

Navigating the Social Classroom: The Interplay of Inhibitory Control and Peer Acceptance in Young Learners

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Abstract: Background: Social acceptance by peers is a cornerstone of a child's school experience, influencing their academic motivation, well-being, and overall adjustment. Concurrently, inhibitory control—a core executive function enabling the suppression of prepotent responses—is critical for self-regulation and goal-directed behavior. While deficits in inhibitory control are linked to negative social behaviors, the direct relationship between well-developed inhibitory control and the positive outcome of peer social acceptance remains an important area of inquiry. This study aimed to investigate the direct association between inhibitory control ability and social acceptance in a sample of young learners.

Methods: A cross-sectional design was employed with 168 elementary school students (Mean age = 9.1 years; 49.4% female). Inhibitory control was assessed using performance-based measures, including the Color-Word Interference Test (Stroop) and relevant subtests from the Delis-Kaplan Executive Function System (D-KEFS). Social acceptance was measured using a peer nomination technique, where students identified classmates they most liked to work and play with, yielding a social preference score for each participant.

Results: Descriptive statistics revealed wide variation in both inhibitory control and social acceptance scores. Pearson correlation analysis indicated a significant, positive relationship between inhibitory control and peer acceptance ($r = .48, p < .001$). Furthermore, multiple regression analysis demonstrated that inhibitory control was a significant unique predictor of social acceptance ($\beta = .51, p < .001$), even after controlling for age and gender. Students with higher inhibitory control consistently received more positive peer nominations.

Conclusion: The findings provide strong evidence that inhibitory control is significantly linked to a child's social standing in the classroom. This suggests that the ability to regulate impulses is a fundamental cognitive mechanism that supports the development and maintenance of positive peer relationships. These results highlight the potential for educational interventions targeting executive functions to not only improve academic readiness but also to foster a child's social integration and well-being.

Keywords: Inhibitory Control, Social Acceptance, Peer Relationships, Executive Functions, Child Development, Self-Regulation, Educational Psychology.

Introduction: 1.1 Background: The Foundations of Childhood Development

The period of childhood is characterized by rapid and transformative growth across multiple, interconnected

domains. It is during these formative years that the foundational architecture of the brain undergoes significant development, laying the groundwork for future learning, behavior, and well-being [10]. Two of the most critical, intersecting domains of this

development are cognitive control and socio-emotional competence. Cognitive control, often conceptualized under the umbrella of executive functions, encompasses the set of higher-order mental processes that enable individuals to manage their thoughts, actions, and emotions to achieve goals [19]. Simultaneously, socio-emotional competence involves the ability to understand and manage one's own emotions, perceive and interpret the emotions of others, and navigate complex social interactions successfully [27]. A failure to develop adequately in either of these domains can have cascading negative effects, while proficiency can predict a wide array of positive life outcomes, including academic success, mental health, and the quality of interpersonal relationships [40, 54].

Educational systems worldwide are increasingly recognizing that academic learning does not occur in a vacuum. A child's ability to focus attention, regulate their behavior, and interact constructively with peers and teachers forms the very bedrock of the learning environment [3]. When these skills are underdeveloped, children may struggle to follow classroom rules, engage in collaborative learning, and persist through challenging academic tasks. Consequently, there is a growing consensus that a holistic approach to education, one that intentionally cultivates both cognitive and social-emotional skills, is essential for preparing young learners for the complexities of the 21st century [27, 29]. The interplay between a child's internal regulatory capacities and their external social world is therefore an area of profound importance. Understanding the specific mechanisms that link cognitive processes to social outcomes is not merely an academic exercise; it holds the key to developing more effective educational strategies and interventions that can support the development of the whole child.

