

The Influence of Maternal Factors and Child Self-regulation on Peer Initiative: A Structural Equation Modeling Approach

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Abstract

Peer initiative refers to a child's personal characteristic relevant to instigating play with peers, and it can be classified as friendly or unfriendly. This study used structural equation modeling to examine the contributions of mother's coaching competence, parenting behavior, and child self-regulation to peer initiative. Participants comprised mothers of children aged 3 to 5 years ($n = 343$) in Korea and their teachers ($n = 39$). Structural equation modeling indicated that the relationship between mothers' coaching competence and friendly peer initiative was fully mediated by maternal affection and child self-regulation. Furthermore, the relationship between mothers' coaching competence and unfriendly peer initiative was partially mediated by maternal rejection and child self-regulation. These findings highlight the importance of children's self-regulation for their social and adaptive development in a Korean cultural context and emphasize the need of maternal affection, which is reinforced by higher coaching competence, required for mothers. It is also worth noting that this study was conducted with a cultural group that collectivism and communality are highly valued.

Keywords: peer initiative, coaching, parenting behavior, self-regulation

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Introduction

Between the ages of 3 and 5, children develop initiative by starting to play with their peers and organizing their own play. When children plan, determine and promote play, they can improve autonomy and learn how to assert their ideas in a socially acceptable way (Stangeland, 2017). Children with initiative tend to build friendly relationships with their peers and be highly accepted by their peers. Previous studies have, however, reported that extremely high levels of initiative can cause aggressive play behaviors and play disruption (Arnott, 2018; Lee & Shin, 2019). In this respect, peer initiative refers to a child's personal characteristic to take the lead in playing within a peer group (Byun & Sung, 2017), and generally consists of two different types: friendly and unfriendly. Friendly peer initiative (FPI) involves prosocial behaviors, such as suggesting new play, explaining play rules, and leading peers to play together. More specifically, children with FPI modify setting and role of the play so that other peers can participate in it together, use positive problem-solving strategies when faced with conflicts, and accept peers' play ideas and then apply them to the play. Alternatively, children with unfriendly peer initiative (UPI) tend to engage in dominant behaviors including ignoring peers' play suggestions and dictatorially ordering and forcing peers to play. The children are likely to insist on their own play ideas, exploit coercive and negative communication strategies when interacting with peers, and leave their peers out in the cold if they don't fit in the play. These types of behaviors can lead to more physical and verbal aggression, impulsive and disobedient behavior, rejection or exclusion in play, and isolation in peer relationships (Acar et al., 2020). That is, each type of peer initiative is closely related to children's social and adaptive development; thus, it is necessary to explore both positive and negative aspects of peer initiative.

Notwithstanding well-established data on the development of peer initiative and its correlation with child social-adaptive functioning, previous research has not been inclined to classify children's peer initiative into friendly and unfriendly types; however, merely described the initiative-related behavior represented in peer play (Arnott, 2018; Frederico, 2018). Furthermore, to elucidate individual differences in peer initiative, previous studies have focused on parental competence and behavior (Kudo et al., 2012; Mokrova et al., 2012) and child self-regulation (Jones et al., 2015; Ramani et al., 2010). Little has been reported,

however, on consecutive paths from parental competence to FPI or UPI by focusing on parenting behavior and child self-regulation as potential mediators.

Many researchers have conducted cross-cultural research on children's play behavior, and have mainly focused on the parental factors that are more prevalent in a particular culture (Abels et al., 2017; Chung et al., 2013; Im & Swadener, 2016). However, it is worth noting that the association between peer initiative and related factors can vary across cultures; thus, the same developmental outcome can be achieved by different means in different cultural contexts (Chung et al., 2013; Jin et al., 2012). For example, it has been reported that strict parenting is positively correlated with a child's aggressive behavior in European Canadian families, yet is negatively related in Asian Canadian families due to their cultural values rooted in Confucianism where family hierarchy and filial piety is emphasized (Ho et al., 2008; Jin et al., 2012). In this respect, it is necessary to first investigate the link between parental and personal factors and peer initiative within one cultural context before conducting cross-cultural research. Therefore, this study examined the contributions of parental competence and behavior and child self-regulation to peer initiative in a specific culture, South Korean, and expected these findings to be extended to diverse cultural samples for children's social and adaptive development.

