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ORIGINAL PAPER

Parental Behavioral Control and Student Motivation: Why Control Over Big Dreams vs. Daily Tasks Matters

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Abstract

The present research explores whether the relationship between parental behavioral control and student's motivation differs based on whether the control is exerted on higher-order goals (e.g., career decision-making) or lower-order goals (e.g., daily homework). Drawing from prior research indicating the significance of autonomy support, particularly for meaningful tasks, we hypothesized that parental behavioral control on higher-order goals would show a more pronounced negative association with student's academic and career motivation compared to parental behavioral control on lower-order goals related to weekly academic goals and homework. Two studies, utilizing samples from diverse cultures and age groups, specifically, U.S. college students (Study 1: $n = 148$) and South Korean middle school students (Study 2: $n = 6{,}908$), substantiated this hypothesis. Results from two studies confirmed that parental behavioral control on higher-order goals had a more substantial negative association with student's academic and career motivation, including intrinsic motivation and competence beliefs, compared to parental control on lower-order goals. These findings underscore the importance of fostering autonomy in students, particularly concerning their higher-order goals such as career decision-making.

Keywords Parental behavioral control · Motivation · Intrinsic motivation · Competence beliefs · Self-efficacy

Highlights

- Parental behavioral control over lower-order goals, such as weekly academic goals, was negatively associated with U.S. college students' motivation.
- Parental behavioral control over lower-order goals was positively associated with South Korean middle school students' motivation.
- Regardless of samples, parental behavioral control over higher-order goals, such as career goals, was more negatively associated with motivation than parental control over lower-order goals.
- The findings suggest the importance of supporting students' autonomy, especially for their higher-order goals.

Introduction

Guiding a child's development is undoubtedly a demanding task for parents. Striking the right balance between fostering autonomy and creating structure without being controlling is a key aspect that often renders parenting challenging, particularly during adolescence and early adulthood when the need for autonomy becomes more salient (Berk, 2022; Feldman, 2008; Steinberg, 2001). Parental control is commonly understood as the regulation of children's behaviors, and research typically distinguishes between two key dimensions: psychological control and behavioral control (Barber et al., 1994; Barber, 1996). Psychological control involves manipulating a child's thoughts and feelings, whereas behavioral control focuses on regulating the child's actions (e.g., Bacikova-Sleskova et al., 2023; Faherty et al., 2020; Soenens et al., 2010; Steinberg et al., 1992; Wang et al., 2007).

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While the evidence for parental psychological control is relatively consistent, the evidence regarding the relations between parental behavioral control and youth motivation is not uniformly negative. Some empirical studies have found no statistically significant associations between parental behavioral control and adolescents' motivation (e.g., Cheung & McBride-Chang, 2008) and, in some cases, even a positive relation (e.g., Lease & Dahlbeck, 2009; Trusty & Lampe, 1997). Given the mixed findings around parental behavioral control's role in child outcomes, it remains important to clarify how it operates.

The present research seeks to reconcile conflicting empirical findings on parental behavioral control and students' motivation by proposing that the nature of the tasks over which parents exert control is a crucial factor. We propose that the nature of the students' goals or tasks over which parental behavioral control is exerted influences the strength and direction of its association with students' motivation. We test this hypothesis in two studies that deliberately vary in populations (U.S. college students vs. South Korean middle school students), cultural contexts (individualistic vs. collectivistic), and measurement sources (student vs. parent reports). This research aims to shed light on the conditions under which parental behavioral control may vary in relation to students' motivational outcomes, including intrinsic motivation and competence beliefs.

Prior Research Findings on Parental Control

Previous research has identified two main dimensions of parental control: psychological control and behavioral control (Barber et al., 1994; Barber, 1996; Steinberg et al., 1992). Although both forms of parental control are often defended based on the assumption that children may not always act in ways that are beneficial to them (e.g., skipping homework), numerous empirical studies have demonstrated that it negatively predicts adolescents' developmental outcomes, including their motivation for schoolwork and career goals (e.g., Annear & Yates, 2010; Bregman & Killen, 1999; Guay et al., 2003). This negative impact occurs because parental control hinders the development of autonomy, competence, and relatedness—all of which are crucial factors for motivation and psychological well-being (Ryan & Deci, 2000; 2020).

Compared to parental psychological control, which is consistently linked to youth's internalizing symptoms, such as depression or anxiety (Annear & Yates, 2010; Barber, 1996, Ratelle et al., 2004, Romm & Metzger, 2018; Soenens & Vansteenkiste, 2010), parental behavioral control has often been associated with more favorable adjustment outcomes. Specifically, behavioral control has been linked to reduction in risky and externalizing behaviors (Fletcher et al., 2004; Lipperman-Kreda et al., 2017; Stice et al., 1993; Wei et al., 2022; Zhu et al., 2023). For instance, studies found that parental behavioral control has been associated with lower level of externalizing symptoms, delinquent behaviors, and illicit substance use among youth (Fletcher et al., 2004; Harris-Mckoy & Cui, 2013; Inguglia et al., 2022). Taken together, the literature shows relatively consistent associations between psychological control and internalizing symptoms, as well as between behavioral control and reduced behavioral problems.