1.2 The Significance of Social Acceptance in the School Environment

Among the most powerful drivers of human behavior is the fundamental "need to belong," a pervasive desire to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships [6]. This motivation is not a mere preference but a core component of human nature, the satisfaction of which is strongly linked to psychological and physical health, while its thwarting can lead to a host of pathological outcomes [30, 35]. The school classroom represents one of the first and most influential social arenas outside the family where a child must navigate this fundamental need. Within this complex social ecosystem, peer acceptance—the extent to which a child is liked or welcomed by their

peer group—emerges as a potent indicator of social success and adjustment [15].

Achieving social acceptance is a multifaceted task that requires a sophisticated repertoire of skills. It involves accurately reading social cues, managing one's emotional expressions, cooperating with others, resolving conflicts, and engaging in prosocial behaviors [47]. The outcome of these efforts has profound implications for a child's daily experience at school. High levels of peer acceptance are robustly associated with a range of positive outcomes, including a stronger sense of school belonging, higher academic motivation, greater classroom engagement, and superior academic achievement [2, 43, 53]. Children who feel accepted by their peers are more likely to view school as a safe and supportive environment, freeing up cognitive resources to focus on learning [15].

Conversely, the experience of peer rejection or neglect can be deeply detrimental. It is linked to feelings of loneliness, depression, anxiety, and a diminished sense of self-worth [44]. Furthermore, social exclusion can undermine academic performance, as children may become preoccupied with social anxieties, leading to disengagement from schoolwork and a decline in achievement [11]. The social standing a child achieves in their early school years can set a trajectory for future social and academic development, making it a critical variable of interest [55]. Given its central role in a child's overall adjustment, identifying the underlying competencies that facilitate peer acceptance is a primary goal for developmental and educational psychology.

1.3 Inhibitory Control as a Core Executive Function

Central to the capacity for self-regulation is the set of cognitive processes known as executive functions [19]. These are the top-down, goal-directed processes that orchestrate and manage more basic cognitive functions. While comprised of multiple components—including working memory and cognitive flexibility—one of the most crucial is inhibitory control [19, 46]. Inhibitory control is not a unitary construct but is broadly defined as the ability to deliberately suppress prepotent, automatic, or dominant thoughts, actions, and emotions that are irrelevant, inappropriate, or conflicting with a chosen goal [1, 7, 23]. This capacity can be further parsed into response inhibition (suppressing a motor action), interference control (resisting distracting stimuli or thoughts), and emotional inhibition (regulating affective responses) [7, 13, 46].

The development of inhibitory control follows a protracted course, with significant maturation occurring throughout childhood and adolescence,

paralleling the development of the prefrontal cortex [10, 28]. Its importance cannot be overstated. In an academic context, inhibitory control allows a child to resist the impulse to talk to a neighbor during a lesson, to ignore distractions while reading, and to stop and think before answering a difficult question [3]. It is a foundational skill for both learning and behavior regulation in the classroom [8]. Indeed, robust meta-analytic evidence confirms that self-regulation skills in childhood, with inhibitory control as a core component, are a powerful predictor of future outcomes across the lifespan, including academic attainment, health, and socioeconomic status [40].

Deficits in inhibitory control are a hallmark of several developmental disorders, most notably Attention-Deficit/Hyperactivity Disorder (ADHD) [14, 20], but also Oppositional Defiant Disorder and Conduct Disorder [12]. Children with weaker inhibitory control often struggle with impulsivity, emotional dysregulation, and maintaining focus, which can lead to conflict with both teachers and peers [8, 13]. The ability to put the brakes on an initial impulse—be it a physical action, a verbal comment, or an emotional outburst—is fundamental to adaptive functioning. This cognitive capacity is what allows an individual to move from being reactive to being proactive, enabling thoughtful, goal-directed behavior instead of action driven by immediate stimuli [51].