Literature Review

Children's types of peer initiative

Within a play group, some children are likely to act as leaders by initiating play and setting out related rules while the remaining children act as followers who adhere to the rules to get involved in the play (Shin & Shon, 2011). In particular, children with higher level language and communication skills and good social interaction abilities tend to lead the play by exerting influence on their peers by utilizing diverse social strategies (Byun & Sung, 2017). Among children, friendly play leaders can adopt diplomatic tactics to win acceptance of their play ideas, exploit prosocial problem-solving strategies, expand their play to allow other peers to participate in it, and concurrently listen to their peer's play

suggestions (Arnott, 2018; Stangeland, 2017). Alternatively, unfriendly play leaders can be viewed as bullies because they employ verbal and physical aggression to dominate peers, resulting in play disruption (Byun & Sung, 2017; Lee & Shin, 2019).

More specifically, children with a higher level of interactive peer play have been reported to have a positive impact on peer competence, sociality, and adaptability (Jones et al., 2015; Ramani et al., 2010; Stangeland, 2017). Furthermore, initiating collaborative play and participating frequently in pretend play were also reliably linked to learning ability and school-readiness among children (Yogman et al., 2018). In contrast, children who displayed antisocial and aggressive play behaviors, which caused play disruption, tended to show hyperactivity, impulsivity, and psychological maladjustment such as anxiety and depression (Acar et al., 2020; Choo et al., 2012). Consequently, these findings have highlighted the importance of children's interactive peer play abilities and friendly play strategies as being critical for developing social abilities and peer competence.

Factors present in children's peer initiative

Given the empirical evidence on children's peer initiative, parental competence and behavior and child self-regulation are interrelated, resulting in individual differences in peer initiative (Lin et al., 2021; Williams & Berthelsen, 2017). Based on Bornstein, Putnick, and Suwalsky's (2018) expanded parenting model, which is "parenting cognitions - parenting practices - child perceptions - child outcomes," this study examined the structural paths from mothers' coaching competence to peer initiative as mediated by parenting behavior and child self-regulation.

Maternal factors and peer initiative

Children generally form the most intimate relationships with their mothers at the beginning of their lives when they experience their first socialization after birth (Taraban & Shaw, 2018). Accordingly, both locally and globally, a mothers' role has been regarded as the most influential factor in the development of children's social competence and adaptability (Mokrova et al., 2012; Pasiak & Menna, 2015). Korean mothers, in particular, are likely to have a higher susceptibility to parenting and be more responsive to children's

physical and emotional needs due to Korean traditional values emphasizing communality and oneness between a mother and child (Jung et al., 2020). More specifically, Korean mothers tend to maintain proximity to their children and thus, create a more secure attachment with them, whereas in Western cultures that are grounded in individualism, mothers are apt to separate from their children to foster their independence and self-responsibility (Jin et al., 2012). Furthermore, Schwarz, Schafermeier, and Trommsdorff (2005) have indicated that Korean mothers with a high collectivistic orientation are more likely to emphasize cooperation, thoughtfulness, and empathy along with integration into a social group when parenting their children. That is, Korean mothers' parenting competence and behavior can be closely related to the development of their children's social skills and strategies; thus, it would be meaningful to determine the impact of mothers' coaching competence and parenting behavior on peer initiative in Korea.

Mothers' coaching competence (MCC) refers to the cognitive ability to grasp a child's temperament and characteristics and then provide the child with appropriate motivation for self-improvement (Jung & Shin, 2012). Mothers with a high coaching competence can clearly identify what their roles as a parent are and make the necessary effort to fulfill these roles (Lim & Kim, 2020). As MCC is shown to influence the discovery and support of children's potential and provide relevant responses and feedback, children raised by mothers with a high coaching competence can independently handle various social environments and acquire the initiative necessary to lead their own lives (Jung & Shin, 2012; Kudo et al., 2012). Coaching competence also enables mothers to pay more attention to their children's verbal and nonverbal expressions and try to interactively communicate with them, thereby improving children's communication and social skills as well as increasing their peer acceptance (Lim & Kim, 2020).

