Sloman, 1984). They have found that certain types of direct influences, such as arranging and supervising peer-play activities or giving advice about making friends, can be effective for young children to be socially competent, whereas these direct interventions may not function well for older children (Ladd, 1999; Parke et al., 2014).

By contrast, the other group of researchers is interested in parents’ indirect influence, i.e. stage-setting, regarding parents as affecting children’s peer relationships through their relationships with children and parenting practices (Parke & O'Neil, 1999; Z. Rubin & Sloman, 1984). This group of researchers explains that parental influence is indirect because its purpose is not straightforwardly to affect children’s
peer relationships (Parke & O'Neil, 1999). To date, there has been more research evidence supporting parental indirect influences than the direct influences on peer relationships in school-aged children (Ladd, 1999).

Attachment theory and social learning theory are the two main theories explaining how parents indirectly influence children’s peer relationships. According to social learning theory, the manners in which parents engage in interpersonal relationships affect children’s peer relationships, since children learn from or model after how their parents relate to other people (Z. Rubin & Sloman, 1984). Attachment theorists, however, explain that secure and affective relationships with parents enable children to have a positive social orientation and to actively explore their social worlds, thereby helping them form and maintain good quality peer relationships (Z. Rubin & Sloman, 1984). While social learning theorists have emphasized the effects of certain discipline techniques on children’s social behaviors, attachment theorists have underscored the emotional nature of parent-child relationships which are internalized as internal working models and represented in children’s later relationships with others (Bugental & Grusec, 2006; Ladd, 1999; Thompson, 2006).
The present study proposes attachment theory as its main theoretical framework in order to establish a valid research model, since it aims to explore the psychological mechanisms underlying the association between the quality of parent-child relationship and positive peer relationships. In line with attachment theory, the quality of parent-child relationships is hypothesized to have indirect influences on peer acceptance and friendship quality through children’s generalized social orientation.

3.2 Attachment theory

Attachment theory is one of the most influential theories that emphasize the impact of parent-child relationships on human development over the course of life span. According to Bowlby (1907-1990), the founder of attachment theory, the affectionate bond between an infant and the primary caregiver is an evolutionarily adaptive relationship whose principal function is to increase the chances for survival of the child (Bretherton, 1992; McElhaney, Allen, Stephenson, & Hare, 2009). Although Bowlby was influenced by Freudian psychoanalytic theory, there was a noteworthy shift from “the notion of a conflictual relationship between society and child” to “a more positive
view of the adaptive quality of parent-child relationships” (Bugental & Grusec, 2006, p. 368). Ainsworth (1913-1999) is another pioneer of attachment theory, who devised an experiment called strange situation and formulated a typology of attachment quality: secure, avoidant, ambivalent or resistant attachment (Grusec & Lytton, 1988).

In attachment theory, parent-child attachment relationship is viewed as a prototype relationship which has a significant impact on children’s subsequent social relationships (Berlin & Cassidy, 1999; England & Sroufe, 1992). Attachment theorists contend that individual differences in attachment quality are explained by parental sensitivity and warmth during infancy, and significantly account for variations in children’s later social development (Thompson, 2006). Parents of securely attached infants have been found to be more responsive, accepting, and cooperative than parents of the insecurely attached (Putallaz & Heflin, 1990).

The concept of internal working model in attachment theory provides an explanation for the mechanism through which early parent-child attachment quality affects children’s later social relationships (Eisenberg, 2006). Internal working models are described as mental representations about previous relationship experiences which are
utilized to make predictions as to how one’s needs can be, or not be, met within interpersonal relationships (Hartup & Laursen, 1999). Internal working models consist of generalized expectations about the self, others, and the relationship between self and others (Hartup & Laursen, 1999). For example, a secure attachment relationship, based on a history of parents’ availability and responsiveness, makes a child develop a sense of self-worth and positive expectations about social interactions, which enables the child to move toward others to build positive social relationships. Conversely, an insecure attachment, following by parents’ insensitive caregiving, leads a child to view the self as unworthy of love and others untrustworthy, which influences the child’s actual social behaviors and the quality of relationships.

### 3.3 Research evidence

A body of literature on children’s social relationships has supported the assumptions and formulations of attachment theory. According to these studies, the quality of early parent-child attachment is strongly related to the quality of subsequent interpersonal relationships, including later parent-child relationships and peer relationships (Thompson, 2006).
First of all, the quality of attachment is found to be one of the most direct and strongest predictors of later parent-child relationships: a secure attachment predicts positive parent-child relationships in childhood and adolescence (Thompson, 2006). From a meta-analysis of the existing longitudinal data, Fraley (2002) concluded that there was a moderate stability of attachment security, versus insecurity, from infancy to late adolescence. However, Thompson (2006) noted that, if parents’ sensitive and supportive care is not maintained for any reason (e.g. due to changes in family ecological conditions), a secure attachment in infancy may not be related to the quality of later parent-child relationships.

The quality of attachment in early childhood is also found to predict children’s later peer relationships. Numerous studies have dealt with the association between parent-child and child-peer relationships since Bowlby argued that there was a strong causal relationship between the quality of parent-child attachment and children’s later capacity to make affectionate bonds (Berlin & Cassidy, 1999). Empirical findings have generally suggested that the quality of attachment successfully predicts children's social competence, peer acceptance, and friendship quality from early childhood to adolescence (England & Sroufe, 1992;
Hartup & Laursen, 1999; Putallaz & Heflin, 1990; Schneider et al., 2001; Sroufe & Fleeson, 1986). Schneider et al. (2001) also reported that this prediction was stronger for peer relationships in middle childhood than in early childhood. In short, previous findings have justified attachment theorists’ argument that the quality of early parent-child relationships sets the stage for successful entry into relationships with others in later life (Sroufe et al., 1999).

However, a secure attachment, if not followed by continuing positive parent-child interactions, is not necessarily a strong predictor of positive peer relationships in the long term (Thompson, 2006). According to Belsky and Fearon (2002), children who were insecurely attached but after were given secure care showed more positive developmental outcomes than children who were securely attached but were not given continued secure care. Since the quality of parent-child relationships is determined by both the past relational history and the current interactional experiences, it might be more sensible to measure the present quality of parent-child relationships, rather than the past attachment quality, when investigating the association between parent-child and child-peer relationships in elementary school years (Thompson, 2006). In fact, a body of research has found that the quality of concurrent
parent-child relationships significantly influences children’s peer relationships in school-aged children (Bohlin, Hagekull, & Rydell, 2000; Ladd, 1999; Thompson, 2006).

In Korean literature, the present quality of parent-child relationships has also been positively related to the quality of peer relationships among preschool children (Y. Lee & Na, 1999), elementary school children (S. B. Kim & Lee, 2014; J. I. Lee et al., 2014; K. S. Lee, Suh, & Shin, 2000; S. H. Moon, 2008), and middle school adolescents (H. J. Jeon & Lee, 2002; Jeong, 2002; Y. Kim & Sim, 2000). But most of these findings had limited implications because the participants of each study were sampled only within a restricted local area. In addition, these studies only suggested the existence of a positive association between parent-child relationships and peer relationships, but could not explain why or how they are interrelated.

4. Processes Underlying Parent-to-Peer Pathway

In this section, a theoretical framework for and empirical findings on the psychological processes underlying the association between parent-child and child-peer relationships are provided. The section is organized into three parts: (1) internal working model and prosocial orientation, (2)
roles of empathy and altruism, and (3) prosocial parent-to-peer pathways. In the first part, the concept of internal working model in attachment theory is reified as prosocial orientation. In the second part, empirical evidence is reviewed on the influences of parent-child relationship quality on children’s empathy and altruism, as well as the influences of empathy and altruism on peer relationships in elementary school years. In the third part, research evidence and the lack thereof on the mediating roles of empathy and altruism on the positive parent-to-peer pathways is described.

4.1 Internal working model and prosocial orientation

From an individual-in-relationships perspective, it is important to understand the continuous interactions between individual characteristics and relationship experiences (W. A. Collins, 1999). As D. Howe (1995) states, the quality of relationships influences individual’s personal characteristics, which in turn affect the later relationship quality.

In attachment theory, the concept of internal working model provides a useful notion about the mechanism of parental influences on children’s peer relationships; yet this concept is too broad and abstract to empirically evaluate its validity (Schneider et al., 2001). One of the ways
attachment theorists have reified this concept is to emphasize the role of children’s social orientation (Thompson, 2015). Social orientation refers to a generalized motivational processes that influence the way in which an individual responds to social environments (Kuperminc & Allen, 2001). Attachment theorists have been more interested in children’s social orientation than specific social behaviors, since internal working models primarily guide children’s psychological processes involving memories, interpretations, and expectations, which, in turn, guide their actual behaviors (Markiewicz, Doyle, & Brendgen, 2001; Putallaz & Heflin, 1990).

According to attachment theorists, a secure attachment establishes a prosocial orientation which helps children to build more positive social relationships with others without being overly concerned with their own needs (Bohlin et al., 2000; Klohnen & John, 1998; Putallaz & Heflin, 1990). *Prosocial orientation* is defined as “a focus on the needs of others and an inclination to enhance the welfare of others” (Côté et al., 2011, p. 217). The term *prosocial* usually collocates with *behaviors* to indicate voluntary and positive actions undertaken to benefit others, such as caring, comforting, sharing, and helping behaviors (Batson & Powell, 2003; Caprara, Alessandri, & Eisenberg, 2012). But
it is also used to refer a type of social orientation that facilitates such prosocial behaviors (Mikulincer & Shaver, 2010). In a broad sense, prosocial behaviors include any behaviors that result in benefiting others regardless of motivations or intentions behind the expressed actions; but prosocial orientation is more an internal characteristic that focuses others’ needs and values others’ well-being (Eisenberg, Spinrad, & Knafo-Noam, 2015).

4.2 Roles of empathy and altruism

In the study of prosocial orientation, empathy and altruism have been studies as two most principal constructs of interest (Batson, Ahmad, Lishner, & Tsang, 2002). Empathy is defined as a cognitive awareness of others’ internal states and the vicarious affective response to others’ emotions (Hoffman, 2001), while altruism refers to a motivation to enhance others’ welfare (Batson & Powell, 2003).

Researchers have suggested that empathy is one of the most fundamental and indispensable factors that enable us to be socially connected with other human beings (Saarni, Campos, Camras, & Witherington, 2006). For most children, empathy begins to emerge by the second year when they become aware of others’ internal states and
able to differentiate others’ perspective from their own one (Hoffman, 2001). Empathy has also been hypothesized to bring about altruism, which in turn leads to prosocial behaviors in actual social interactions (Batson et al., 2002; Eisenberg et al., 2006; Panfile & Laible, 2012; Saarni et al., 2006). As children’s cognitive and emotional understandings mature, empathic responses to others’ distress become more predictive of altruistic orientation and behaviors (Eisenberg et al., 2006; Thompson, 2006).

Researchers have observed large differences among school-aged children in the ability to empathize with others and to show altruistic concerns. It is likely that genetic and biological factors explain some variations in empathy and altruism; but empirical evidence on this issue has so far been very limited. On the other hand, social environments have been found to play a critical role in the origins of empathy and altruism (Eisenberg et al., 2006). Particularly, they have scrutinized parental influences on children’s prosocial development. While social learning theorists emphasize an acquisition of certain prosocial behaviors by parenting practices, attachment theorists underline the emotional quality of parent-child relationships that foster empathy and altruism in children (Zahn-Waxler & Smith, 1992).
A number of studies have supported that a better quality of parent-child relationships predicts higher empathy and altruism in children (N. L. Collins & Feeney, 2000; Eisenberg et al., 2006; Krevans & Gibbs, 1996; Thompson, 2006). Attachment theorists have suggested that empathy is promoted within good quality parent-child relationships that satisfy children’s own needs, encourage their emotional expressions, and discourage excessive self-concerns (Saarni et al., 2006; Zahn-Waxler & Smith, 1992). Also, positive parent-child relationships have been found to help children to be more sensitive to humanistic and unselfish concerns that lead to altruistic behaviors toward others (Mikulincer, Shaver, Gillath, & Nitzberg, 2005; Thompson, 2006). In short, the affectionate relationships between parent and child are “essentially the crucible in which empathy and concern for others' well-being are forged” (Saarni et al., 2006, p. 264).