1.4 The Theoretical Link Between Inhibitory Control and Social Acceptance

The bridge connecting the internal, cognitive process of inhibitory control to the external, social outcome of peer acceptance is built on the foundation of self-regulated behavior. Social harmony and the formation of positive relationships depend on individuals adhering to a complex set of spoken and unspoken social rules [9]. This adherence requires constant self-regulation. For instance, to successfully take turns in a game, a child must inhibit the impulse to grab the toy out of turn. To resolve a disagreement peacefully, a child must inhibit the impulse to yell or become physically aggressive. To show empathy, a child must inhibit their own immediate concerns to consider another's perspective [47]. Each of these prosocial actions is predicated on an act of inhibition.

Theoretically, children with stronger inhibitory control are better equipped to navigate the myriad challenges of social interaction. They are more likely to be able to stop and think before they act, consider the consequences of their behavior, and choose a socially appropriate response over an impulsive, self-serving one [37]. This ability facilitates smoother, more positive interactions, making them more desirable playmates

and friends. Research has begun to substantiate this link, showing that inhibitory control in preschool predicts later social-emotional competence [37] and that executive functions more broadly are critical for the development of peer relationships, potentially even more so than emotion understanding alone [50]. A recent longitudinal study demonstrated a clear developmental pathway from early inhibitory control to later social connectedness, suggesting that these early cognitive skills lay a crucial foundation for future social success [56].

Conversely, poor inhibitory control can lead to behaviors that actively repel peers. Impulsive aggression, blurting out hurtful comments, difficulty waiting one's turn, and an inability to manage frustration are all behaviors that can lead to peer rejection [8]. Children who exhibit such behaviors are often perceived as unpredictable, disruptive, and difficult to play with [26]. Therefore, inhibitory control can be seen as a gatekeeper of social competence. It is the cognitive mechanism that allows a child to translate their knowledge of social rules into appropriate social behavior, which, in turn, influences how they are perceived and accepted by their peers.

1.5 The Present Study

While a compelling theoretical case exists and emerging research has connected inhibitory control to social skills and behaviors [22, 37], the direct relationship between performance on objective, cognitive measures of inhibitory control and the outcome of peer-rated social acceptance is an area that warrants more focused investigation. Many studies rely on teacher or parent ratings of behavior [8, 38], which, while valuable, can be influenced by subjective factors. Other studies have examined the link between inhibitory control and broader constructs like social competence or prosocial behavior [9, 48]. Fewer have drawn a direct line from a child's specific cognitive ability to inhibit responses to their actual social standing within their peer group, as rated by the peers themselves.

This study seeks to address this gap by examining the direct, cross-sectional relationship between inhibitory control and peer social acceptance in a sample of elementary school-aged children. We chose this demographic because middle childhood is a critical period for the development of both executive functions and the solidification of peer relationships [54]. Our primary research question is: To what extent does inhibitory control ability predict peer social acceptance in young learners?

Based on the theoretical framework outlined above, we formulated the following hypothesis: There will be

a significant, positive association between children's performance on measures of inhibitory control and their social acceptance scores as rated by their peers. We predict that children who demonstrate superior ability to inhibit prepotent responses will be more well-liked and accepted by their classmates. The findings of this study aim to contribute to a deeper understanding of the cognitive underpinnings of social success in childhood and to inform the design of interventions aimed at fostering positive peer relationships in school settings.

METHOD

2.1 Participants

The study's participants were recruited from three public elementary schools in a mid-sized suburban school district. Initial approval was obtained from the university's Institutional Review Board and the school district's research review committee. Subsequently, informational packets and consent forms were sent home to the parents of all students in the 3rd and 4th grades. A total of 180 students returned signed parental consent forms and provided their own verbal assent to participate. From this initial pool, 12 students were excluded due to incomplete data on one or more key measures, resulting in a final sample of 168 students.