Based on Sigel, McGillicuddy-DeLisi, and Goodnow's (2014) parental belief systems, maternal cognitive and behavioral factors are closely related to each other in the ways that mothers tend to sequentially think and act. That is, MCC as a cognitive factor can be manifested in parenting behavior that determines children's peer initiative type. According to Rohner and Lansford's (2017) parenting theory, maternal affection and rejection are two key parenting behavior dimensions. Maternal affection improves children's social competence, interpersonal problem-solving skills, and leadership by ensuring high quality

mother-child interactions (Neppi et al., 2019). Based on social learning theory, this may be because children learn linguistic expressions and the skills necessary to create and maintain social relationships from their mothers' parenting behavior (O'Connor et al., 2013). In contrast, children who have experienced maternal rejection can easily show emotional instability, negative self-adequacy, and aggression, which cause conflicts with peers (Mokrova et al., 2012; Ramirez-Ucles et al., 2018). Therefore, since early childhood is a period where children are more likely to be greatly influenced by mothers, parenting behavior based on MCC plays a vital role in determining children's peer initiative type.

Child self-regulation and peer initiative

Self-regulation refers to an individual's ability to modulate arousal and control behavior in accordance with social circumstances (Perry et al., 2018). Self-regulation emerges during infancy and continuously is developed throughout life, encompassing multiple domains such as behavior, emotion, and cognition including attentional shifting and inhibitory control (Lin et al., 2021). Previous studies have highlighted the function of self-regulation for social competence, high quality peer interaction, school adjustment, and academic achievement (Edossa et al., 2018; Robson et al., 2020; Williams & Berthelsen, 2017). In particular, Korean children tend to have a higher level of self-regulation, which includes voluntarily managing attention and inhibiting behavioral response and impulsivity because of Korean cultural values emphasizing group harmony, cohesiveness, and collectivism compared to other children from different countries (Im & Swadener, 2016; Krassner et al., 2017). That is, Korean mothers are likely to enable their children to act upon group norms and rules and harmonize with their peers by encouraging them to inhibit impulses and desires, thus improving their self-regulation. Hence, children's self-regulation can be a highly influential predictor of the type of peer initiative developed and displayed in peer play, especially in Korea.

As previously mentioned, since self-regulation is an acquired skill, it can be influenced by MCC and parenting behavior. For instance, when mothers with a high coaching competence support and encourage children to find a solution to their goals on their own, children become responsible for their goals and develop self-regulation by inhibiting and delaying impulsivity (Jung & Shin, 2012; Lim & Kim, 2020). Additionally, parenting

behavior involving maternal warmth and responsive reactions can foster children's willingness to regulate their behaviors and emotions as a way to sustain a satisfying mother-child relationship (Neppi et al., 2019). Simply put, mothers who have a high coaching competence and are affectionate to their children can be facilitators of children's self-regulation development, while maternal rejection hinders their social and developmental growth.

Along with the impact of the role of mothers, self-regulation can be rapidly improved during early childhood with an increase in extended social relationships (Arnott, 2018) and is associated with the development of children's peer initiative. For example, children with higher self-regulation levels tend to be considerate of others by delaying self-gratification (Edossa et al., 2018). They can also easily regulate negative behaviors and emotions when faced with conflicts, and respond in a friendly manner to peer's demands or suggestions (Compas et al., 2017). However, children with poor self-regulation are prone to aggressive behaviors in response to dissatisfaction with play, thereby dominating peers by exerting their superiority (Robson et al., 2020). As a result, children with adequate self-regulation would use more friendly strategies and less unfriendly strategies when leading play with peers.

The current study

Although peer initiative development is a major task in early childhood, few studies have investigated how parental and personal factors surrounding children affect peer initiative (Byun & Sung, 2017; Fox et al., 2015). In the present study, we divided peer initiative as comprising friendly and unfriendly types and identified the structural relationship between MCC, parenting behavior, and child self-regulation for each type, targeting Korean children and their mothers. This study aimed to emphasize the importance of child self-regulation as well as the mothers' role in the development of peer initiative in early childhood by examining consecutive paths from MCC to FPI or UPI.

Based on the literature discussed above, children's FPI was expected to be associated with higher MCC, maternal affection, and greater self-regulation, while UPI was expected to be related to the opposite pattern of outcomes (Hypothesis 1). In the case of the structural

equation model (SEM), we hypothesized that maternal affection and child self-regulation would, in turn, mediate the relationship between MCC and FPI (SEM1; Hypothesis 2). Finally, maternal rejection and child self-regulation were also expected to mediate the relationship between MCC and UPI (SEM2; Hypothesis 3).