In Korean literature, several studies have investigated the association between parent-child relationship quality and children’s prosocial orientation. But this association has mostly been examined with preschooler sample: in general, positive parent-child interactions have been related to higher prosocial orientation in young children (M. S. Choi, Moon, Kim, & Lee, 2008; K. H. Kim & Ahn, 2009; Son, 2000).
For school-aged children, however, few studies were conducted on the influence of positive parent-child relationships on prosocial orientation; rather, researchers have focused on the influences of negative parent-child relationships on children’s aggression, social withdrawn, or depression (C. K. Lee & Yang, 2015; Min, 2012; J. H. Park & Lim, 2014).

On the other hand, children’s prosocial orientation appears contributing to their positive peer relationships in school-aged children. As stated in the second section in this chapter, children’s social behaviors are one of the strong predictors at individual level of peer acceptance and friendship quality. Therefore, it seems evident that children’s prosocial orientation behind their prosocial behaviors also influences positive peer relationships in school-aged children. Western researchers have found that empathic and altruistic tendencies significantly predict peer acceptance across the elementary school years (Edwards, Manstead, & Macdonald, 1984; Van Lieshout et al., 1999). Children’s prosocial orientation has also been found to influence their friendship quality, since children who are able to understand others’ emotional states and respond in other-oriented way can easily build and maintain more positive relationships with friends (Eisenberg et al., 2012; Wilson, O’Brien, & Sesma, 2009).
Lately, a Korean study reported a significant cross-sectional and longitudinal relationships between prosocial orientation and peer acceptance among elementary school children (H. Sim, 2005). Following this study, (Yang, Kim, Jung, Cha, & Park, 2007) found that the ability to understand others’ thoughts and emotion was related to higher peer acceptance and lower rejection among school-aged children. Similarly, H. J. Lee (2015) found a positive relationship between empathy and peer acceptance among children in 4th to 6th grade. For middle school children, cognitive and affective empathy were found to influence the quality of peer relationships (Yusun Kang & Park, 2014). The study of J. Y. Lee and Lee (2007) also suggested that altruism affected higher peer acceptance among high school students. However, these researchers could not obtain generalizable findings about the association between prosocial orientation and peer relationships due to the lack of representative data on empathy and altruism in Korean children.

4.3 Prosocial parent-to-peer pathways

In an attachment theoretical framework, children’s prosocial orientation, i.e. empathy and altruism, can be hypothesized to play mediating roles between parent-child relationship quality and positive
peer relationships. This hypothesis appears theoretically plausible because children’s empathy and altruism are found to be fostered within positive parent-child relationships and to predict later peer acceptance and friendship. However, few studies have empirically examined the roles of empathy and altruism as mediators in the parent-to-peer pathways.

Recently, Clark and Ladd (2000, p. 487) proposed a “prosocial-orientation-as-mediator model” within an attachment theoretical framework. They hypothesized that children’s ability to empathize with and willingness to help others would mediate the relationship between parent-child relationships and peer relationships. The results of their path analyses for 192 kindergarten children demonstrated that all the indirect paths from parent-child connectedness through children’s prosocial orientation to peer acceptance, the number of mutual friends, and friendship harmony were positively significant. As hypothesized, children’s prosocial orientation was found to partially mediate the relationship between parent-child connectedness and positive peer relationships. The researchers also evaluated an alternative model called a “prosocial-orientation-as-determinant model,” in which children’s prosocial orientation affects both parent-child relationships
and peer relationships at the same time; but the alternative models were estimated less fit than the originally hypothesized model. Similar to this study, Zhou et al. (2002, p. 898) hypothesized a “parent-driven-socialization model,” in which parental warmth and positive expressivity influence children’s social outcomes by mediating children’s empathy. They found that this model produced better fit than a “child-driven-alternative model” in which children’s empathy determines parental warmth and positive expressivity.

As Clark and Ladd (2000) pointed out, investigators have rarely examined the mediating role of children’s prosocial orientation on the impact of parent-child relationships on children's peer relationships, even though it is theoretically reasonable to hypothesize. On the other hand, a boy of research has examined the mediating role of children’s antisocial orientation, or aggression, in negative parent-to-peer pathways (Denham, Blair, Schmidt, & DeMulder, 2002; Dishion, 1990; Shields & Cicchetti, 2001). Research interests in negative parent-to-peer pathways appear rapidly increasing in Korean literature as well. Recently, a number of studies have explored the psychological mechanisms underlying the association between negative parent-child relationships and negative peer relationships, mainly focusing on children’s

However, a relatively few Korean studies have explored the mechanisms underlying positive parent-to-peer pathways. Despite a general lack of research, some researchers have produced valuable findings. In the study of S. H. Park (2002), significant correlations were found between parental empathic care, children’s helping behaviors, and peer acceptance among children in 5th grade, suggesting that helping behaviors might play a mediating role on the relationship between parental empathic care and peer acceptance. In another study of B. S. Sim and Ko (2008), children’s empathy and cooperation skills were found to partially mediate the negative association between parent-child attachment and peer conflicts among children in 6th grade. They also hypothesized the mediating effects of empathy and cooperation skills on the association between parent-child attachment and peer acceptance, but this hypothesis was not supported. More recent studies have shown that children’s empathy mediated the association between positive parenting behaviors and positive peer relationships (Im & Jin, 2014; S. E. Lee &
Nahm, 2011; J. H. Oh, 2015; Yoon & Jin, 2015). These findings imply that children’s prosocial orientation such as empathy and altruism might play a mediating role on the influence of parent-child relationship quality on positive peer relationships. But these studies have some limitations. First, although research evidence on each hypothesized path was provided, these studies lacked a theoretical background to the mediation model as a whole. Second, the findings of these studies lacked external validity because the sample was not representative.

In summary, from the review of previous literature, more research is needed (1) in an “individual-in-relationships” perspective (W. A. Collins, 1999, p. 3), (2) to overcome “the tendency to focus solely on the study of negative behaviors” (Crick, 1996, p. 2318), and (3) on “the psychological processes underlying” the parent-to-peer pathways (Thompson, 2006, p. 65). Especially in Korea, it is needed to conduct more theory-based studies on the mechanisms of positive parent-to-peer pathways with larger and representative sample of school-aged children. In this regard, this study aims to develop a theoretical model for prosocial parent-to-peer pathways and test its statistical validity using nationally representative data of school-aged children. To be specific, this study seeks to examine (1) the effect of parent-child relationships on peer
acceptance and friendship quality, and (2) the mediating effects of empathy and altruism on the association between parent-child relationships and positive peer relationships among Korean school-aged children.

5. Influence of Individual and Familial Characteristics

To examine the relationships among constructs of interest more accurately, it is required to control for the influences of other variables. In this section, the influences of individual and familial characteristics on children’s prosocial orientation and positive peer relationships are reviewed. The section is organized into two parts: (1) individual characteristics and (2) familial characteristics. In the first part, the influences of age, gender, and academic competence on empathy, altruism, peer acceptance, and friendship quality are explicated. In the second part, the influences of having siblings and family socioeconomic status on empathy, altruism, peer acceptance, and friendship quality are described.
5.1 Individual characteristics

Age

In attachment theory, internal working models are considered as changing with age (Thompson, 2006). As reviewed in the previous section, empathy and altruism are also found to develop as children grow. Overall, prosocial orientation and behaviors tend to increase with age, but in middle childhood, there exist inconsistent findings: some observation studies reported that older children showed less, or no more, empathic and altruistic behaviors than younger children (Eisenberg et al., 2006; Jo, 2011; Zahn-Waxler & Smith, 1992; Zarbatany, Hartmann, & Gelfand, 1985).

On the other hand, age differences in positive peer relationships have been investigated mainly between developmental stages, i.e. early childhood, middle childhood, and adolescence (K. H. Rubin et al., 2006). As reviewed in the first section, the importance of peer acceptance and friendships increases as children grow. Although there is little research on the age differences in peer acceptance and friendship quality during elementary school years, the effects of parent-child relationships on peer relationships might be moderated by age,
since dependency on parents significantly decrease from lower to higher grade in elementary school (Lieberman, Doyle, & Markiewicz, 1999).

**Gender**

Gender differences in children’s prosocial orientation have extensively been investigated by many researchers in the field of childhood studies (Zahn-Waxler & Smith, 1992). Although there exist inconsistent findings depending on designs and measures, school-aged girls were generally found to show more empathic response and altruistic behaviors than boys (Bar-Tal, 1976; Beutel & Johnson, 2004; Feshbach, 1982; Jo, 2011; Ma, Cheung, & Shek, 2007; C. O. Park & Ghim, 2010; Zahn-Waxler & Smith, 1992). But it should be noted that the observed gender differences were weak, and their origins have not yet been clearly explored (Eisenberg, 2006; Eisenberg et al., 2006; S. H. Park, 2002).

Gender differences in children's friendships have also received great attention (Schneider, Wiener, & Murphy, 1994). In elementary school years, children are likely to interact and form friendships primarily with same-sex peers (Rose & Smith, 2009). Researchers have generally not found a significant gender difference in the quantity of friendships; but as for the quality of friendships, girls’
friendships have been characterized as more intimate and collaborative, while boys’ friendships as more assertive and competitive (Parker & Asher, 1993; Rose & Smith, 2009; Schneider et al., 1994).

On the other hand, there has been a lack of research on gender differences in peer acceptance despite the widespread interests in gender issue in child development (K. H. Rubin et al., 2006). This topic has been studied specifically with regard to the association between children’s sex and gender-stereotyped behaviors: boys who display female-stereotyped behaviors tend to be rejected, whereas girls who display male-stereotyped behaviors are generally accepted (K. H. Rubin et al., 2006). In some studies, girls’ higher empathy was found to predict peer acceptance; but, for boys, the influence of empathy on peer acceptance was weaker or even negative (H. J. Lee, 2015; Oberle et al., 2010). These results suggest that the relationship between prosocial orientation and peer acceptance might be moderated by children’s gender.

**Academic competence**

Cognitive competence, in addition to emotional competence, comprises a fundamental part of prosocial development, especially of empathy development (Saarni et al., 2006; Thompson, 2006). Therefore,
academic competence might be positively associated with prosocial orientation of school-aged children (Eisenberg et al., 2006). Academic competence has also generally been reported to have a positive association with peer acceptance and, though weaker, with friendships as well (Van Lieshout et al., 1999; Wentzel, 2009).

However, when longitudinally examined, academic competence might rather be an outcome than a predictor of prosocial orientation and positive peer relationships. A recent study demonstrated that children’s prosocial behaviors in 3rd grade strongly predicted academic achievement in 8th grade, after controlling for prior academic achievement (Caprara, Barbaranelli, Pastorelli, Bandura, & Zimbardo, 2000). Moreover, there exist substantial evidence on the beneficial effects of peer acceptance and friendships on academic achievement in school-aged children (Wentzel, 2009).

5.2 Familial characteristics

Existence of siblings

Characterized by both commonality and complementarity, sibling relationships may provide a different social context from the context provided by parent-child relationships (Teti, 1992). Having
siblings, especially for older siblings, may foster empathy and altruism, since they are more likely to be involved in understanding others’ emotion and giving help and care to others in need from early childhood (Eisenberg et al., 2006; S. H. Park, 2002).

Also, the existence of siblings, for both older and younger siblings, has generally been found to influence peer acceptance and friendship quality, because sibling relationships function as “a natural laboratory” for learning about the social worlds (N. Howe & Recchia, 2014).

However, having siblings can contribute to aggression or negative peer relationships if the quality of sibling relationships is conflictual (Zahn-Waxler & Smith, 1992). Since the quality of sibling relationships was found to be predicted by the quality of parent-child relationships, the quality of sibling relationships may mediate the association between parent-child relationships and peer relationships (Ross & Howe, 2009; Volling & Belsky, 1992). Taken together, if children have good quality relationships with their parents, it is probable that having siblings contribute to prosocial orientation and positive peer relationships.
**Family socioeconomic status**

Family socioeconomic status (SES) has extensively investigated in association with a wide array of children’s developmental outcomes, including social and emotional development: overall, low-SES children tend to show poorer, or less optimal, psychological and behavioral outcomes (Bradley & Corwyn, 2002). However, findings are inconsistent about the association between various indicators of family SES (e.g. family structure, parental education, household income) and children’s prosocial orientation or positive peer relationships (Eisenberg et al., 2006; S. H. Park, 2002). This association, if any, has generally been hypothesized as indirect rather than direct, through more proximal environmental factors like the quality of parent-child relationships (Clark & Ladd, 2000; Eisenberg et al., 2006; Thompson, 2006).