The final sample consisted of 85 boys (50.6%) and 83 girls (49.4%). The age of participants ranged from 8.2 to 10.1 years, with a mean age of 9.1 years ($SD = 0.55$). The grade distribution was nearly even, with 82 students (48.8%) in the 3rd grade and 86 students (51.2%) in the 4th grade. The demographic composition of the sample, based on parent-reported data, was as follows: 71.4% Caucasian, 10.7% African American, 8.3% Hispanic, 5.4% Asian American, and 4.2% who identified as Multiracial or Other. All participating children were proficient in English, which was the language of instruction at the schools and the language used for all study measures.

2.2 Measures

A battery of established instruments was used to assess the core constructs of inhibitory control and social acceptance. The reliability and validity of these measures are well-documented for use with school-aged populations [4, 45].

2.2.1 Inhibitory Control

To create a robust composite measure of inhibitory control, two distinct, performance-based tasks were administered. This multi-method approach aligns with recommendations for capturing the latent variable of inhibitory control more accurately than any single task can [23, 46].

Delis-Kaplan Executive Function System (D-KEFS): Color-Word Interference Test. The D-KEFS is a comprehensive battery of tests designed to assess a wide range of executive functions in children and adults [17]. We administered the Color-Word Interference Test, a standardized version of the classic Stroop task [42], which is widely considered a gold-standard measure of interference control. The test consists of four conditions: (1) Color Naming, (2) Word Reading, (3) Inhibition (naming the ink color of color words printed in a conflicting ink, e.g., the word "BLUE" printed in red ink), and (4) Inhibition/Switching (alternating between naming the ink color and reading the word). The primary variable of interest for this study was the time taken to complete the Inhibition condition (Condition 3). To control for basic processing speed, a contrast score was calculated by subtracting the time taken for the combined Color Naming and Word Reading conditions from the time taken for the Inhibition condition. Raw scores were converted to age-corrected scaled scores based on the test's normative data [17, 21]. Higher scaled scores on this contrast measure indicate better inhibitory control. The D-KEFS has demonstrated excellent psychometric properties [17].

Go/No-Go Task. A computerized Go/No-Go task was administered to assess response inhibition. This task required children to respond as quickly as possible to a frequent "Go" stimulus (e.g., the letter 'M' appearing on screen) by pressing the spacebar, but to withhold their response to a rare "No-Go" stimulus (e.g., the letter 'W'). The task consisted of 200 trials, with the "Go" stimulus appearing in 80% of trials and the "No-Go" stimulus in 20%. The primary outcome measure was the rate of commission errors (i.e., the percentage of "No-Go" trials in which the participant incorrectly pressed the spacebar). A lower commission error rate indicates superior response inhibition. Such tasks are common and valid measures of response inhibition in developmental research [41, 49].

An overall Inhibitory Control Composite Score was created for each participant by converting the D-KEFS scaled score and the Go/No-Go commission error rate (reverse-scored) into z-scores and then averaging them. This composite approach provides a more stable and reliable estimate of the underlying inhibitory control construct [23].

2.2.2 Social Acceptance

Social acceptance was assessed using a peer nomination sociometric procedure, a widely used and valid method for measuring social status within a peer group [26, 44]. This method captures the perspective of the peer group itself, providing a direct measure of a child's social standing. Each participant was provided

with a roster of all participating classmates and asked to respond to two positive nomination questions:

1. "Circle the names of three classmates you most like to play with."
2. "Circle the names of three classmates you most like to work with on school projects."

For each child, the total number of positive nominations received from all participating classmates was summed. To account for variations in the number of participating raters across classrooms, this total was standardized within each classroom, creating a Social Acceptance z-score for each participant. Higher scores indicated greater social acceptance by peers. This procedure is standard in peer relations research and has been shown to have good reliability and predictive validity [55].

2.3 Procedure

Data collection was conducted over a four-week period by a team of trained graduate research assistants. The assessments were administered in quiet rooms at the children's schools during the regular school day. The procedure was divided into two sessions to minimize fatigue.