Methods

Participants and procedure

Participants surveyed were 343 children's (181 boys, 162 girls) mothers enrolled in seven daycares and four kindergartens, and 39 teachers in charge of the children in metropolitan areas of South Korea. Furthermore, we provided sufficient information to the participants on the purpose and procedures of this study. Both mothers' and teachers' questionnaires about each child were collected. Of the 450 questionnaires that were initially distributed, 385 were returned with their consent to participate indicated in the questionnaire. As only 42 were completed by either a teacher or mother only, these were excluded and 343 were used for the final analyses. Regarding the children studied, 133 were three years (38.8%), 111 four years (32.4%), and 99 five years old (28.9%). In terms of the mothers' age, 53% were between 30 and 39 years old, and 46% were between 40 and 49 years old. Furthermore, approximately 83% of mothers had at least a college or university degree.

Measures

Mothers' coaching competence

MCC was assessed using the 18-item Parent Coaching Competence (PCC) tool developed by Jung and Shin (2012). The scale is grouped into five subscales: action (8 items, e.g., "I understand my child's needs and set up my parenting to deal with them."), communication (4 items, e.g., "I know the meaning of my child's nonverbal behavior."), relation (2 items, e.g., "I am confident I can raise my child successfully."), awareness (2

items, e.g., “I try to communicate without giving up even if my child reacts negatively.”), and growth (2 items, e.g., “No matter how difficult the situation is, I constantly strive to be a good parent.”). Mothers rated each item on a 5-point Likert scale (1 = *not at all*, 5 = *extremely*). The Cronbach’s alpha for this study was .93.

Parenting behavior

Mothers’ parenting behavior was assessed using the Maternal Behavior Research Instrument (MBRI), which was developed by Schaefer (1959) and adapted for a Korean cultural context (Lee, 1984). Of the 48 items in the MBRI, the present study used only 24, grouped into two types: affection (12 items, e.g., “Do you enjoy spending time with your child?”) and rejection (12 items, e.g., “Do you often ignore your child’s needs?”). Mothers indicated the degree of their parenting behavior on a 5-point Likert scale (1 = *not at all*, 5 = *extremely*). The Cronbach’s alpha was .83 and .78 for affection and rejection, respectively.

Child self-regulation

Child self-regulation was assessed using the Child Self-regulation Scale, which was developed by Lee and Yang (2003) and modified by Lee and Choi (2007) for teacher report. Of the scale’s 31 items, 17 behavioral/emotional self-regulation items measure behavioral inhibition (10 items, e.g., “The child keeps following the rules despite losing the game.”) and emotionality (7 items, e.g., “The child easily gives up and is frustrated with the difficult task.”), while 14 cognitive self-regulation items measure self-appraisal (5 items, e.g., “The child distinguishes what can or cannot be done and expresses it verbally.”) and self-determination (9 items, e.g., “The child checks the timetable to play a game with peers.”). For emotionality, which was assessed using negative sentences, we reversed the scores before conducting data analysis. Children’s teachers rated each item on a 5-point Likert scale (1 = *extremely untrue of this child*, 5 = *extremely true of this child*). The Cronbach’s alpha for this scale was .94 in this study.

Peer initiative

Peer initiative was evaluated using the Child Peer Initiative Scale developed by Byun and Sung (2017). This scale consists of 39 items grouped into two types: friendly peer

initiative (28 items, e.g., “The child explains how to play a game to peers and leads the game.”) and unfriendly peer initiative (11 items, e.g., “The child insists on their own opinion when playing with peers.”). Teachers rated the items for each child on a 5-point Likert scale (1 = *extremely untrue of this child*, 5 = *extremely true of this child*). The Cronbach’s alpha was .96 and .93 for friendly and unfriendly peer initiative, respectively.

Statistical analyses

The data collected in this study were analyzed using SPSS version 20.0 and AMOS version 20.0. Pearson’s correlation analyses were conducted to investigate the correlation between study variables. Next, structural equation modeling was used to test the mediator models for FPI and UPI. We calculated five global fit indices: (1) chi-square (χ^2 , $p > 0.05$), (2) goodness-of-fit index ($GFI \geq 0.9$), (3) Tucker-Lewis index ($TLI \geq 0.9$), (4) comparative fit index ($CFI \geq 0.9$), and (5) root-mean-square error of approximation ($RMSEA < 0.08$). Finally, bootstrapping was performed to verify the statistical significance of mediating effects. A 95% bias-corrected bootstrap confidence interval not containing zero indicates that the indirect effects are significant (Hayes, 2012).