In summary, at individual level, children’s age, gender, and academic competence are likely to be somehow related to prosocial orientation and positive peer relationships. At familial level, the existence of siblings and family socioeconomic status such as family structure, parental education, or household income might be related to prosocial orientation and positive peer relationships. Thus, it is necessary to control for the influences of these individual and environmental
characteristics when examining the influences of parent-child relationship quality on empathy, altruism, peer acceptance and friendship quality.

6. Conclusion

In this chapter, the constructs of interest and the relationships among them have been explicates within an attachment theoretical framework. In view of previous literature, this study seeks to answer the following research questions:

(1) Does the quality of parent-child relationships have an effect on positive peer relationships, i.e. peer acceptance and friendship quality, among school-aged children?

(2) Do children’s empathy and altruism mediate the effect of parent-child relationship quality on positive peer relationships among school-aged children?
CHAPTER III – RESEARCH MODEL

1. Introduction

In Chapter III, a research model of this study is proposed. This chapter is organized into two sections: (1) conceptual model and (2) research hypotheses. In the first section, a conceptual model is proposed based on the previous literature review. The research hypotheses about the relationships among variables are stated in the second section.

2. Conceptual Model

In order to examine the effect of parent-child relationships on peer acceptance and friendship quality, and the mediating effects of empathy and altruism, a conceptual model is established as demonstrated in Figure 1. The proposed model consists of five major variables. Peer acceptance and friendship quality are two distinct but correlated dependent variables indicating positive peer relationships. The quality of parent-child relationships is a major independent variable. Empathy and altruism are two distinct but correlated mediating variables, which are explained by the independent variable and explaining the dependent variables at the same time.
In addition, children’s individual and familial characteristics which could be related to mediators and dependent variables are inserted as control variables in the model. Those variables consist of three children’s individual characteristics, i.e. grade, gender, and academic competence, and four familial characteristics, i.e. existence of siblings, family structure, parental education, and household income level.

### 3. Research Hypotheses

In order to answer the research questions of this study, two main hypotheses and four sub-hypotheses are developed as follows:
(1) The quality of parent-child relationships will have a positive effect on positive peer relationships.

(1-1) The quality of parent-child relationships will have a positive effect on peer acceptance.

(1-2) The quality of parent-child relationships have a positive effect on friendship quality.

(2) Children’s empathy and altruism will mediate the effect of parent-child relationship quality on positive peer relationships.

(2-1) Children’s empathy and altruism will mediate the effect of parent-child relationship quality on peer acceptance.

(2-2) Children’s empathy and altruism will mediate the effect of parent-child relationship quality on friendship quality.

4. Conclusion

A conceptual model and research hypotheses have been proposed in this chapter. In this study, it is expected to answer the research questions by examining an empirical validity of the proposed model and testing research hypotheses.
CHAPTER IV – METHODS

1. Introduction

In Chapter IV, the quantitative methods to appropriately answer the research questions are explained. This chapter is organized into three sections: (1) data and sample, (2) measurement, and (3) analysis techniques. In the first section, the data to be analyzed and the sample of this study are introduced. In the second section, operational definitions and measures of variables are explained. Lastly, the major techniques for analysis are described in the third section.

2. Data and Sample

This study seeks to statistically test the proposed conceptual model and research hypotheses with large-scale representative data of Korean school-aged children in order to produce precise and generalizable findings. In this study, the data from the South Korean subsample of the International Survey of Children’s Well-Being (ISCWeB) were analyzed. The ISCWeB investigates children’s own perceptions and evaluations of their well-being in 15 countries. Each country’s data consist of a large-scale representative sample of children in three separate school year groups from middle childhood to early adolescence (Rees & Main, 2015).
In 2013, nationally representative South Korean data of the ISCWeB were collected from 7,337 pairs of parents and children in 3<sup>rd</sup>, 5<sup>th</sup>, and 7<sup>th</sup> grade using multi-cluster random sampling method (B. J. Lee et al., 2015). The survey was conducted by the Institute of Social Welfare at Seoul National University with an approval from the Institutional Review Board (IRB) at Seoul National University.\(^1\) The present study was exempted from the IRB oversight, since it involves the analysis of existing data collected in ways that individual subjects can never be identified.\(^2\)

A distribution of grade and family structure of the total participants in the South Korean ISCWeB study is presented in Table 1.

<table>
<thead>
<tr>
<th></th>
<th>3&lt;sup&gt;rd&lt;/sup&gt; grade</th>
<th>5&lt;sup&gt;th&lt;/sup&gt; grade</th>
<th>7&lt;sup&gt;th&lt;/sup&gt; grade</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both parents</td>
<td>2,124</td>
<td>2,181</td>
<td>2,316</td>
<td>6,621 (90.2)</td>
</tr>
<tr>
<td>Single parent</td>
<td>183</td>
<td>202</td>
<td>264</td>
<td>649 (8.8)</td>
</tr>
<tr>
<td>Others</td>
<td>16</td>
<td>24</td>
<td>27</td>
<td>67 (0.9)</td>
</tr>
<tr>
<td><strong>Total (%)</strong></td>
<td><strong>2,323 (31.7)</strong></td>
<td><strong>2,407 (32.8)</strong></td>
<td><strong>2,607 (35.5)</strong></td>
<td><strong>7,337 (100.0)</strong></td>
</tr>
</tbody>
</table>

In the present study, only the data collected from the subsample of children in 3<sup>rd</sup> (n=2,323) and 5<sup>th</sup> grade (n=2,407) are

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\(^1\) SNU IRB Approval No. 1310/001-003

\(^2\) SNU IRB Exemption No. E1504/001-003
utilized, since the research focus is on school-aged children. In addition, forty children who do not live with any of their parent are excluded in the analysis, since the independent variable is the quality of parent-child relationships. Therefore, the sample of this study comprises 4,690 children in 3rd and 5th grade who are living with at least one parent.

3. Measurement

The conceptual model of the present study comprises five major variables and seven control variables. The definitions and measures of these variables are explicated in this section. The major variables are measured using indicators developed by Child Trends and Children’s Worlds. The quality of translation was verified by a back translation method when developing the questionnaire for the South Korean ISCWeB study. The control variables are measured using additional

3 Child Trends is a U.S. nonprofit research center that provides valuable information and insights on the well-being of children and youth (See more at: www.childtrends.org).

4 Children’s Worlds is a worldwide research projects on children’s subjective well-being, conducting the International Survey of Children’s Well-Being (ISCWeB) (See more at: http://www.isciweb.org).
indicators for children’s individual and familial background characteristics.

3.1 Dependent variables

Peer acceptance, one of the dependent variables, is defined as the degree to which a child is accepted or liked by other peers (K. H. Rubin et al., 2006). The indicator of this construct was developed by Children’s World, consisting of 2 items: ‘my friends are usually nice to me’ and ‘I have enough friends.’ These self-reported items are measured by five-point Likert scales which range from ‘1=do not agree’ to ‘5=totally agree.’ The original Cronbach’s alpha of these items is unknown. But the Cronbach’s alpha in this data is .81.

The other dependent variable, friendship quality, is defined as “having peer relationships characterized by the mutual experience of support, encouragement, affect, companionship, loyalty/standing up for one another, and trust” (Lippman et al., 2014, p. 13). Its indicator consists of 5 items: ‘I support my friends when they do the right thing,’ ‘I encourage my friends to be the best they can be,’ ‘I help close friends feel good about themselves,’ ‘I am there when my friends need me,’ and ‘I would stand up for my friend if another kid was causing them trouble.’
These self-reported items are measured by five-point Likert scales which range from ‘1=do not agree’ to ‘5=totally agree.’ When originally developed by Child Trends, the Cronbach’s alpha of these items was .91. The Cronbach’s alpha in this data is .88.

### 3.2 Independent variable

The quality of parent-child relationships is defined as the quality of interactions between a parent and his/her child, “including identification with a parent, affective connection, positive interactions, and constructive communication” (Lippman et al., 2014, pp. 12-13). Its indicator consists of 6 items: ‘my parent shows me he/she is proud of me,’ ‘my parent takes an interest in my activities,’ ‘my parent listens to me when I talk to him/her,’ ‘I can count on my parent to be there when I need him/her,’ ‘my parent and I talk about the things that really matter,’ and ‘I am comfortable sharing my thoughts and feelings with my parent.’ All these child self-reported items are measured by five-point Likert scales which range from ‘1=none of the time’ to ‘5=all the time.’ When originally developed by Child Trends, the Cronbach’s alpha of these items was .92. The Cronbach’s alpha in this data is .90.
### 3.3 Mediating variables

Empathy, one of the mediating variables, is defined as “the affective and cognitive ability to feel and understand what someone else is feeling” (Lippman et al., 2014, p. 12). The indicator of this construct consists of 4 items: ‘I feel bad when someone gets their feelings hurt,’ ‘I understand how those close to me feel,’ ‘It is important to me to understand how other people feel,’ and ‘I am happy when others succeed.’ These self-reported items are measured by five-point Likert scales which range from ‘1=not all like me’ to ‘5=exactly like me.’ When originally developed by Child Trends, the Cronbach’s alpha of these items was .84. The Cronbach’s alpha in this data is .86.

Altruism, the other mediating variable, is defined as “showing unselfish concern for the welfare of others in one’s thoughts and actions” (Lippman et al., 2014, p. 15). Its indicator consists of 4 items: ‘I go out of my way to help others,’ ‘I help others even if it requires a lot of my time,’ ‘I help others even if the person is a total stranger,’ and ‘I help others even if it is hard for me.’ These self-reported items are measured by five-point Likert scales which range from ‘1=not all like me’ to ‘5=exactly like me.’ When originally developed by Child Trends,
the Cronbach’s alpha of these items was .80. The Cronbach’s alpha in this data is .90.

3.4 Control variables

Children’s self-reported individual characteristics, i.e. grade, gender, academic competence, and parent-reported family characteristics, i.e. existence of siblings, family structure, parental education, household income level, are included as control variables. All of these variables are dichotomous except for children’s academic competence, which is computed as the mean score of self-reported academic achievement in Korean, math, and English. Each of these items is measured by a five-point Likert scale which ranges from ‘1=very poor’ to ‘5=very good.’

Existence of siblings is measured by whether the child is living with ‘0=no siblings’ or ‘1=one or more siblings.’ Family structure is measured by whether the child is living with ‘0=two parents or ‘1=a single parent.’ Parental education is measured by whether the child’s mother or father is ‘0= lower than college graduate’ or ‘1=college graduate or higher.’ Household income level is measured by whether the income-to-need ratio, or the ratio of household income to family size, is ‘0=above 120%’ or ‘1=120% and below’ of the 2013 minimum cost of
living, and whether the household is ‘1=receiving assistances under the National Basic Living Security Act.’ The measures of five major variables and seven control variables are summarized in Table 2. The Korean version questionnaire which was originally used to measure those variables is provided in Appendix (p.136).
<table>
<thead>
<tr>
<th>Variable</th>
<th>Item/Indicator</th>
<th>Scale/Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer acceptance</td>
<td>v1_nice</td>
<td>5-point Likert (α=.81)</td>
</tr>
<tr>
<td></td>
<td>v2_enough</td>
<td></td>
</tr>
<tr>
<td>Friendship quality</td>
<td>v1_support</td>
<td>5-point Likert (α=.88)</td>
</tr>
<tr>
<td></td>
<td>v2_encourage</td>
<td></td>
</tr>
<tr>
<td></td>
<td>v3_feel good</td>
<td></td>
</tr>
<tr>
<td></td>
<td>v4_there</td>
<td></td>
</tr>
<tr>
<td></td>
<td>v5_stand up</td>
<td></td>
</tr>
<tr>
<td>Parent-child relationship</td>
<td>v1_proud</td>
<td>5-point Likert (α=.90)</td>
</tr>
<tr>
<td></td>
<td>v2_interest</td>
<td></td>
</tr>
<tr>
<td></td>
<td>v3_listen to</td>
<td></td>
</tr>
<tr>
<td></td>
<td>v4_count on</td>
<td></td>
</tr>
<tr>
<td></td>
<td>v5_talk about</td>
<td></td>
</tr>
<tr>
<td></td>
<td>v6_share</td>
<td></td>
</tr>
<tr>
<td>Empathy</td>
<td>v1_feel bad</td>
<td>5-point Likert (α=.86)</td>
</tr>
<tr>
<td></td>
<td>v2_understand</td>
<td></td>
</tr>
<tr>
<td></td>
<td>v3_important</td>
<td></td>
</tr>
<tr>
<td></td>
<td>v4_happy</td>
<td></td>
</tr>
<tr>
<td>Altruism</td>
<td>v1_go out</td>
<td>5-point Likert (α=.90)</td>
</tr>
<tr>
<td></td>
<td>v2_time</td>
<td></td>
</tr>
<tr>
<td></td>
<td>v3_stranger</td>
<td></td>
</tr>
<tr>
<td></td>
<td>v4_hard</td>
<td></td>
</tr>
<tr>
<td>Grade</td>
<td>Grade in school</td>
<td>0=3rd grade</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1=5th grade</td>
</tr>
<tr>
<td>Gender</td>
<td>Gender of the child</td>
<td>0=boy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1=girl</td>
</tr>
<tr>
<td>Academic competence</td>
<td>Mean score of child-reported academic achievement in Korean, Math, and English</td>
<td>5-point Likert (α=.68)</td>
</tr>
<tr>
<td>Family structure</td>
<td>Whether the child lives with single parent</td>
<td>0=two parents</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1=single parent</td>
</tr>
<tr>
<td>Parental education</td>
<td>Whether the parent had higher education</td>
<td>0= lower than college</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1=college or higher</td>
</tr>
<tr>
<td>Existence of siblings</td>
<td>Whether the child lives with one or more siblings</td>
<td>0=no sibling</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1=having siblings</td>
</tr>
<tr>
<td>Household income level</td>
<td>Whether the income-to-need ratio is 120% and below of minimum cost of living and/or the household receives national assistances</td>
<td>0=not in poverty,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1=in poverty</td>
</tr>
</tbody>
</table>
4. Analysis Techniques