In the first session, which was conducted individually, each child completed the two cognitive tasks assessing inhibitory control. The D-KEFS Color-Word Interference Test was administered first, followed by the computerized Go/No-Go task. The order was kept consistent for all participants. This individual session lasted approximately 20-25 minutes per child.

The second session was conducted one week later in a group setting within each child's classroom. Research assistants provided clear, age-appropriate instructions for the peer nomination procedure, emphasizing the confidentiality of their responses. Participants were given the class roster and the nomination questions and were seated with adequate spacing to ensure privacy. This session took approximately 15 minutes to complete. Throughout all procedures, research assistants ensured a supportive and encouraging environment for the children.

2.4 Data Analysis Plan

All data were entered and analyzed using IBM SPSS Statistics, Version 28. The analysis proceeded in three stages.

First, descriptive statistics (means, standard deviations, ranges) were calculated for all key variables, including age, the individual inhibitory control measures, the inhibitory control composite score, and the social acceptance z-score. The distributions of the variables

were examined for normality, and preliminary analyses were conducted to check for any significant differences based on gender or grade level.

Second, to address the primary research question regarding the association between the variables, a Pearson product-moment correlation coefficient (r) was calculated. This analysis examined the strength and direction of the linear relationship between the Inhibitory Control Composite Score and the Social Acceptance z-score.

Third, to determine the unique predictive power of inhibitory control, a hierarchical multiple regression analysis was conducted. The Social Acceptance z-score was entered as the dependent variable. In the first step of the model, demographic variables (age and gender) were entered as control variables. In the second step, the Inhibitory Control Composite Score was entered to determine the additional variance in social acceptance it could explain (ΔR^2) beyond the control variables. An alpha level of .05 was set for all tests of statistical significance.

RESULTS

3.1 Preliminary Analyses

Prior to conducting the main analyses, the data were screened for accuracy of entry, missing values, and conformity to the assumptions of parametric testing. The final sample of 168 participants had complete data on all measures. Examination of the distributions for the key variables—the Inhibitory Control Composite Score and the Social Acceptance z-score—revealed that they were approximately normal, with skewness and kurtosis values falling within acceptable ranges.

Descriptive statistics for the demographic and key study variables are presented in Table 1. The mean Social Acceptance score was, by definition of the z-score transformation, 0 with a standard deviation of 1. The Inhibitory Control Composite score also had a mean near zero ($M = 0.02$, $SD = 0.89$), indicating that the sample's performance was, on average, consistent with the standardization of the composite measure. Independent samples t-tests were conducted to examine potential gender differences. No significant difference was found between boys and girls on the Inhibitory Control Composite Score, $t(166) = 0.45$, $p = .65$, or the Social Acceptance z-score, $t(166) = -0.89$, $p = .37$. Similarly, there were no significant differences between the 3rd and 4th grade students on the key variables. Therefore, gender and grade were retained primarily as control variables in the subsequent regression analysis.

Table 1: Descriptive Statistics for Key Study Variables (N = 168)

Variable	Mean	SD	Min	Max
Age (years)	9.10	0.55	8.20	10.10
D-KEFS CWI Scaled Score	10.21	2.88	4.00	17.00
Go/No-Go Commission Errors (%)	12.55	6.41	2.50	35.00
Inhibitory Control Composite (z)	0.02	0.89	-2.15	1.98
Social Acceptance (z)	0.00	1.00	-2.45	2.78

3.2 Correlational Findings

To test the primary hypothesis of a positive association between inhibitory control and social acceptance, a Pearson product-moment correlation was computed. The analysis revealed a strong, positive, and statistically significant correlation between the Inhibitory Control Composite Score and the Social Acceptance z-score,

$r(166) = .48, p < .001$. This result indicates that children with higher levels of inhibitory control tended to be more highly accepted by their peers. The correlation coefficient suggests a medium to large effect size, with approximately 23% of the variance in social acceptance being shared with the variance in inhibitory control. The correlation matrix for all variables is presented in Table 2.