Results

Preliminary analyses

Table 1 shows descriptive statistics for the study variables. If the absolute value of skewness present across variables is less than 2 and that of kurtosis is less than 7, the assumption of normal distribution can be considered valid in SEM (Curran et al., 1996). All study variables were found to have less than ± 2 (skewness) and less than ± 7 (kurtosis), indicating that the normal distribution assumption was met.

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Table 1. *Descriptive Statistics for the Study Variables (n = 343).*

	M	SD	Min	Max	Skewness	Kurtosis
Coaching competence	3.57	.49	2.17	5.00	-.05	.25
Maternal affection	3.95	.45	2.33	4.92	-.40	.02
Maternal rejection	2.59	.43	1.50	3.67	.34	-.08
Child self-regulation	3.59	.57	2.10	4.87	-.31	-.28
Friendly peer initiative	3.50	.62	1.64	5.00	-.21	.18
Unfriendly peer initiative	2.53	.81	1.00	4.73	.37	-.44

Correlations between the study variables are displayed in Table 2. FPI was positively associated with maternal affection and child self-regulation, and negatively related to maternal rejection, while UPI was positively correlated with maternal rejection and negatively related to child self-regulation. It is important to note that FPI was significantly and positively associated with UPI.

Table 2. *Correlation Analysis between Study Variables (n = 343).*

	1.	2.	3.	4.	5.	6.
1. Coaching competence	1					
2. Maternal affection	.66***	1				
3. Maternal rejection	-.44***	-.49***	1			
4. Child self-regulation	.20***	.24***	-.29***	1		
5. Friendly peer initiative	.08	.13*	-.13*	.61***	1	
6. Unfriendly peer initiative	-.06	-.06	.13*	-.24***	.27***	1

Note. *p < .05, ***p < .001.

Structural equation model for FPI

To check the validity of the main variables (MCC, maternal affection, child self-regulation, and FPI), we conducted confirmatory factor analyses (CFA). Item parceling was used for maternal affection and FPI that constituted a single observed variable. The results of an initial CFA indicated a mediocre fit for GFI and RMSEA. As the emotionality of child self-regulation had the lowest standardized regression weight, the variable was removed (as per Fornell & Larcker, 1981). Following this, we redid the CFA, and the second results showed an improved model fit: $\chi^2 = 198.63$, $p = 0.000$; GFI = 0.92; TLI =

0.95; CFI = 0.96; RMSEA = 0.07. Even if the χ^2 was below the threshold for a good model fit, this fit index may not be reliable because it is highly affected by the sample size, resulting in the rejection of the model (Hooper et al., 2008). In sum, all other indices indicated a very good fit except for the χ^2 , so the second CFA, composed of MCC, maternal affection, child self-regulation (without emotionality), and FPI, was identified as a good fit.

Table 3. *Path Coefficient of FPI Model*

Path	B	β	S.E.	C.R.	p
MCC → Maternal affection	.70	.77	.06	11.71	***
Maternal affection → Child self-regulation	.34	.22	.09	3.61	***
Child self-regulation → FPI	.85	.87	.05	17.01	***

Note. *** $p < .001$.

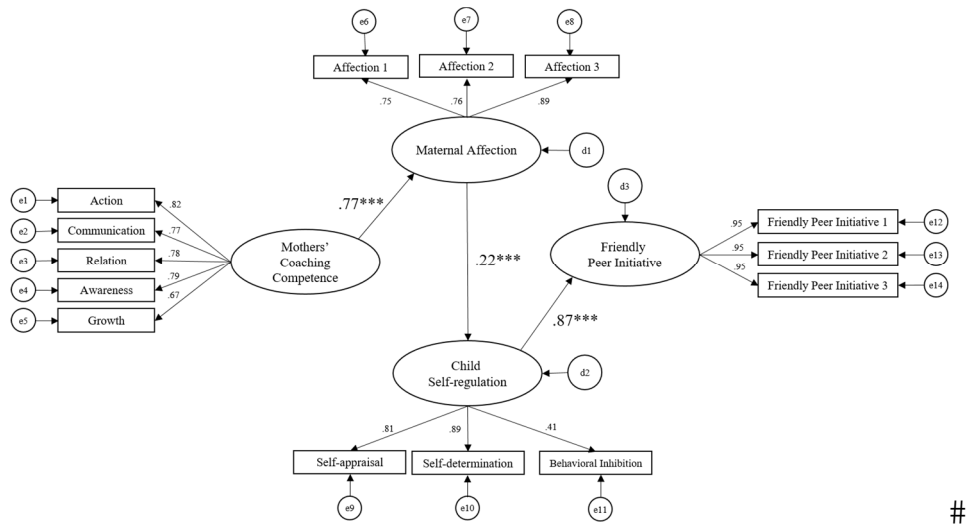


Figure 1. Final model for friendly peer initiative.