What remains less consistent, however, is the literature on parental behavioral control and adolescents' psychological functioning, such as motivation. A substantial body of research indicates that parental behavioral control is negatively associated with youth motivation (Bronstein et al., 2005; Hess & McDevitt, 1984). For instance, Bronstein and colleagues (2005) found that parental behavioral control negatively predicted the grade point average (GPA) and academic intrinsic motivation of 5th and 7th-grade children. Similarly, controlling maternal behaviors have been associated with heightened levels of negative emotional symptoms (Di Giunta et al., 2022; Inguglia et al., 2016). Even though some studies report negative associations between parental behavioral control and youth's motivational outcomes; however, others suggest that it can have beneficial effects. For example, research indicates that parental behavioral control is positively associated with youth's confidence in their career decisions (e.g., Strage & Brandt, 1999; Lease & Dahlbeck, 2009). Supporting this, Rohner & Pettengil (1985) propose that youth may perceive parental behavioral control as a sign of parental warmth and low neglect.

Noting the inconsistency in the extant literature, some researchers have examined factors that may explain the contrariety in the empirical findings on parental control. Some researchers have distinguished parental psychological control from parental behavioral control, proposing that behavioral control may be beneficial because it provides children with clear guidelines for appropriate behavior whereas psychological control is often linked to youth's internalizing symptoms, such as depression or anxiety (Barber, 1996; Ingoglia et al., 2017; Soenens & Vansteenkiste, 2010). Grolnick and colleagues sought to further clarified the conceptual distinction by differentiating between parental structure and parental control. Parental structure involves emphasizing clear and consistent guidelines, rules, routines, and expectations for children without pressuring, demanding, or intruding (Farkas & Grolnick, 2010; Grolnick & Pomerantz, 2009). They argue that some positive findings related to parental control may actually reflect parental structure rather than parental behavioral control (e.g., Fletcher et al., 2004). Finally, Hasebe et al. (2004) suggested that the effects of parental behavioral control may depend on the domain, particularly whether the domain is considered personal (e.g., who to be friends with

or what music to listen to) or conventional (e.g., doing homework, cutting school, or drinking alcohol). In personal domains, societal expectations dictate that this realm is an individual's autonomous area. Conversely, in conventional domains, society anticipates a robust presence of parental guidance and structure. The research reported that youth displayed greater internalizing symptoms when they perceived parental behavioral control in personal domains than in conventional domains (Hasebe et al., 2004).

Building on prior work, we focus specifically on behavioral control within conventional domains, where debates about its benefits versus detriments are more nuanced compared to personal domains. Parental behavioral control is distinct from other parenting behaviors, such as parental involvement (e.g., participating in children's school activities; Pomerantz et al., 2012). While parental involvement emphasizes active engagement in a child's life, behavioral control specifically involves pressuring or demanding specific outcomes from children. It shares similarities with concepts such as parental structure and parental monitoring, as all involve setting boundaries. However, behavioral control differs in that it may be perceived as less supportive of a child's autonomy, whereas parental structure and monitoring can still foster autonomy (Guilamo-Ramos et al., 2010; Elsaesser et al., 2017). Adolescent self-disclosure—when teens voluntarily share information about their lives—plays a critical role in differentiating these parenting behaviors. When adolescents openly communicate about their activities, parents gain insight into their lives without needing to exert controlling behaviors. As a result, the same parenting actions may be interpreted as parental structure or monitoring rather than behavioral control, provided they are accompanied by sufficient adolescent self-disclosure (Pathak, 2012; Vieno et al., 2009).

Despite efforts to clarify the definition and scope of parental control, which have enhanced our understanding of this concept and addressed certain conflicting findings, several studies continue to report mixed results. For example, Lease & Dahlbeck (2009) measured parental behavioral control using Parental Authority Questionnaire (PAQ; Buri, 1991) with items such as "Whenever my mother told me to do something as I was growing up, she expected me to do it immediately without asking any questions," which fits the definition of parental behavioral control. The researchers found that youth with controlling parents displayed higher self-efficacy in their career decision-making. In contrast, Guay and colleagues (2003) identified a negative relationship between parental control and youth's self-efficacy. With this in mind, we aim to identify an additional factor that may help explain the heterogeneity in associations between parental behavioral control and youth motivation. As discussed below, we propose that the nature of the students' goals and tasks over which control is exerted may be a distinguishing factor influencing the relationship between parental behavioral control and students' motivation.