Table 2: Pearson Correlation Matrix for Study Variables

Variable	1. Age	2. Inhibitory Control	3. Social Acceptance
1. Age	—		
2. Inhibitory Control Composite	.14	—	
3. Social Acceptance	.09	.48*	—

3.3 Main Findings: Predicting Social Acceptance

To further examine the unique contribution of inhibitory control to the prediction of social

acceptance, a hierarchical multiple regression analysis was performed. Social acceptance was the dependent variable. Age and gender (coded 0 = female, 1 = male) were entered in Step 1 to control for their potential

influence. The Inhibitory Control Composite Score was added in Step 2. The results of the regression analysis are summarized in Table 3.

In Step 1, the model including only age and gender was not statistically significant, $F(2, 165) = 1.12$, $p = .33$, and accounted for only 1.3% of the variance in social acceptance ($R^2 = .013$). This indicates that the demographic variables alone were not significant predictors of peer acceptance in this sample.

In Step 2, the addition of the Inhibitory Control Composite Score resulted in a significant improvement in the model's predictive power. The overall model was now highly significant, $F(3, 164) = 20.15$, $p < .001$. The total variance in social acceptance explained by the model (R^2) increased to .27, indicating that 27% of the

variability in peer acceptance could be accounted for by the combination of age, gender, and inhibitory control. The change in R^2 was statistically significant, $\Delta R^2 = .257$, $F_{change}(1, 164) = 56.89$, $p < .001$.

Examining the individual predictors in the final model, the Inhibitory Control Composite Score emerged as the only significant predictor. It was a strong, positive predictor of social acceptance ($\beta = .51$, $t = 7.54$, $p < .001$). Neither age ($\beta = .02$, $p = .78$) nor gender ($\beta = -.06$, $p = .43$) were significant predictors in the final model. The standardized beta coefficient of .51 for inhibitory control suggests that for every one standard deviation increase in a child's inhibitory control score, their social acceptance score is predicted to increase by 0.51 standard deviations, holding age and gender constant.

Table 3: Hierarchical Multiple Regression Predicting Social Acceptance

Variable	B	SE B	β
Step 1			
(Constant)	-1.15	1.04	
Age	0.16	0.18	.09
Gender	-0.14	0.15	-.07
Step 2			
(Constant)	-0.58	0.96	
Age	0.04	0.16	.02
Gender	-0.10	0.14	-.06
Inhibitory Control Composite	0.57	0.08	.51*
Model Summary			

Step 1: $R^2 = .013$			
Step 2: $R^2 = .270$			
Step 2: $\Delta R^2 = .257^*$			

Note: * $p < .001$

DISCUSSION

4.1 Summary and Interpretation of Findings

The primary objective of this study was to investigate the direct relationship between inhibitory control, a core executive function, and social acceptance among elementary school-aged children. In strong support of our hypothesis, the results demonstrate a significant and robust positive association between these two constructs. The correlational analysis revealed that children with better inhibitory control were more likely to be well-liked and accepted by their peers. Furthermore, the hierarchical regression analysis confirmed that inhibitory control is a powerful and unique predictor of social acceptance, accounting for a substantial portion of the variance in children's social standing, even after controlling for age and gender.

These findings provide compelling empirical evidence for the theoretical bridge linking a child's internal cognitive regulatory capacities with their external social success. The ability to pause and suppress a prepotent but socially inappropriate response is not merely an academic skill; it appears to be a fundamental tool for navigating the complex social world of the classroom. Children who can effectively manage their impulses are better positioned to engage in the give-and-take of social interaction. They are more likely to be able to wait their turn, share resources, listen to others' perspectives, and refrain from verbal or physical aggression when frustrated [9, 37]. These self-regulated behaviors are highly valued by peers and are the building blocks of friendship and acceptance. As suggested by prior work, observed peer competence is closely linked to a child's self-regulation skills [48]. Our study extends this by showing that this link holds not just for observed behavior but for the underlying cognitive mechanism of inhibition and the ultimate social outcome of acceptance.