In order to examine the validity of the conceptual model and test the research hypotheses, Structural Equation Modeling is employed in this study. Structural Equation Modeling (SEM), also called “path analysis with latent variables,” is a statistical method now widely used to represent dependent relationship in multivariate data in social sciences (McDonald & Ho, 2002, p. 64). The main characteristics that distinguish SEM from other multivariate analysis techniques includes (1) the ability to estimate “a series of separate, but interdependent, multiple regression equations simultaneously,” and (2) the ability to represent theoretical concepts as latent variables and “account for measurement error in the estimation process” (Hair, Black, Babin, & Anderson, 2010, p. 617).

Especially when examining a mediation model with multiple mediators or outcome variables, SEM is preferable to conducting several regression analyses as suggested Baron and Kenny (1986), because it simplifies the complicated hypotheses testing into a single analysis and produces more accurate estimates with lower possibility of Type I error (Gunzler, Chen, Wu, & Zhang, 2013). Also, SEM has an advantage over regression analysis in that it estimates
structural coefficients more accurately, accounting for measurement error (Hair et al., 2010). In this study, SEM is employed as a main technique of analysis for three reasons: (1) to test the validity of the conceptual model including one independent variable, two mediators, and two outcome variables, (2) to test mediating effects of empathy and altruism, and (3) to account for measurement errors of the five major variables, which is measured with multiple items.

Prior to analyzing data with SEM, the issue of missing data due to the nonresponse should be properly addressed. The extent of missing data for individual indicators and cases is reported in Table 3. All items measuring major variables have approximately 1% of missing data, except for the second item of peer acceptance having 2.5%. On the other hand, household income level has more than 10% of missing data, and parental education more than 5%. Of the total sample, 1,023 (21.81%) cases have at least one missing data, which indicates that the extent of missing data cannot be simply ignored.
### Table 3 Missing data for individual indicators and cases

<table>
<thead>
<tr>
<th>Variable</th>
<th>Indicator</th>
<th>Number of missing data</th>
<th>Percent of missing data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer acceptance</td>
<td>v1_nice</td>
<td>62</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>v2_enough</td>
<td>117</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>v1_support</td>
<td>45</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>v2_encourage</td>
<td>49</td>
<td>1.0</td>
</tr>
<tr>
<td>Friendship quality</td>
<td>v3_feel good</td>
<td>82</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>v4_there</td>
<td>63</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>v5_stand up</td>
<td>68</td>
<td>1.4</td>
</tr>
<tr>
<td>Parent-child relationship</td>
<td>v1_proud</td>
<td>39</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>v2_interest</td>
<td>43</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td>v3_listen</td>
<td>56</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>v4_count on</td>
<td>54</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>v5_talk</td>
<td>69</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>v6_share</td>
<td>66</td>
<td>1.4</td>
</tr>
<tr>
<td>Empathy</td>
<td>v1_feel bad</td>
<td>34</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td>v2_understand</td>
<td>42</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td>v3_important</td>
<td>50</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td>v4_happy</td>
<td>43</td>
<td>0.9</td>
</tr>
<tr>
<td>Altruism</td>
<td>v1_go out</td>
<td>51</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td>v2_time</td>
<td>53</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td>v3_stranger</td>
<td>53</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td>v4_hard</td>
<td>56</td>
<td>1.2</td>
</tr>
<tr>
<td>Grade</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Gender</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Academic competence</td>
<td>73</td>
<td>73</td>
<td>1.6</td>
</tr>
<tr>
<td>Existence of siblings</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Family structure</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Parental education</td>
<td>278</td>
<td>278</td>
<td>5.9</td>
</tr>
<tr>
<td>Household income level</td>
<td>485</td>
<td>485</td>
<td>10.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of missing data per case</th>
<th>Number of cases</th>
<th>Percent of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 5</td>
<td>969</td>
<td>20.66</td>
</tr>
<tr>
<td>6 – 10</td>
<td>20</td>
<td>0.43</td>
</tr>
<tr>
<td>11 – 15</td>
<td>17</td>
<td>0.36</td>
</tr>
<tr>
<td>16 – 20</td>
<td>9</td>
<td>0.19</td>
</tr>
<tr>
<td>21 – 25</td>
<td>8</td>
<td>0.17</td>
</tr>
<tr>
<td>Total</td>
<td>1,023</td>
<td>21.81</td>
</tr>
</tbody>
</table>
In order to determine the appropriate remedy, the level of randomness of missing data was examined. The Little’s MCAR test shows that the data were not missing at completely random ($\chi^2=3071.104$, df=2107, p<.001). Following the suggestions by Hair et al. (2010), the Expectation-Maximization approach was applied to impute numeric variables. For nonmetric dichotomous variables, i.e. parental education, household income level, missing data is directly incorporated into the analysis by creating new dummy variables, where missing values are recoded into 1 and all the other valid values into 0.

Another procedure before performing SEM involves examining the statistical assumptions underlying multivariate analysis. This examination will be discussed when interpreting descriptive statistics of individual variables.

In the process of SEM analysis, following the recommendation of Anderson and Gerbing (1988) for a two-step approach, the measurement model is estimated separately prior to the simultaneous estimation of the measurement and structural models. All the procedures of statistical analysis are performed with the SPSS 21.0 and the AMOS 21.0.
The validity of the measurement or structural models is assessed using four model fit indices: chi-square ($\chi^2$), Comparative Fit Index (CFI), Tucker Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Residual (SRMR). The criteria for assessing the goodness-of-fit when the sample size is larger than 1,000 are summarized in Table 4 (Hair et al., 2010).

**Table 4 Criteria for assessing goodness-of-fit**

<table>
<thead>
<tr>
<th>Index</th>
<th>$m &lt; 12$</th>
<th>$12 \leq m &lt; 30$</th>
<th>$m \geq 30$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$</td>
<td>Insignificant p-value</td>
<td>Significant p-value expected</td>
<td></td>
</tr>
<tr>
<td>CFI or TLI</td>
<td>$&gt;.95$</td>
<td>$&gt;.92$</td>
<td>$&gt;.90$</td>
</tr>
<tr>
<td>RMSEA</td>
<td>$&lt;.07$</td>
<td>$&lt;.07$</td>
<td>$&lt;.07$</td>
</tr>
<tr>
<td>SRMR</td>
<td>Biased upward</td>
<td>$&lt;.08$</td>
<td>$&lt;.08$</td>
</tr>
</tbody>
</table>

Note: $m$ is the number of observed variables

5. **Conclusion**

In this chapter, data and sample, measurement of variables, and analysis techniques have been explained. By analyzing the data using SEM, it is expected to examine the validity of the proposed model and test the research hypotheses.
CHAPTER V – RESULTS

1. Introduction

In Chapter V, the results of analysis according are reported to the sequence of statistical analysis. This chapter is organized into three sections: (1) descriptive statistics, (2) analysis of measurement model, and (3) analysis of structural model. In the first section, descriptive statistics are reported and statistical assumptions are examined. In the second section, analytical results of the measurement model are demonstrated. In the third section, analytical results of the structural model are reported.

2. Descriptive Statistics

In this section, descriptive statistics of five major variables and seven control variables are presented. Also, after examining normality assumption underlying SEM, the measures to deal with the violations of assumption are explained.

2.1 Individual and familial characteristics

Descriptive statistics of control variables show individual and familial characteristics of the sample. In Table 5, frequency and
percent of each category are reported for nonmetric variables; mean and standard deviation are presented for numeric variables.

Table 5 Descriptive statistics of control variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category / Range</th>
<th>Frequency (%)</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade</td>
<td>0=3rd grade</td>
<td>2,307 (49.2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1=5th grade</td>
<td>2,383 (50.8)</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>0=boy</td>
<td>2,306 (49.2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1=girl</td>
<td>2,384 (50.8)</td>
<td></td>
</tr>
<tr>
<td>Academic competence</td>
<td>1=very poor to 5=very good</td>
<td></td>
<td>3.77 (.83)</td>
</tr>
<tr>
<td>Existence of siblings</td>
<td>0=no sibling</td>
<td>726 (15.5)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1=having siblings</td>
<td>3,964 (84.5)</td>
<td></td>
</tr>
<tr>
<td>Family structure</td>
<td>0=both parents</td>
<td>4,305 (91.8)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1=single parent</td>
<td>385 (8.2)</td>
<td></td>
</tr>
<tr>
<td>Parental education</td>
<td>0=high school or lower</td>
<td>1,202 (25.6)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1=college or higher</td>
<td>3,210 (68.4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1=missing</td>
<td>278 (5.9)</td>
<td></td>
</tr>
<tr>
<td>Household income level</td>
<td>0=not in poverty</td>
<td>3,807 (81.2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1=in poverty</td>
<td>398 (8.5)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1=missing</td>
<td>485 (10.3)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>4,690 (100.0)</td>
<td></td>
</tr>
</tbody>
</table>

As for grade and gender, the sample was almost equally distributed: 50.8% were in 5th grade, and 50.8% were girls. Children’s self-reported academic competence in three major subjects (M=3.77, SD=.83) was higher than ‘3=average’ but slightly lower than ‘4=good.’ In terms of familial characteristics, 84.5% living with one or more siblings, and 91.8% of children were living with two parents. The number of children whose mother or father had higher education was
3,210 (68.4%). The number of children living in an economically poor family were 398 (8.5%).

2.2 Distributions of major variables

Next, descriptive statistics of major variables show the univariate distributions of the observed indicators. In Table 6, minimum and maximum, mean and standard deviation, skewness and kurtosis of 21 items measuring five major variables are presented.

<table>
<thead>
<tr>
<th>Table 6 Descriptive statistics of major variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Peer acceptance</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Friendship quality</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Parent-child relationship</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Empathy</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Altruism</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
The range of all items was 4. The lowest mean score was that of the third item of altruism (M=2.86, SD=1.28): ‘I help others even if the person is a total stranger.’ By contrast, the highest mean score was that of the fourth item of parent-child relationship quality (N=4.39, SD=.92): ‘I can count on my parent to be there when I need him/her.’ All items were skewed to the left except the third one from altruism. Two-third of items were platykurtic, while the others leptokurtic.