Where Is Parental Behavioral Control Exerted?

Adolescents pursue a multitude of goals and tasks. Some goals, such as career aspirations, require more time to accomplish, demand sustained effort, and hold greater personal significance than others like completing homework. Researchers characterize these goals as superordinate or higher-order goals (Fishbach et al., 2006; McIntosh, 1996). Higher-order goals are positioned higher on a goal hierarchy and are typically achieved through the successful achievement of multiple lower-order goals. Lower-order goals, in contrast, function as instrumental subgoals designed to help attain higher-order goals. For example, the goal of completing homework for tomorrow's class may serve as a lower-order goal in the pursuit of the higher-order goal of graduating from high school with good grades. Higher-order goals often require multiple lower-order goals for completion. For instance, the goal of becoming a medical doctor depends on lower-order steps such as passing exams, earning a degree, and gaining clinical experience.

Higher-order goals conceptually overlap with several other characteristics of goals including goal importance and temporal distance (i.e., long-term vs. short-term goals). Goal importance refers to the value individuals place on specific goals, and long-term goals require extended periods to achieve, such as earning a degree or building a career. Many higher-order goals are important and long-term because they reflect core aspects of an individual's identity. However, they are distinct in that they represent broader aspirations. For example, passing exams (an important lower-order goal) or losing twenty pounds by year-end (a long-term lower-order goal) are likely to function as lower-order goals in service of higher-order goals, such as career success or overall fitness, even though they may be important or long-term in nature.

We believe the multidimensional nature of higher-order goals (i.e., not only long-term but also personally important and requiring accomplishment of multiple subgoals) explains why goal hierarchy makes the difference in the role of parental control in students' motivational outcomes. Self-Determination Theory (Ryan & Deci, 2000; 2020) suggests that supporting or thwarting individuals' autonomy is particularly impactful when higher-order goals—those closely tied to one's identity and core values—are at stake. For example, research shows that allowing students control over the initiation and regulation of significant, higher-order goals substantially boosts intrinsic motivation and supports deeper learning (e.g., Cordova & Lepper, 1996; Tafarodi et al., 2002). Since lower-order goals tend to be

instrumental, short-term, and replaceable in the service of higher-order goals, students may sometimes view parental behavioral control over these goals as acceptable, especially if they believe the intrusion on autonomy is minor or will lead them to better achieve their higher-order goals. However, since higher-order goals represent ultimate aspirations, rather than instrumental steps, students may not be willing to accept as much parental control on their higher order goals as they do for lower order goals. Goal researchers, in fact, have empirically shown that individuals tend to ruminate mainly about higher-order goals whereas lower-order goals are only seen as instrumental in attaining higher-order goals (McIntosh, 1996).

A close look at the literature on parental behavioral control further supports our proposition. Previous studies reporting negative relations between parental behavioral control and youth's motivational outcomes seem to focus on higher-order goals, while those reporting positive or weak negative relations tend to target parental behavioral control on lower-order goals. Guay and colleagues (2006), for example, measured parental control using the items focused on parents' attitudes towards career decisions, a relatively higher-order goal. Similarly, a study by Bregman & Killen (1999) examined parental control over career goals. Both studies (Bregman & Killen, 1999; Guay et al., 2006) found negative relations between parental control and youth's motivation, likely because these higher-order goals, being closely tied to youth's identity and core value, are less positively responsive to external control (Chen et al., 2015). That is, parental attempts to control high-order goals can prompt resistance, as such efforts may feel intrusive to youth's values and autonomy (Ryan & Deci, 2006; Soenens & Vansteenkiste, 2010).

In contrast, research shows that providing students with autonomy in low-stakes choices, such as selecting between versions of similar tasks, has minimal impact on performance or intrinsic motivation (e.g., Overskeid & Svartdal, 1996; Schraw et al., 1998). In studies that found positive relations between parental behavioral control and students' competence beliefs, parental behavioral control was often measured using items that focus on relatively lower-order daily interactions, such as how youth are to behave in their home (Lease & Dahlbeck, 2009; Strage & Brandt, 1999). Similarly, studies reporting weak or no contribution of parental behavioral control to youths' outcomes also tend to focus on lower-order goals (e.g., "My mother makes me do supplementary exercises"; Cheung & McBride-Chang, 2008). Lower-order goals might be more receptive to parental behavioral control because they are less central to students' identity and ultimate aspirations. These goals often involve routine behaviors (e.g., completing homework) that do not necessarily challenge students' sense of self, making them more open to parental input.