Note. *** $p < .001$.

Structural equation modeling for FPI was performed based on CFA. Non-significant paths were removed to ensure a more concise model; thus, the SEM had a good fit: $\chi^2 = 205.04$, $p = 0.000$; GFI = 0.92; TLI = 0.95; CFI = 0.96; RMSEA = 0.07. The final model indicated three significant paths: MCC to maternal affection ($\beta = 0.77$, $p < 0.001$), maternal affection to child self-regulation ($\beta = 0.22$, $p < 0.001$), and child self-regulation to FPI ($\beta =$

0.87, $p < 0.001$; see Table 3 and Figure 1). That is, MCC had an indirect influence on FPI ($effect = 0.15$, $p < 0.01$; see Table 4), and the mediating effects of maternal affection and child self-regulation were significant (95% CI: 0.03 to 0.20) as a result of bootstrapping. Hence, the relationship between MCC and FPI was fully mediated by maternal affection and child self-regulation.

Table 4. *Direct, Indirect, and Total Effect of FPI Model*

Path	Direct Effect	Indirect Effect	Total Effect
MCC → Maternal affection	.77***	-	.77***
MCC → Child self-regulation	-	.17**	.17**
MCC → FPI	-	.15**	.15**
Maternal affection → Child self-regulation	.22***	-	.22***
Maternal affection → FPI	-	.19**	.19**
Child self-regulation → FPI	.87***	-	.87***

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

Structural equation model for UPI

Confirmatory factor analyses were conducted to validate the study variables (MCC, maternal rejection, child self-regulation, and UPI). We parceled items for maternal rejection and UPI into three parts. An initial CFA resulted in self-determination of child self-regulation exhibiting the Heywood Case phenomenon with a negative variance. To solve this, the variance value was specified as 0.005 (as per Dillon et al., 1987). Moreover, the fit indices indicated a mediocre fit; thus, we removed the emotionality and behavioral inhibition of self-regulation, which had the lowest standardized regression weights (see Fornell & Larcker, 1981). The second CFA showed an improved model: $\chi^2 = 130.91$, $p = 0.000$; GFI = 0.95; TLI = 0.96; CFI = 0.97; RMSEA = 0.06. Except for the χ^2 , all fit indices for UPI were very good. Thus, we identified the CFA composed of MCC, maternal rejection, child self-regulation (without behavioral inhibition and emotionality), and UPI as a good fit.

Structural equation modeling for UPI was conducted based on the above CFA results. The fit indices obtained as a result of the SEM were acceptable after deleting non-significant paths to ensure a concise model: $\chi^2 = 131.25$, $p = 0.000$; GFI = 0.95; TLI =

0.96; CFI = 0.97; RMSEA = 0.06. The final SEM demonstrated four significant paths: MCC to maternal rejection ($\beta = -0.55, p < 0.001$), maternal rejection to child self-regulation ($\beta = -0.27, p < 0.001$), maternal rejection to UPI ($\beta = 0.22, p < 0.001$), and child self-regulation to UPI ($\beta = 0.16, p < 0.01$; see Table 5 and Figure 2). Furthermore, MCC was found to have an indirect impact on UPI ($effect = -0.10, p < 0.05$; see Table 6). Next, bootstrapping was executed to verify the significance of the mediating effects. The mediating effect of maternal rejection on the relationship between MCC and UPI was significant (95% CI: -0.19 to -0.03). For the full mediation, since zero was not included in the 95% bias-corrected bootstrap confidence interval, the mediating effects of maternal

Table 5. Path Coefficient of UPI Model

Path	B	β	S.E.	C.R.	p
MCC → Maternal rejection	-.45	-.55	.06	-7.63	***
Maternal rejection → Child self-regulation	-.42	-.27	.10	-4.26	***
Maternal rejection → UPI	.47	.22	.14	3.30	***
Child self-regulation → UPI	.23	.16	.08	2.80	**