The results align with and integrate findings from several lines of research. They are consistent with longitudinal studies that have identified a developmental pathway from early inhibitory control to later social competence and connectedness [56]. They also support research that has linked poor

inhibitory control to teacher-child conflict and externalizing behaviors [8], which are known to be antithetical to positive peer relationships. By using performance-based measures of cognition and peer-rated measures of social status, this study adds a layer of objectivity, strengthening the conclusion that the link between self-regulation and social life is not just an artifact of rater bias but reflects a genuine connection between a cognitive skill and a social reality. The findings resonate with the work of Oberle and Schonert-Reichl [34], who also found a relationship between inhibitory control and peer acceptance, and extend it by using a composite measure of inhibition to provide a more stable estimate of the construct.

4.2 Theoretical Implications

The results of this study have significant implications for developmental and educational psychology theories. First, they underscore the domain-general importance of executive functions [19]. While often studied in the context of "cool" cognitive tasks and academic achievement [3, 51], our findings highlight the critical role of inhibitory control in "hot," socially- and emotionally-laden contexts [36]. This supports integrative models of development which posit that cognitive skills are not isolated but are deeply embedded within, and essential for, socio-emotional functioning [10, 54]. The ability to manage cognitive interference on a Stroop task may seem far removed from navigating a playground dispute, but our data suggest they are supported by a shared underlying mechanism of inhibition.

Second, the findings contribute to theories of social development by identifying a key cognitive antecedent of peer acceptance. While factors like social cognition (e.g., theory of mind) and emotional understanding are undoubtedly important [18, 50], our results suggest that the "cold" executive ability to simply stop an action may be a necessary, though perhaps not sufficient, condition for successful social engagement. It may be that even if a child understands what they should do in a social situation (social cognition), they cannot translate this knowledge into action without the requisite inhibitory control to override a competing,

impulsive response. This places inhibitory control in a foundational position, as a gatekeeper that enables other social skills to be effectively deployed [37]. Wang and Feng's [50] longitudinal work suggested that executive function might be even more critical than emotion understanding for peer relationships, a proposition that our strong cross-sectional findings support.

Finally, this study reinforces the idea that human beings are fundamentally motivated by a need to belong [6, 30]. Our results can be framed within this motivational context: inhibitory control is a key cognitive tool that helps individuals regulate their behavior in a manner that satisfies this fundamental need. By inhibiting selfish or antisocial impulses, children behave in ways that make them valuable and attractive relationship partners, thereby facilitating their integration into the peer group and securing a sense of belonging [2].

4.3 Practical Implications

The strong predictive relationship between inhibitory control and social acceptance offers several promising avenues for practical application, particularly within educational settings.

For Educators and Schools: Teachers are on the front lines of managing classroom social dynamics. Our findings suggest that when a child struggles with peer relationships, the root cause may lie not only in a lack of social skills knowledge but also in an underlying deficit in cognitive regulation. Therefore, rather than focusing solely on teaching explicit social rules, educators might also benefit from strategies that help children develop self-regulation. This could involve creating structured and predictable classroom environments that reduce the cognitive load on children, explicitly teaching strategies for pausing before acting, and using games and activities that practice impulse control [31]. The findings provide a strong rationale for the integration of Social and Emotional Learning (SEL) programs into the core curriculum. Many evidence-based SEL programs include components aimed at developing self-management and self-regulation skills [27, 29], and our study validates that enhancing these cognitive capacities may pay dividends in the social health of the classroom.

For Clinical Interventions: For children with clinical levels of inhibitory control deficits, such as those with ADHD, the social difficulties they experience are often a primary source of impairment [14, 20]. Our results emphasize that interventions targeting the core cognitive deficits of ADHD may have crucial downstream benefits for their peer relationships. Cognitive training programs, mindfulness-based

interventions, and behavioral therapies designed to improve inhibitory control could be explicitly framed as tools to help children make and keep friends [33, 36, 49]. This may increase motivation for treatment and provide a tangible, socially-relevant goal for children and their families.