2.3 Examination of normality assumption

SEM analysis requires the fulfillment of multivariate normality assumption. First of all, univariate normality assumption is examined using the critical ratios for skewness and kurtosis. When each estimate of skewness was divided by its standard error, all the absolute values were greater than 1.96 except for the fourth item measuring altruism. Similarly, all critical ratios for kurtosis exceeded 1.96 except for the fifth item of parent-child relationship quality. Moreover, most control variables are dichotomous, which are not normally distributed by definition. Since univariate normality is not assumed, the assumptions of multivariate normality underlying SEM analysis are also violated. The
lack of normality could lead to other problems such as heteroscedasticity or the existence of univariate and/or multivariate outliers.

Therefore, when estimating parameters and testing mediating effects, an assumption-free bootstrap method which draws a large number of subsamples is employed, because it is known for providing “best” estimates and their standard error (Hair et al., 2010, p. 2). In the following SEM analysis, parameters are estimated by Bootstrap Maximum Likelihood with 1,000 bootstrap samples and the statistical significance of parameters are tested using a 95% bias-corrected percentile method. Also, chi-square model fit is assessed with the Bollen-Stine bootstrap p-value.

3. Analysis of Measurement Model

The structural relationships among constructs cannot be validly examined and interpreted without valid measures (Hair et al., 2010). The five major variables in the conceptual model were measured by 21 items. It is required to confirm the validity of measurement model prior to analyzing structural relationships among variables. In this section, overall measurement model fit and construct validity are assessed.
3.1 Overall measurement model fit

The measurement model of this study is hypothesized to be congeneric as presented in Figure 2. It consists of five unidimensional latent variables with all cross-loadings constrained to zero and all covariance between or within measurement errors fixed at zero. Factor loadings of the first items on each variables were fixed at 1 to set the scale of latent variables.
Figure 2 Measurement model
As the measurement model comprises 21 observed items, it is expected to have a significant values of $\chi^2$, CFI or TLI over .92, RMSEA under .07, and SRMR under .08. The model fit indices for the proposed measurement model are presented in Table 7. As expected, $\chi^2$ was significant at the .001 level, while all the other indices met the aforementioned criteria. These results suggest that the measurement model fits well to the sample data.

**Table 7 Measurement model fit**

<table>
<thead>
<tr>
<th>$\chi^2$ (DF, P)</th>
<th>CFI</th>
<th>TLI</th>
<th>RMSEA (90% CI)</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>2339.250 (179, .001)</td>
<td>.964</td>
<td>.958</td>
<td>.051 (.049 - .053)</td>
<td>.040</td>
</tr>
</tbody>
</table>

Note: P-value for chi-square is adjusted with Bollen-Stine bootstrap.

### 3.2 Construct validity

After confirming the validity of the overall measurement model, convergent and discriminant validity of constructs were examined, following suggestions of Hair et al. (2010). First, convergent validity was assessed with factor loadings, average variance extracted, and construct reliability. As shown in Table 8, all the standardized factor loadings were significant and higher than .70 except for the fifth items of friendship quality with .62. All values for average variance extracted
(AVE) were higher than .50, and all values for construct reliability (CR) higher than .80.

**Table 8 Estimates of convergent validity**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstandardized Estimate</th>
<th>Standardized Estimate</th>
<th>Bootstrap SE</th>
<th>P</th>
<th>AVE*</th>
<th>CR**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer acceptance (PA)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.676</td>
<td>.812</td>
</tr>
<tr>
<td>v1_nice</td>
<td>1.000</td>
<td>0.855</td>
<td>0</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v2_enough</td>
<td>0.946</td>
<td>0.788</td>
<td>0.027</td>
<td>.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friendship quality (FQ)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.594</td>
<td>.859</td>
</tr>
<tr>
<td>v1_support</td>
<td>1.000</td>
<td>0.751</td>
<td>0</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v2_encourage</td>
<td>1.152</td>
<td>0.846</td>
<td>0.019</td>
<td>.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v3_feelgood</td>
<td>1.188</td>
<td>0.849</td>
<td>0.020</td>
<td>.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v4_there</td>
<td>1.039</td>
<td>0.764</td>
<td>0.021</td>
<td>.002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v5_standup</td>
<td>0.874</td>
<td>0.623</td>
<td>0.022</td>
<td>.002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent-child relationship quality (PCRQ)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.615</td>
<td>.894</td>
</tr>
<tr>
<td>v1_proud</td>
<td>1.000</td>
<td>0.770</td>
<td>0.02</td>
<td>.003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v2_interest</td>
<td>1.096</td>
<td>0.770</td>
<td>0.02</td>
<td>.003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v3_listen</td>
<td>1.135</td>
<td>0.803</td>
<td>0.021</td>
<td>.002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v4_count</td>
<td>0.968</td>
<td>0.836</td>
<td>0.021</td>
<td>.002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v5_talk</td>
<td>1.171</td>
<td>0.795</td>
<td>0.029</td>
<td>.002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v6_share</td>
<td>1.181</td>
<td>0.732</td>
<td>0.027</td>
<td>.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empathy (EM)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.611</td>
<td>.831</td>
</tr>
<tr>
<td>v1_feelbad</td>
<td>1.000</td>
<td>0.762</td>
<td>0</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v2_understand</td>
<td>1.001</td>
<td>0.822</td>
<td>0.017</td>
<td>.003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v3_important</td>
<td>1.041</td>
<td>0.820</td>
<td>0.019</td>
<td>.003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v4_happy</td>
<td>0.913</td>
<td>0.718</td>
<td>0.018</td>
<td>.002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Altruism (AL)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.683</td>
<td>.858</td>
</tr>
<tr>
<td>v1_goout</td>
<td>1</td>
<td>0.805</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v2_time</td>
<td>1.163</td>
<td>0.882</td>
<td>0.016</td>
<td>.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v3_stranger</td>
<td>1.087</td>
<td>0.762</td>
<td>0.021</td>
<td>.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v4_hard</td>
<td>1.152</td>
<td>0.852</td>
<td>0.018</td>
<td>.001</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Average Variance Extracted = \( \frac{\sum_{i=1}^{n} \lambda_i^2}{n} \)

**Construct Reliability = \( \frac{\sum_{i=1}^{n} \lambda_i^2}{\sum_{i=1}^{n} \lambda_i^2 + \sum_{i=1}^{n} \epsilon_i} \)

Note: P-values are reported as bias-corrected two-tailed significance.

Second, discriminant validity was assessed by comparing the values for average variance extracted with the squared correlation
between any two latent variables. In Table 9, estimates of correlation are presented below the diagonal, and squared correlation above the diagonal. All average variance extracted estimates in Table 8 were greater than the squared correlation estimates between corresponding variables in Table 9. Taken together, these results support that, in this measurement model, a set of measured items adequately reflects the latent variable they intended to measure.

**Table 9 Estimates of correlation and squared correlation**

<table>
<thead>
<tr>
<th></th>
<th>PA</th>
<th>FQ</th>
<th>PCRQ</th>
<th>EM</th>
<th>AL</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA</td>
<td></td>
<td>.265</td>
<td>.213</td>
<td>.165</td>
<td>.147</td>
</tr>
<tr>
<td>FQ</td>
<td>0.515***</td>
<td></td>
<td>.332</td>
<td>.529</td>
<td>.494</td>
</tr>
<tr>
<td>PCRQ</td>
<td>0.462***</td>
<td>0.576***</td>
<td></td>
<td>.282</td>
<td>.218</td>
</tr>
<tr>
<td>EM</td>
<td>0.406***</td>
<td>0.727***</td>
<td>0.531***</td>
<td></td>
<td>.506</td>
</tr>
<tr>
<td>AL</td>
<td>0.383***</td>
<td>0.703***</td>
<td>0.467***</td>
<td>0.711***</td>
<td></td>
</tr>
</tbody>
</table>

*** p<.001

Note: Below the diagonal are correlation estimates; above the diagonal are squared correlation.

4. Analysis of Structural Model

Correlation estimates in Table 9 suggest that all of the bivariate relationships were positively significant. But more accurate estimates of structural relationships among variables should be examined by analyzing the structural model. In this section, overall structural model fit is assessed and the results of hypotheses testing are reported.
4.1 Overall structural model fit

The structural model of this study is specified as presented in Figure 3. The key five variables are included as latent variables, and control variables are included as observed variables.

![Figure 3 Structural model]

In this structural model, the quality of parent-child relationships is hypothesized to directly influence empathy, altruism, peer acceptance, and friendship quality. Empathy and altruism are each hypothesized to directly influence peer acceptance and friendship quality.
Also, all the control variables are hypothesized to directly influence empathy, altruism, peer acceptance, and friendship quality. The independent and control variables are hypothesized to each have covariance with others.

As the structural model comprises 30 observed variables, it is expected to have a significant values of $\chi^2$, CFI or TLI over .90, RMSEA under .07, and SRMR under .08. The model fit indices for the proposed structural model are reported in Table 10. As expected, $\chi^2$ was significant at the .001 level, while all the other indices met the aforementioned criteria. These results suggest the proposed structural model fits the sample data well.

**Table 10 Structural model fit**

<table>
<thead>
<tr>
<th>$\chi^2$ (DF, P)</th>
<th>CFI</th>
<th>TLI</th>
<th>RMSEA (90% CI)</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>3025.836 (323, .001)</td>
<td>.959</td>
<td>.944</td>
<td>.042 (.041 - .044)</td>
<td>.030</td>
</tr>
</tbody>
</table>

Note: P-value for chi-square is adjusted with Bollen-Stine bootstrap.

In the structural model, the fraction of variance in endogenous variables that is accounted for by a set of influencing variables is represented by the value of squared multiple correlation. The squared multiple correlation values of dependent and mediating variables are reported in Table 11. In this model, the proportion of
explained variance in peer acceptance was 28.3%, while friendship quality was 64.6%. The analytic model explained 31.4% of variance in empathy and 23.6% of variance in altruism.

**Table 11 Estimates of squared multiple correlation**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Squared multiple correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer acceptance</td>
<td>.283</td>
</tr>
<tr>
<td>Friendship quality</td>
<td>.646</td>
</tr>
<tr>
<td>Empathy</td>
<td>.314</td>
</tr>
<tr>
<td>Altruism</td>
<td>.236</td>
</tr>
</tbody>
</table>

### 4.2 Parameter estimation

After confirming the validity of the overall structural model, individual parameter estimates and their statistical significance are examined. The main results are summarized in Table 12 and Figure 4.

**Table 12 Estimates of relationships among major variables**

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized estimate</th>
<th>Standardized estimate</th>
<th>Bootstrap SE</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>EM ← PCRQ</td>
<td>0.573</td>
<td>0.484</td>
<td>.023</td>
<td>.001</td>
</tr>
<tr>
<td>AL ← PCRQ</td>
<td>0.506</td>
<td>0.428</td>
<td>.022</td>
<td>.003</td>
</tr>
<tr>
<td>PA ← EM</td>
<td>0.104</td>
<td>0.112</td>
<td>.028</td>
<td>.003</td>
</tr>
<tr>
<td>PA ← AL</td>
<td>0.113</td>
<td>0.121</td>
<td>.024</td>
<td>.001</td>
</tr>
<tr>
<td>FQ ← EM</td>
<td>0.309</td>
<td>0.346</td>
<td>.022</td>
<td>.002</td>
</tr>
<tr>
<td>FQ ← AL</td>
<td>0.302</td>
<td>0.338</td>
<td>.019</td>
<td>.003</td>
</tr>
</tbody>
</table>

Note: P-values are reported as bias-corrected two-tailed significance.
The direct effects of parent-child relationship quality on peer acceptance (β=.303, p=.003) and friendship quality (β=.203, p=.002) were positively significant, suggesting that children having better quality parent-child relationships have more positive peer relationships. The effects of parent-child relationship quality on empathy (β=.484, p=.001) and altruism (β=.428, p=.003) were also positively significant, which signifies that children having better quality parent-child relationships show higher empathy and altruism.

The effects of empathy on peer acceptance (β=.112, p=.003) and friendship quality (β=.346, p=.002) were positively significant, which means that children with higher empathy are better accepted by peers and have better quality friendships. The effects of altruism on peer
acceptance ($\beta=.121$, $p=.001$) and friendship quality ($\beta=.338$, $p=.003$) were positively significant as well, indicating that children with higher altruism are better accepted by peers and have better quality friendships.