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

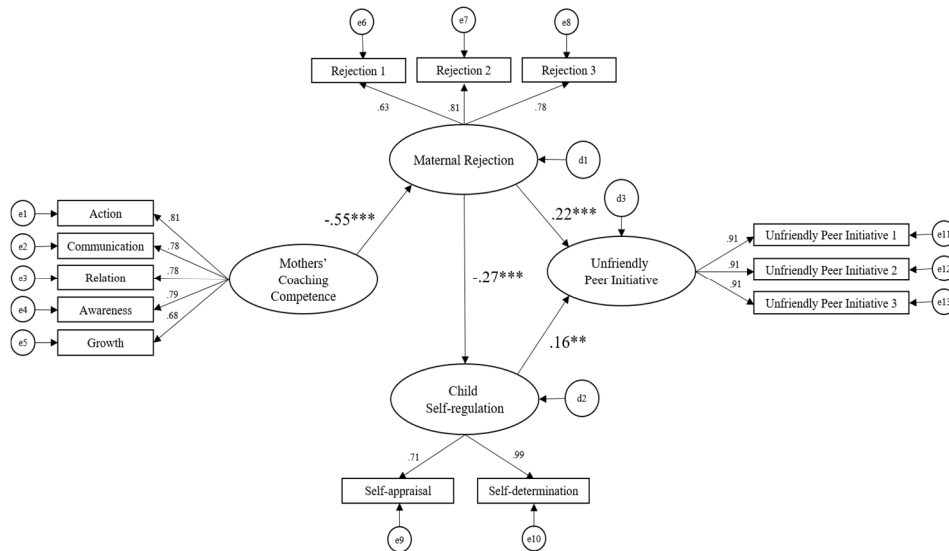


Figure 2. Final model for unfriendly peer initiative.

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

rejection and child self-regulation were significant as well (95% CI: 0.001 to 0.04). Hence, the relationship between MCC and UPI was partially mediated by maternal rejection and child self-regulation.

Table 6. *Direct, Indirect, and Total Effect of UPI Model*

Path	Direct Effect	Indirect Effect	Total Effect
MCC → Maternal rejection	-.55***	-	-.55***
MCC → Child self-regulation	-	.15**	.15**
MCC → UPI	-	-.10*	-.10*
Maternal rejection → Child self-regulation	-.27***	-	-.27***
Maternal rejection → UPI	.22***	-.04*	.17**
Child self-regulation → UPI	.16**	-	.16**

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

Discussion

This study classified peer initiative into two types (FPI and UPI) and examined the structural relationships between MCC, parenting behavior, child self-regulation, and peer initiative in a sample of Korean children and their mothers. Results showed that higher maternal affection and lower rejection predicted children's FPI, while higher rejection positively predicted UPI. This suggests that mothers with a higher level of affection and warmth model prosocial behaviors and effectively discipline their children through mother-child synchronous interactions, a bidirectional process, whereby a mutual focus is shared and response to each other's signals is evident (Pasiak & Menna, 2015); this ensures that the children can recognize social rules and acquire the needed social skills for FPI. Alternatively, children who get rejected or are neglected by their mothers may have no opportunity to observe and learn prosocial behaviors and are apt to exploit unfriendly strategies by disrupting play with peers and ignoring play suggestions.

Meanwhile, child self-regulation was found to be correlated with FPI and UPI. This means that the higher self-regulation children have, the more FPI and the less UPI they display. Our study results are consistent with empirical findings that reported higher self-regulation as allowing children to cooperate with peers in play using adequate

communication skills (Lin et al., 2021; Williams & Berthelsen, 2017). Children with lower self-regulation, on the contrary, tend to be impulsive in social circumstances due to inherent anxiety and dissatisfaction, and fail to empathize with other's thoughts and emotions; as a result, they have trouble building good relationships with peers (Robson et al., 2020). That is, hypothesis 1 was partially supported because only parenting behavior and child self-regulation were significantly correlated with FPI and UPI except for MCC.

Of particular interest in our findings was the positive relationship between FPI and UPI. That is, children with FPI are more likely to dominate play in a dictatorial way. According to an ethological theory, dominance hierarchies tend to manifest in early childhood (Hawley, 2015). For example, socially dominant children tend to take the initiative in playing with peers and maintain social order by using not only prosocial behaviors (helping, cooperation), but also coercive strategies (thwarting, aggression) to attain their own goals, while other children may feel obliged to follow them to be involved in a peer group. Based on this premise, both FPI and UPI can appear at the same time during this period. However, as children age, they encounter more opportunities to be exposed to environments where they can receive positive feedback on prosocial behavior and appropriate discipline for antisocial or unfriendly behavior from their mothers and teachers (Fox et al., 2015); thereby developing peer initiative in a friendly way.