For Policy and Curriculum Development: The results support a broader policy shift in education towards a more holistic model that values the development of executive functions alongside traditional academic subjects [10]. Curricula can be designed with intentional "scaffolding" for executive functions. For example, long-term projects can be broken down into smaller parts to support planning and initiation, and classroom routines can be designed to practice waiting and turn-taking. Recognizing inhibitory control as a key ingredient for a positive school climate and student well-being [43, 52] provides a compelling argument for dedicating resources and training to its cultivation. Just as schools invest in resources to teach literacy and numeracy, they should also invest in evidence-based approaches to foster the self-regulatory skills that enable children to thrive both academically and socially.

4.4 Limitations and Future Research

Despite the strength of the findings, this study has several limitations that should be acknowledged and which point toward important directions for future research. First, the cross-sectional design prevents any conclusions about causality. While we have argued that inhibitory control facilitates social acceptance, it is also plausible that the relationship is bidirectional. For instance, children who are accepted by their peers may experience less social stress and more positive, structured interactions, which could, in turn, support the development of their self-regulatory capacities [8]. Similarly, being socially excluded could be a stressful experience that taxes and potentially impairs executive functions. Longitudinal studies are critically needed to untangle this directional relationship over time, tracking children's cognitive and social development concurrently [22, 50, 56].

Second, our sample was drawn from a specific suburban region and was predominantly Caucasian. The generalizability of these findings to more diverse populations, including children from different cultural and socioeconomic backgrounds, is unknown. Cultural norms around behavior and emotional expression can vary, which may influence the specific behaviors that lead to peer acceptance and the role that inhibitory control plays [24]. Future research should replicate this study with more diverse and representative samples.

Third, our measurement approach, while robust, could

be expanded. We used a composite of two cognitive tasks to measure inhibitory control. Future studies could incorporate a wider array of tasks to create a more comprehensive latent variable [23] and could also include teacher or parent ratings of inhibitory control to provide a multi-informant perspective [38]. Similarly, while peer nominations are a gold standard, they could be complemented with observational data of children's actual social interactions in the classroom or on the playground to provide a more nuanced picture of their social competence [48].

Looking forward, a crucial next step is to move from correlational to experimental designs. Randomized controlled trials that test the efficacy of specific inhibitory control training programs could directly assess whether enhancing this cognitive skill causally leads to improvements in peer acceptance. Such studies could compare cognitive training interventions to more traditional social skills training programs to determine their relative or combined effectiveness [33, 49]. Investigating potential moderators and mediators of the observed relationship is also a rich avenue for future inquiry. For example, does the link between inhibitory control and social acceptance differ for boys versus girls, or for children with varying temperaments? Do specific behaviors, such as prosocial actions or reduced aggression, mediate the path from better inhibition to greater peer acceptance [47]? Answering these questions will provide a more complete and actionable understanding of how to support children's social development.

CONCLUSION

This study provides clear and compelling evidence that a child's ability to inhibit their impulses is a powerful predictor of their social standing within the peer group. In the bustling social arena of the elementary school classroom, where countless opportunities for both conflict and connection arise, the cognitive capacity to stop, think, and regulate one's behavior appears to be a critical determinant of who is welcomed and who is left out. The findings bridge the gap between cognitive science and developmental social psychology, demonstrating that a fundamental executive function is intimately tied to the fulfillment of the fundamental human need to belong. The practical implication is profound: to help children navigate their social world more effectively, we must look beyond teaching them what to do and also focus on building the underlying cognitive machinery that allows them to do it. By fostering the development of inhibitory control, we may not only be building better students but also happier, more connected, and more socially successful children.

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