On the other hand, the effects of control variables on mediating and dependent variables are reported in Table 13. To summarize the relationships that were significant at the .05 level, children in 5th grade have higher empathy ($\beta=.037$, $p=.009$) and higher altruism ($\beta=.065$, $p=.002$) than children in 3rd grade. They are also better accepted by peers ($\beta=.060$, $p=.001$) but have worse quality friendships ($\beta=-.027$, $p=.011$) than younger children. Girls have higher empathy ($\beta=.118$, $p=.002$), are better accepted by peers ($\beta=.056$, $p=.003$), and have better quality friendships ($\beta=.043$, $p=.001$) than boys. Academic competence is positively associated with empathy ($\beta=.128$, $p=.002$), altruism ($\beta=.112$, $p=.002$), peer acceptance ($\beta=.135$, $p=.001$), and friendship quality ($\beta=.096$, $p=.001$). Children who have one or more siblings are better accepted by peers ($\beta=.055$, $p=.003$) than those who do not have siblings. Children whose mother or father had higher education have higher empathy ($\beta=.037$, $p=.009$) and better quality friendship ($\beta=.023$, $p=.037$). In this model, living with a single parent or in an
economically poor family did not have a direct effect on children’s prosocial orientation nor positive peer relationships.

**Table 13 Estimates of relationships between major and control variables**

<table>
<thead>
<tr>
<th></th>
<th>→ EM</th>
<th>→ AL</th>
<th>→ PA</th>
<th>→ FQ</th>
<th>↔ PCRQ</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standardized Estimates (P)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade</td>
<td>0.037</td>
<td>0.065</td>
<td>0.060</td>
<td>-0.027</td>
<td>0.017</td>
</tr>
<tr>
<td></td>
<td>(.009)</td>
<td>(.002)</td>
<td>(.001)</td>
<td>(.011)</td>
<td>(.246)</td>
</tr>
<tr>
<td>Gender</td>
<td>0.118</td>
<td>0.024</td>
<td>0.056</td>
<td>0.043</td>
<td>0.039</td>
</tr>
<tr>
<td></td>
<td>(.002)</td>
<td>(.079)</td>
<td>(.003)</td>
<td>(.001)</td>
<td>(.017)</td>
</tr>
<tr>
<td>Academic competence</td>
<td>0.128</td>
<td>0.112</td>
<td>0.135</td>
<td>0.096</td>
<td>0.301</td>
</tr>
<tr>
<td></td>
<td>(.002)</td>
<td>(.002)</td>
<td>(.001)</td>
<td>(.001)</td>
<td>(.001)</td>
</tr>
<tr>
<td>Existence of siblings</td>
<td>0.004</td>
<td>0.018</td>
<td>0.055</td>
<td>0.013</td>
<td>-0.020</td>
</tr>
<tr>
<td></td>
<td>(.701)</td>
<td>(.159)</td>
<td>(.003)</td>
<td>(.227)</td>
<td>(.181)</td>
</tr>
<tr>
<td>Family structure</td>
<td>0.009</td>
<td>-0.017</td>
<td>-0.008</td>
<td>0.014</td>
<td>-0.080</td>
</tr>
<tr>
<td></td>
<td>(.576)</td>
<td>(.300)</td>
<td>(.690)</td>
<td>(.307)</td>
<td>(.002)</td>
</tr>
<tr>
<td>Parental education</td>
<td>0.037</td>
<td>0.019</td>
<td>-0.029</td>
<td>0.023</td>
<td>0.108</td>
</tr>
<tr>
<td></td>
<td>(.009)</td>
<td>(.170)</td>
<td>(.053)</td>
<td>(.037)</td>
<td>(.002)</td>
</tr>
<tr>
<td>Parental education missing</td>
<td>0.011</td>
<td>-0.001</td>
<td>0.002</td>
<td>-0.001</td>
<td>-0.030</td>
</tr>
<tr>
<td></td>
<td>(.568)</td>
<td>(.900)</td>
<td>(.926)</td>
<td>(.887)</td>
<td>(.086)</td>
</tr>
<tr>
<td>Household income level</td>
<td>-0.005</td>
<td>-0.004</td>
<td>-0.025</td>
<td>-0.007</td>
<td>-0.072</td>
</tr>
<tr>
<td></td>
<td>(.722)</td>
<td>(.798)</td>
<td>(.121)</td>
<td>(.575)</td>
<td>(.002)</td>
</tr>
<tr>
<td>Household income missing</td>
<td>0.015</td>
<td>0.024</td>
<td>-0.013</td>
<td>-0.013</td>
<td>-0.019</td>
</tr>
<tr>
<td></td>
<td>(.281)</td>
<td>(.083)</td>
<td>(.340)</td>
<td>(.287)</td>
<td>(.207)</td>
</tr>
</tbody>
</table>

Note: P-values are reported as bias-corrected two-tailed significance.

The covariance estimates between the quality of parent-child relationships and other control variables are also presented in Table 13. Among children’s individual characteristics, being a girl and having higher academic competence are related to a better quality of parent-
child relationships. Among familial characteristics, living with two parents, having a parent with higher education, and not living in an economically poor family are also related to better quality relationships with parent.

4.3 Decomposition of effects

To test the research hypotheses of the study, the total effects of parent-child relationship quality on peer acceptance and friendship quality were decomposed into direct and indirect effects with bootstrap method. The estimates of total, direct, and indirect effects as well as their statistical significances are demonstrated in Table 14.

**Table 14 Estimates of total, direct, and indirect effects**

<table>
<thead>
<tr>
<th></th>
<th>Total effect</th>
<th>Direct effect</th>
<th>Indirect effect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate</td>
<td>SE</td>
<td>Estimate</td>
</tr>
<tr>
<td>PA ← PCRQ</td>
<td>0.453**</td>
<td>0.028</td>
<td>0.335**</td>
</tr>
<tr>
<td></td>
<td>(0.409)</td>
<td>(0.018)</td>
<td>(0.303)</td>
</tr>
<tr>
<td>FQ ← PCRQ</td>
<td>0.544**</td>
<td>0.019</td>
<td>0.214**</td>
</tr>
<tr>
<td></td>
<td>(0.515)</td>
<td>(0.014)</td>
<td>(0.203)</td>
</tr>
</tbody>
</table>

Note: Values in parenthesis are standardized estimates and standard errors. P-values are reported as bias-corrected two-tailed significance.

The total effect of parent-child relationship quality on peer acceptance (β=.409, p=.003) was positively significant. This result support the hypothesis 1-1: the quality of parent-child relationships has
a positive effect on peer acceptance. Also, the total effect of parent-child relationship quality on friendship quality ($\beta=.515$, $p=.002$) was positively significant. This result support the hypothesis 1-2: the quality of parent-child relationships has a positive effect on friendship quality. Taken together, these results support the first main hypothesis: the quality of parent-child relationships has a positive effect on positive peer relationships.

On the other hand, the indirect effect of parent-child relationship quality on peer acceptance ($\beta=.106$, $p=.002$) was positively significant. This result support the hypothesis 2-1: children’s empathy and altruism mediate the effect of parent-child relationship quality on peer acceptance. Also, the indirect effect of parent-child relationship quality on friendship quality ($\beta=.312$, $p=.002$) was positively significant. This result support the hypothesis 2-2: children’s empathy and altruism mediate the effect of parent-child relationship quality on friendship quality. But given the significant direct effects of parent-child relationship quality on peer acceptance and friendship quality, the mediating effects of empathy and altruism are a partial mediation. Taken together, these results support the second main hypothesis: children’s
empathy and altruism partially mediate the effect of parent-child relationship quality on positive peer relationships.

5. Conclusion

In this chapter, the results of statistical analysis have been reported. The analytical results supported the research hypotheses on (1) the effects of parent-child relationship quality on positive peer relationships, and (2) the mediating effects of empathy and altruism. In conclusion, the research questions of this study can be answered as follows:

(1) The quality of parent-child relationships has a positive effect on peer acceptance and friendship quality among Korean school-aged children.

(2) Children’s empathy and altruism partially mediate the effect of parent-child relationship quality on positive peer relationships among Korean school-aged children.
CHAPTER VI – CONCLUSION

1. Introduction

In Chapter VI, the results of the study are discussed within a larger context. This chapter is organized into four sections: (1) findings, (2) theoretical implications, (3) practical implications, and (4) limitations and suggestions. In the first section, main findings from the model testing are recapitulated and discussed. In the second section, theoretical implications of the present study are stated. In the third section, practical implications for Korean parents, policy makers, and social workers are stated. In the fourth section, limitations of the present study and suggestions for future study are described.

2. Findings

The purpose of this study was to examine (1) the effect of parent-child relationships on peer acceptance and friendship quality, and (2) the mediating effects of empathy and altruism on the association between parent-child relationships and positive peer relationships among Korean school-aged children. Based on the attachment theoretical framework and empirical evidence, the research model for prosocial parent-to-peer pathways was developed and empirically tested by analyzing nationally
representative data of children in 3rd and 5th grade. In this section, four main findings from the model testing are summarized and discussed with regard to previous research findings.

**Effect of parent-child relationships on empathy and altruism**

First of all, the quality of parent-child relationships was found to have positive effects on children’s empathy and altruism. This result concurs with previous findings that a better quality of parent-child relationships predicts higher empathy and altruism in children (N. L. Collins & Feeney, 2000; Eisenberg et al., 2006; Krevans & Gibbs, 1996; Thompson, 2006). Korean literature on the association between parent-child relationship quality and children’s prosocial orientation has mainly focused on children in early childhood (M. S. Choi et al., 2008; K. H. Kim & Ahn, 2009; Son, 2000). But this study shows that the quality of parent-child relationships does matter to school-aged children as well.

In addition, the post hoc pairwise comparisons confirmed that the effects of parent-child relationship quality on empathy and altruism were significantly larger than the effects of any control
variables.\(^5\) This result suggests that, even after considering diverse individual and familial characteristics, the quality of parent-child relationships is one of the most influential factors explaining school-aged children’s empathy and altruism. This finding is inconsistent with a previous Korean exploratory study, in which school-aged children’s prosocial orientation was only significantly associated with age and gender, but not with other individual and environmental variables including the quality of parent-child interactions (Jo, 2011). However, the results of the aforementioned study could not be generalized to all Korean children because a relatively small number of its participants (n=108) were sampled in just one elementary school. With nationally representative large-scale data, the present study found that the quality of parent-child relationships had stronger effects on empathy and altruism than other significant variables such as grade, gender, academic competence, and parental education. In sum, good quality relationships with parents can be considered as one of the essential conditions where Korean children’s prosocial orientation is fostered.

\(^5\) The critical ratios for difference between estimates ranged from 7.22 to 15.98.
Effect of empathy and altruism on positive peer relationships

Secondly, children’s empathy and altruism were found to have positive effects on peer acceptance and friendship quality. These results support the previous findings that empathic ability and altruistic tendency are significantly related to peer acceptance and friendship quality in middle childhood (Edwards et al., 1984; Eisenberg et al., 2012; Eugene Han, 2005; H. Sim, 2005; Van Lieshout et al., 1999; Wilson et al., 2009).

According to previous literature, the association between prosocial orientation and positive peer relationships can be mediated by actual prosocial behaviors: that is, empathic understanding on peers’ needs and a concern for their well-being may bring about actual behaviors that benefit other peers, thereby contributing good quality peer relationships (Mikulincer & Shaver, 2010; K. H. Rubin et al., 2006). Admittedly, prosocial behaviors in a certain situation are not determined solely by an individual’s prosocial orientation, but influenced by various other factors (Eisenberg et al., 2015). But the results of this study show that school-aged children’s prosocial orientation, in general, contributes to positive peer relationships. As Saarni et al. (2006) suggested, prosocial orientation can be regarded as an indispensable characteristics that enable children to positively relate with other peers.
In the meantime, the post hoc pairwise comparisons following the second hypothesis testing reported unexpected but interesting findings about the differences between peer acceptance and friendship quality: the effects of empathy and altruism on friendship quality were significantly larger than their effects on peer acceptance. These results suggest that children’s prosocial orientation might be a stronger predictor of friendship quality than of peer acceptance. The quality of friendships is likely to be primarily influenced by personal characteristics of the self and friends, because friendships, by definition, are dyadic peer relationships characterized by a positive affection tie; but peer acceptance can be influenced both by personal characteristics and peer group contexts since it is a group-level relationship (Gifford-Smith & Brownell, 2003). In fact, the squared multiple correlation of peer acceptance (28.3%) was much smaller than that of friendship quality (64.6%). This result indicates that peer acceptance is more likely to be determined by peer-group-related contextual factors. In the present model, for example, the effect of academic competence on peer acceptance

6 For empathy, the critical ratio for difference between its effects on peer acceptance and friendship quality was 7.47, while for altruism, the critical ratio was 7.49.
acceptance ($\beta=.135$, $p=.001$) was not significantly different from the effects of empathy ($\beta=.104$, $p=.003$) and altruism ($\beta=.113$, $p=.001$) on peer acceptance. These results might be interpreted within Korean school context where academic achievement is a major standard by which children evaluate each other (Chen, ChunG, & Hsiao, 2009).