As predicted in hypothesis 2, the SEM for FPI demonstrated that MCC enhances affectionate parenting behavior, which triggers child self-regulation, and in turn, child self-regulation improves FPI. These findings show that mothers need to reinforce child self-regulation first to promote FPI. This claim can be supported by previous findings where maternal parenting had an indirect effect on preschool adjustment and social competence through child self-regulation (Lin et al., 2021; Park & Moon, 2014). Early childhood, particularly, is an important period for children to explore their surroundings and judge given situations on their own to expand their social relationships with others by moving away from dependent relationships with their mothers. Thus, the development of self-regulation in this period is vital as it would allow children to effectively regulate their own thoughts and behaviors depending on a situation and to adapt well to new social environments.

On the relationship between MCC and UPI, two significant paths were revealed. The

first was that maternal rejection and child self-regulation mediated the relationship between MCC and UPI; thus hypothesis 3 was completely supported. That is, lower maternal rejection, mitigated by MCC, may enhance children's self-regulation, thus increasing UPI. However, this sequential path must be carefully considered in that child self-regulation of the UPI model did not include behavioral and emotional factors but consisted only of cognitive factors such as self-appraisal and self-determination. Related to this, previous findings have indicated that children with high levels of cognitive abilities mainly indulged in bullying while those with low levels of cognitive abilities were prone to being bullied (Hong & Espelage, 2012), and that children's ability to select and apply appropriate strategies to solve problems was related to lying behavior to disguise their own faults (Evans & Lee, 2013). This suggests that children can use cognitive self-regulation to manipulate or turn a play situation to their advantage and to order and force peers to follow it.

At another point, Hassan, Poole, and Schmidt (2020) have stressed the individual differences in the adaptability of self-regulation. For example, it has been reported that inhibitory control was negatively associated with prosocial behavior and popularity for only shy children, and that preschooler's behavioral inhibition was positively linked to social anxiety and low social leadership only in a higher inhibitory control context (Sette et al., 2018). That is, self-regulation can be beneficial or problematic factor depending on the individual temperament, attitude, and context. Even though self-regulation has been conceptualized as an essential skill for children's social- adaptive development, it would be meaningful to consider both sides of self-regulation interrelated with individual characteristics.

Contrary to the FPI model, maternal rejection mediated the relationship between MCC and UPI. This implies that negative parenting behavior, i.e., maternal rejection, can cause UPI without the role of child self-regulation. Gross, Stern, Brett, and Cassidy (2017) have indicated that children are prone to forming insecure attachments with their mothers when mothers exhibit inconsistent and negative parenting behavior. Accordingly, children's internal representation, the basis of establishing interpersonal relationships, can be negatively impacted. That is, a distorted perception is created that aggressive and dominant behaviors, rather than prosocial skills, are an effective way to attain social superiority

among peers. However, a higher coaching competence can diminish the degree of UPI by mitigating maternal rejection. Specifically, mothers with a high coaching competence provide immediate responses and feedback to their children's behaviors and promote reciprocal interaction with their children, thereby lowering the children's aggression and impulsivity and improving communication skills and social behaviors (Jung & Shin, 2012; Lim & Kim, 2020).

Although this study revealed important insights into the influence of maternal factors and self-regulation on peer initiative, it had several limitations that need to be addressed. Firstly, since it utilized cross-sectional analyses, cause and effect relationships between study variables could not be established. Future studies should thus use a longitudinal approach to establish whether there are causal relationships between parental and personal factors toward peer initiative. Secondly, in the CFA, we removed some observed variables of self-regulation due to low factor loadings to obtain a good model fit. Therefore, future studies need to reaffirm the validity of the self-regulation scale by conducting factor analyses to ensure its effective use in future studies.

In conclusion, we have stressed the importance of child self-regulation for social-adaptive development in Korean, non-Western culture; however, higher coaching competence, which is a protecting factor for maternal rejection and a reinforcing factor for maternal affection, is needed by mothers to ensure this development. As these findings have reflected Korean cultural values of collectivism and communality, it would be interesting to apply this research model to diverse cultural samples and confirm the cultural differences in contributions of MCC, parenting behavior, and child self-regulation to peer initiative.

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