In Korea, several studies have reported the positive association between prosocial orientation and peer acceptance in elementary school (H. J. Lee, 2015; C. O. Park & Ghim, 2010; H. Sim, 2005). Surprisingly, however, there exist little empirical research on the association between prosocial orientation and friendship quality, although prosocial orientation seems to be more closely related to friendship quality than to peer acceptance. Also, there has rarely been empirical research in Korea on the similarities and differences in predictors between peer acceptance and friendship quality. Distinguishing peer acceptance and friendship quality, this study provides more detailed findings about the association between prosocial orientation and two domains of positive peer relationships among school-aged children. Further studies are called for to explain the mechanisms behind the differences between peer acceptance and friendship quality.
Indirect effect of parent-child relationships on positive peer relationships

Thirdly, children’s empathy and altruism were found to partially mediate the effects of parent-child relationship quality on peer acceptance and friendship quality. This result supports the “prosocial-orientation-as-mediator model” proposed by Clark and Ladd (2000, p. 487). This finding provides valuable evidence on the mechanisms underlying positive parent-to-peer pathways among South Korean children. This study empirically examined the speculation of S. H. Park (2002) that prosocial characteristics would mediate the relationship between positive parenting and peer acceptance. Also, the present study complements the findings of B. S. Sim and Ko (2008) that failed to support the hypothesis that children’s empathy and cooperation skills would mediate the association between parent-child attachment and peer acceptance. The observed significant indirect pathways from parent-child relationships through children’s prosocial orientation to positive peer relationships are generally consistent with recent findings on the mediating roles of children’s empathy between positive parenting and positive peer relationships (Im & Jin, 2014; S. E. Lee & Nahm, 2011; J. H. Oh, 2015;
Yoon & Jin, 2015). But the present study has unique strengths over these studies: the research model was developed based on solid theoretical backgrounds and was statistically examined with large-scale representative data. In summary, this study provides one possible explanation with scientific rigor to the question on how the quality of parent-child relationships affects the quality of peer relationships among South Korean school-aged children.

**Direct effect of parent-child relationships on positive peer relationships**

Lastly, it should be noted that the direct effects of parent-child relationships on positive peer relationships still remained significant after accounting for the indirect effects through empathy and altruism. These results can be explained in two ways: first, the quality of parent-child relationships does directly influence positive peer relationships, and second, there exist other significant but omitted variables that mediate the influences of parent-child relationship quality on positive peer relationships. As for the second hypothesis, it might be possible that there are different mediators other than children’ prosocial orientation in positive parent-to-peer pathways. For example, several Korean researchers have investigated the mediating roles of emotion regulation
on the association between parent-child relationships and peer relationships in middle childhood (Y. S. Choi & Park, 2015; M. H. Jang & Lee, 2011; Kwon & Jin, 2014; Nam & Lee, 2014). These studies suggest that school-aged children’s emotional competence, in concert with prosocial orientation, may also explain the psychological mechanisms through which parent-child relationship quality influences positive peer relationships.

Furthermore, a significant difference was observed in the direct effects of parent-child relationship quality between two domains of positive peer relationships: the direct effect of parent-child relationship quality was significantly larger on peer acceptance than on friendship quality.\(^7\) This result implies that the omitted mediators, if any, are more likely to explain the pathways from parent-child relationship quality to peer acceptance. Taken together, more studies are needed on social and emotional mechanisms through which parent-child relationship quality has an impact on peer acceptance and friendship quality among school-aged children.

\(^7\) The critical ratio for difference between the direct effects on peer acceptance and friendship quality was 5.17.
3. Theoretical Implications

This study may be one of the first studies in Korea that develop a theoretical model for prosocial parent-to-peer pathways and empirically examine its validity with large-scale representative data. In this section, theoretical implications of the present study are stated.

**Perspectives**

First of all, this study has brought attention to the research needs for studying children’s peer relationships from an “individual-in-relationships” perspective (W. A. Collins, 1999). Also, this study attempted to focus on positive rather than negative peer relationships from a perspective that “the absence of problems or failures does not necessarily indicate proper growth and success” (Ben-Arieh, 2006, p. 804). In this study, two domains of peer relationships are differentially investigated with some interesting findings. By scrutinizing positive peer relationships, this study calls for more research efforts to deflect the mainstream of research attention away from “fascination with problems and pathology” (Saleebey, 2013, p. 2).
Theoretical framework and research model

Also, this study has suggested attachment theory as a main theoretical framework and empirically tested its validity. The structural model of this study was statistically fit to the data collected from the representative sample of South Korean children in 3rd and 5th grade living with at least one parent. This result indicates that the attachment theoretical framework and the proposed conceptual model can be validly applied to explain the mechanisms underlying the association between parent-child relationship quality and positive peer relationships among South Korean school-aged children.

Although attachment theory is one of the basic theories explaining children’s social development. There has been no study in Korean literature that conceptualized prosocial orientation as a form of internal working models within an attachment theoretical framework. However, this study provides a piece of evidence that children’s prosocial orientation such as empathy and altruism might function as one form of internal working models, which are developed by the quality of parent-child relationships and guide children’s psychological processes behind their actual behaviors, which in turn influence the quality of peer
relationships (Markiewicz et al., 2001; Putallaz & Heflin, 1990). By modeling and examining prosocial parent-to-peer pathways, this study provides one plausible theoretical model for understanding Korean school-aged children’s prosocial development.

4. Practical Implications

The findings of the study also have practical implications for parents, policy makers, and social workers within broader Korean social contexts.

Implications for parents

First, this study brings attention to the importance of maintaining good quality parent-child relationships in prosocial development during elementary school years. The majority of Korean parents want and try to raise their children to be happy and competent. When children enter school, however, many parents tend to only focus on children’s academic achievement and spend substantial resources to make them stay ahead at school, hoping to ensure the best possible opportunities for them to succeed in school life and in the future (Sharma, 2013). But, it may deteriorate the quality of parent-child relationships during the school-age years. A longitudinal study that analyzed the data
from Korea Youth Panel Study (KYPS), in fact, reported that parent-child attachment relationship linearly decreased from middle childhood to early adolescence (Eunyoung Han, 2014).

In this context, it is noteworthy that the quality of parent-child relationships has direct and indirect influences on school-aged children’s positive peer relationships, which function as the contexts where children’s present happiness is measured, and their adaptive skills and behaviors for later successful development are fostered (Hartup & Laursen, 1999). If parents neglect the importance of good quality parent-child relationships and regard children’s prosocial development as peripheral to cognitive development, their effort to raise happy and competent children could go in vain, contrary to their expectations. One of the most important legacies that parents can leave to their children would be a history of positive parent-child relationships, such as affective connections and constructive communications. Good quality parent-child relationships would provide children with a foundation for the ability to empathize with and care about others, thereby enabling them to flourish in positive social relationships.
Implications for policy makers

Second, this study highlights the need for changes in Korean educational and social environments in a way that encourages positive peer relationships in schools and positive parent-child relationships in families.

In educational environments where student abilities are measured, evaluated, and compared mostly by one’s test scores and ranks, it would be hard to experience positive peer relationships to the fullest extent. In fact, in an international comparison study, Korean children expressed an ambivalence about peers between source of joy and competing rival, and reported the lowest satisfaction with peer relationships among four countries (K. Moon, Kim, Kim, Lee, et al., 2008; K. Moon, Kim, Kim, & Min, 2008). The aforementioned tendency of Korean parents to emphasize children’s academic achievement may also be relevant to this competitive education climate.

However, the goal of education is not solely on students’ academic achievement, but should involve developing personally fulfilled and socially responsible citizens (Gordon, 2009). Recently, the National Assembly of the Republic of Korea passed a Character Education Promotion Act, which requires all Korean schools to teach
students how to develop personal qualities and competencies necessary for living with others, in community, and in nature. The legislation has a significance in that it can set grounds for promoting children’s prosocial characteristics in school settings. But this law may be ineffective if it does not affect the overall educational environments where competition between peers and individual academic achievement are still most highly valued. Moreover, prosocial characteristics such as empathy and altruism cannot be merely taught by means of formal school lessons, but can be fostered in positive social contexts, primarily within a good quality of parent-child relationships.

On the other hand, in social environments where parents have to work for long hours under stressful conditions, it would be hard for them to have enough time and energy available for positive interactions with their children. Unfortunately, Korea has consistently been ranked among the top in OECD countries for annual and weekly working hours (OECD, 2015). A lack of family-friendly atmosphere at large could also be a serious impediment to positive child development. Thus, our society should make policy efforts to improve working parents’ work-family balance and encourage them to foster positive relationships
with their children. These changes in our social environments would indirectly help more children flourish in their social relationships.

**Implications for social workers**

Finally, this study provides useful evidence to develop preventive and promotive programs for enhancing positive peer relationships in school-aged children by focusing on their prosocial orientation. As S. G. Lee (2007) noted, the majority of social work practice aims to change clients’ psychosocial aspects, which in turn can bring about the actual target changes. Hence, investigations on the psychological mechanisms could inform social workers of *where* and *how* to intervene. In Korea, a number of social work practices have targeted at reducing children’s aggressive or withdrawn orientation and behaviors in order to solve and prevent peer-related problems. But, our society needs to implement more social interventions focusing on prosocial orientation in order to help children flourish in peer relationships.

These interventions could be a preventive program for children at risk of negative or low quality parent-child relationships. Although good quality parent-child relationships are crucial for positive
peer relationships, it might be hard for social workers to directly intervene in parent-child relationships to promote children’s peer relationships, since the quality of parent-child relationships is likely to be influenced by various factors, such as parental physical and mental health or family SES, which are harder to change just by social work practices (Clark & Ladd, 2000; Eisenberg et al., 2006; Thompson, 2006). Rather, social workers can intervene in more proximal predictors of positive peer relationships – children’s prosocial orientation. This intervention strategy can contribute to the efforts of social work field to provide all children with the best and equal opportunity for positive development.

Also, social interventions focusing on prosocial orientation could be a universal program for general population. In Western society, a number of school-based or community-based programs whose objective is to increase prosocial orientation and behaviors have been developed and tested with general children from early childhood to adolescence (Caprara et al., 2014; Gordon, 2003; Ramaswamy & Bergin, 2009; Schonert-Reichl, Smith, Zaidman-Zait, & Hertzman, 2012; Solomon, Watson, Delucchi, Schaps, & Battistich, 1988). In Korea, there exist some evidence-based programs targeting preschoolers’ prosocial
orientation and behaviors, but few exist for elementary school children (S. M. Song et al., 2015). But, some researchers have recently attempted to develop and implement classroom-based programs to promote children’s prosocial orientation (Y. H. Kim & Lee, 2012; S. M. Song et al., 2015). The present study provides empirical evidence for such programs by focusing on the roles of empathy and altruism. These kinds of social interventions targeting prosocial orientation would contribute to the fields’ efforts not only to bring children up “from negative eight to zero” but also to make them “rise from zero to positive eight” (Gable & Haidt, 2005, p. 103).

5. Limitations and Suggestions

This study has several limitations due to secondary data analysis. First, because of the absence of panel data, this study could only explore the cross-sectional relationships among variables which can actually vary across time. Although the directions of influences between variables are specified based on theories and previous research, longitudinal data analysis is required to increase the internal validity of this study. Especially when testing mediated relationships, longitudinal analysis is
essential to ascertain causal relationships among variables (Eisenberg et al., 2006).

Second, the results of the study may have been affected by common method bias due to the use of child self-reported measures. Peer acceptance was not rated by other peers; friendship quality was not mutually measured with friend-reported measures; parent-child relationship quality was also not mutually measured with parent-reported measures. These problems are attributable to intrinsic limitations of a large-scale, self-report survey method. Although convergent and discriminant validity of the measurement model was assessed before analyzing the structural relationships among variables, this study could not perfectly rule out the possibility of common method bias. In the following studies, appropriate remedies are needed to avoid or minimize possible common method bias from data collection to data analysis.

Third, the research model of this study may have omitted some important variables explaining school-aged children’s positive peer relationships, particularly peer acceptance. The structural model explained a relatively substantial amount of variances in friendship quality (64.6%) but not large peer acceptance (28.3%). These results imply that some significant variables explaining peer acceptance were
not included in the research model. In the following studies, it is needed to find a better model for explaining peer acceptance and to compare similarities and differences in predictors and the mechanisms thereof between peer acceptance and friendships among school-aged children.

6. Conclusion

This study provides a simple but significant conclusion: children who have grown within good quality relationships with parents are likely to be more empathic and altruistic toward others, thereby being better accepted by peers and having better friendships during elementary school years. This study calls for more future studies on Korean children’s prosocial orientation and positive peer relationships with more scientific rigor and practical relevance. As Gordon (2009, p. 100) claims, the illiterate in the next generation would not be “those who don't know how to read” but “those who don't know how to relate.” Supporting parents to maintain good quality relationships and providing all children with good opportunities for prosocial development would be one of the most powerful measures to make our children flourish in their social lives, and raise them to be caring and responsible adults in the future.
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relation in school age children. [학령기 아동들의 부모에
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teenagers’ exposure to domestic violence and exercising
school violence. [청소년의 가정폭력 노출경험과
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영향: 교사에 대한 친밀감과 또래애착의 조절효과].


APPENDIX

Korean Version Questionnaire

1. Peer acceptance

<table>
<thead>
<tr>
<th>다음에 대해 얼마나 찬성하나요?</th>
<th>찬성하지 않음</th>
<th>약간 찬성</th>
<th>어느 정도 찬성</th>
<th>상당히 찬성</th>
<th>완전히 찬성</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) 내 친구들은 대체로 나에게 잘 대해준다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(2) 나는 친구들이 충분히 많이 있다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

2. Friendship quality

<table>
<thead>
<tr>
<th>다음의 문장들이 자신의 모습을 얼마나 잘 설명하는지 표시해주세요.</th>
<th>전혀 비슷하지 않다</th>
<th>약간 비슷하고</th>
<th>비슷한 편이다</th>
<th>상당히 비슷하다</th>
<th>매우 비슷하다</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) 나는 옳은 일을 하고 있는 친구들을 응원하고 지원한다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(2) 나는 친구들이 최고가 될 수 있도록 격려한다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(3) 나는 친한 친구들이 스스로에 대해 자긍심을 갖고도록 돕는다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(4) 친구가 나를 필요로 할 때 거기에 있어준다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(5) 다른 아이가 친구를 괴롭히면 나는 친구의 편을 들어준다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
3. Parent-child relationship quality

다음과 같은 일이 얼마나 자주 일어나는지 표시해주세요.

<table>
<thead>
<tr>
<th></th>
<th>거의 그렇지 않다</th>
<th>가끔 그렇다</th>
<th>그런 편이다</th>
<th>자주 그렇다</th>
<th>항상 그렇다</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) 부모님은 나를 자랑스럽게 여긴다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(2) 부모님은 내가 하는 일에 관심을 가진다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(3) 내가 부모님께 이야기할 때면, 부모님은 내 말을 잘 들어준다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(4) 내가 부모님의 도움을 필요로 할 때 부모님이 도와주실 것이라고 믿는다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(5) 부모님과 나는 심각한 문제에 대해서도 이야기를 나눈다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(6) 나는 부모님께 내 생각과 감정을 편하게 이야기할 수 있다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

4. Empathy

다음의 문장들이 자신의 모습을 얼마나 잘 설명하는지 표시해주세요.

<table>
<thead>
<tr>
<th></th>
<th>전혀 비슷하지 않다</th>
<th>약간 비슷하다</th>
<th>비슷한 편이다</th>
<th>상당히 비슷하다</th>
<th>매우 비슷하다</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) 다른 사람들의 감정이 상처받을 때면 나도 마음이 아프다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(2) 나와 가까운 사람들이 느끼는 감정을 이해한다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(3) 나에게 다른 사람들의 감정을 이해하는 것이 중요하다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(4) 나는 다른 사람들이 성공하는 것을 보면 행복하다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
5. Altruism

다음의 문장들이 자신의 모습을 얼마나 잘 설명하는지 표시해주세요.

<table>
<thead>
<tr>
<th></th>
<th>전혀 비슷하지 않다</th>
<th>약간 비슷하다</th>
<th>비슷한 편이다</th>
<th>상당히 비슷하다</th>
<th>매우 비슷하다</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) 나는 남을 돕기 위해 앞장서서 노력한다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(2) 나는 내가 시간을 많이 쓰더라도 남을 돕는다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(3) 나는 잘 모르는 사람의 일이라도 돕는다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(4) 나는 나에게 혼든 일이라도 남을 돕는다</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

6. Control variables

Q. 학생의 성별은 무엇인가요?  
   ① 남자  ② 여자

<table>
<thead>
<tr>
<th></th>
<th>매우 못함</th>
<th>보통 이하</th>
<th>보통 이상</th>
<th>아주 잘함</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. 본인의 학업성적은 어떻게니까?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) 전체적으로</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>(2) 국어</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>(3) 수학</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>(4) 영어</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Q. 귀댁 자녀가 현재 함께 살고 있는 가족은 어떻게 됩니까? 아래 해당되는 번호에 모두 체크해 주십시오. (※ 해외, 지방 출장 등의 이유로 일시적으로 떠어져 사내는 가족도 포함하여 주십시오.)

① 어머니   ② 아버지   ③ (외)할머니   ④ (외)할아버지
⑤ 형제・자매・남매   ⑥ 다른 아이들   ⑦ 다른 어른들
Q. 귀댁 자녀의 아버지는 학교를 어디까지 다니셨습니까? (※ 아동의 아버지가 계실 경우에만 응답해주십시오.)
① 초등학교 졸업 이하(중학교 중퇴 포함) ② 중학교 졸업(고등학교 중퇴 포함)
③ 고등학교 졸업(대学校 중퇴 포함) ④ 전문대학 졸업
⑤ 대학교 졸업(4 년제 이상) ⑥ 대학원 이상

Q. 귀댁 자녀의 어머니는 학교를 어디까지 다니셨습니까? (※ 아동의 어머니가 계실 경우에만 응답해주십시오.)
① 초등학교 졸업 이하(중학교 중퇴 포함) ② 중학교 졸업(고등학교 중퇴 포함)
③ 고등학교 졸업(대学校 중퇴 포함) ④ 전문대학 졸업
⑤ 대학교 졸업(4 년제 이상) ⑥ 대학원 이상

Q. 현재 귀댁 자녀가 함께 살고 있는 가족은 모두 몇 명입니까? (_______명)
(※ 해당자녀를 포함한 가족 전체 인원을 적어 주십시오. 해외, 지방 출장 등의 이유로 일시적으로 떠어져 지내는 가족도 포함하여 주십시오)

Q. 귀댁 자녀가 속한 가구의 지난 3개월간의 월평균 총 가구 소득은 대략 어느 정도입니까? 금액을 써 주십시오. (월 평균 소득 (세전)___________만원)
(※ 가구원 전체의 근로소득, 이자소득, 재산 및 임대소득과 연금, 각종 보조금, 개인적으로 받은 돈 등을 모두 합산한 금액을 기입해 주십시오.)
국문 초록

학령기 아동의 부모자녀관계가 긍정적 또래관계에 미치는 영향에서 공감과 이타심의 매개 역할

서울대학교 대학원
사회복지학과
이주연

본 연구의 목적은 첫째, 학령기 아동의 부모-자녀관계가 긍정적인 또래관계에 미치는 영향을 확인하고, 둘째, 이러한 영향 관계에서 아동의 공감과 이타심이 매개 효과를 가지는지 검증하는 것이다. 또래수용과 우정으로 대표되는 긍정적인 또래관계는 학령기 아동의 행복한 삶과 바람직한 성장의 주요 예측 요인이다. 예차 이론을 기반으로 한 다수의 선행 연구는 부모-자녀관계의 질이 학령기 아동의 또래수용 및 우정의 질에 중요한 영향을 미치는 변수임을 밝혀 왔다. 그러나 이러한 영향력의 구체적인 기체를 탐색한 연구는 상대적으로 부족했다. 특히 국내에서는 아동기 또래관계에 대한 대부분의 연구가 또래거부나 괴롭힘 같은 부정적인 또래관계에
초점을 두고 있었기에, 긍정적인 또래관계의 영향 요인과 그 매개 경로를 탐색한 연구는 거의 없었다.

애착 이론의 '내적 작동 모델' 개념과 아동의 친사회적 성향에 관한 선행 연구들에 의하면, 긍정적인 부모-자녀관계는 아동의 공감, 이타심 등의 친사회적 성향을 증진하여 또래수용, 우정과 같은 긍정적인 또래관계를 촉진하는 것으로 가정될 수 있다. 이에 따라 본 연구에서는 부모-자녀관계의 질이 공감과 이타심을 매개하여 또래수용과 우정의 질에 영향을 미치는 연구 모형을 설정하였으며, 개인 특성 변인과 가정 환경 변인을 통제하여 주요 변수의 영향 관계를 보다 정밀하게 파악하고자 하였다. 본 연구의 주요 가설은 다음과 같다. 첫째, 부모-자녀관계의 질은 학령기 아동의 긍정적 또래관계에 정적인 영향을 미칠 것이다. 둘째, 아동의 공감과 이타심은 부모-자녀관계의 질이 긍정적 또래관계에 미치는 영향을 매개할 것이다.

연구 모형과 가설을 검증하기 위해, 본 연구는 '2013년 한국 아동의 삶의 질 지수 국내 및 국제 비교 연구'에 참여한 전국의 초등학교 3학년 및 5학년 아동 4,690명의 설문조사 자료를 활용하여 구조방정식모형 분석을 실시하였다.
분석 결과, 본 연구에서 설정한 연구 모형은 전반적으로 한국 학령기 아동의 친사회적 발달 경로를 설명하기에 타당한 것으로 판단되었으며, 또래수용에 대해 29.3%의 설명력, 우정의 질에 대해 64.6%의 설명력을 가졌다. 연구 가설 역시 모두 지지되었으며, 그 결과를 요약하면 다음과 같다. 첫째, 부모-자녀관계의 질은 전반적으로 또래수용과 우정의 질에 정적인 영향을 미쳤다. 즉, 부모와의 관계가 긍정적인 아동일수록 또래 집단으로부터 잘 수용되고 다른 또래들과 좋은 우정 관계를 가진다는 것이다. 둘째, 아동의 공감과 이타심은 부모-자녀관계의 질이 긍정적 또래관계에 미치는 영향을 부분적으로 매개했다. 즉, 부모와의 관계가 긍정적인 아동일수록 공감과 이타심이 높게 나타나, 결과적으로 또래 집단으로부터 잘 수용되고 다른 또래들과 좋은 우정 관계를 가진다는 것이다.

본 연구의 의의는 다음과 같다. 첫째, 아동을 사회적 관계 속에서 발달하는 존재로 바라보았으며, 또래관계의 부정적인 측면만이 아니라 긍정적인 측면을 연구해야 할 필요성을 제기하였다. 둘째, 애착 이론과 선행 연구 결과를 토대로 부모-자녀관계의 질이 또래수용 및 우정에 영향을 주는 이론적 모형을 설정하였고, 이를
전국 대표성을 가진 자료를 통해 실증적으로 검증함으로써 일반화 가능성을 높였다. 셋째, 부모-자녀관계의 절이 긍정적 또래관계에 미치는 영향에서 아동의 공감과 이타심의 매개 역할을 검증함으로써, 학령기 아동의 친사회적 발달 경로에 대한 지식 확장에 기여하였고 사회복지 실천에의 함의를 제공하였다. 후속 연구에서 횡단 자료 및 자기보고식 측정 도구의 한계를 보완하고, 학령기 아동의 또래수용과 우정의 절에 중요한 영향을 미칠 수 있는 다른 변인들을 고려한다면, 이론적으로나 실천적으로 더욱 크게 기여할 수 있을 것이다.

주요어:  긍정적 또래관계, 또래수용, 우정, 부모-자녀관계, 공감, 이타심, 구조방정식모형

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