Taken together, the mixed results in the literature on parental behavioral control may be due in part to the different nature of the goals or tasks that parents attempt to regulate. Specifically, empirical evidence suggests that parental behavioral control may have stronger negative relations with students' motivation when exerted on higher-order goals than lower-order goals.

Motivational Outcomes

In the present research, we focus on two motivational outcome variables: intrinsic motivation and competence beliefs. Prior studies on students' motivation suggest intrinsic motivation (e.g., interest, enjoyment, intrinsic value) and competence beliefs (e.g., self-efficacy, self-concept, expectancy for success) are two critical components of students' motivation (e.g., Eccles et al., 1983; Eccles & Wigfield, 2020). Students initiate tasks they feel are intrinsically valuable or enjoyable (i.e., intrinsic motivation) and continue working when they feel competent (i.e., competence beliefs).

The first motivational outcome, intrinsic motivation, signifies one's enjoyment and satisfaction while accomplishing an academic task (Ryan & Deci, 2000, 2020). Previous studies have consistently indicated that youth with high intrinsic motivation demonstrate increased task effort (Ryan & Deci, 2000; Jõesaar et al., 2011) and attain higher academic achievement (Ayub, 2010; Conti, 2000; Köller et al., 2001; Ryan & Deci, 2000, 2020;). Moreover, intrinsic motivation is crucial not only for its instrumental role in academic effort and achievement but also due to its inherent value. High intrinsic motivation, by definition, implies that students derive pleasure from the process of working on the task, a quality most parents would aspire to see in their children.

In addition, a great deal of research has shown that high competence beliefs and the feeling of confidence are also positively related to various achievement behaviors, including task persistence and performance (Eccles, 2005; Schunk et al., 2008; Wigfield, 1994; Wigfield & Eccles, 1992). Importantly, and as previously reviewed, studies focused on parental control have often yielded mixed findings regarding adolescents' competence beliefs, self-efficacy, or confidence (e.g., Guay et al., 2003; 2006; Lease & Dahlbeck, 2009; Strage & Brandt, 1999). Therefore, we have included competence beliefs as one of the outcomes.

The Present Research

In this research, we aimed to investigate whether the association between parental behavioral control and students'

motivation varies according to the hierarchical positions of goals. Our hypothesis was that parental behavioral control over lower-order goals, such as completing homework, would exhibit a weaker negative or no relation with motivation. Conversely, we anticipated that parental behavioral control over higher-order goals, such as career decision-making, would demonstrate a stronger negative association with students' motivation.

To examine the robustness of our findings across diverse contexts, we tested our hypothesis based on two cross-sectional studies using various samples, cultures, measures, and designs. Study 1 tested the hypothesis with a convenience sample of college students from the United States. Study 1 randomly assigned participants to one of two conditions, where students were asked to describe either a higher- or lower-order goal. Subsequently, they reported their perceived parental behavioral control, intrinsic motivation, and competence beliefs for the respective goal they had been assigned to reflect on. Study 2 tested the hypothesis using a nationally representative sample of South Korean middle school students. In this study, parental control was assessed by asking parents to report their level of behavioral control over both a higher-order goal (career decisions) and a lower-order academic goal (homework completion) for their children. Students reported on their academic motivation. Finally, we included students' gender (Studies 1 and 2) and family income (Study 2) as covariates, given that prior research has suggested that gender and socioeconomic status (SES) predict variability in both parenting and students' motivation (e.g., Eccles et al., 1983; Joo et al., 2000; Gonzales et al.,1996; Meece, 2002; Stipek & Ryan, 1997).

Although the measures and populations differed between studies, these differences were intentional to examine the robustness of our hypothesis across varied cultural, developmental, and reporting contexts. By including participants from an individualistic society (the United States) and a collectivistic society (South Korea), college students and middle school students, and both student and parent reports, we aimed to explore whether the association between parental behavioral control and students' motivation would emerge consistently across diverse conditions.

Study 1

Methods

Participants

One hundred-forty-eight college (43.9% women) students at a large southwestern school in the United States participated in the study. The average age of participants was 21.84 years ($SD = 3.61$). The racial and ethnic composition of the sample was as follows: Caucasian (57.4%), Latinx (18.9%), Asian (14.9%), African-American (2%), other ethnicities (2%), and those who did not disclose their ethnicity (4.7%). Participants were recruited through an online survey platform using the department's subject pool, and all research procedures were reviewed and approved by the university's Institutional Review Board (IRB).

Procedure

Before participating in the study, participants were presented with an online consent form and were asked to indicate their agreement to participate by answering a consent question at the beginning of the study. This study was conducted entirely online. In Study 1, we employed a between-subjects design to minimize the risk of carryover effects in participants' responses between higher- and lower-order goals. Participants were randomly assigned to one of two conditions: a higher-order (career goal, $n = 75$) or a lower-order goal condition (weekly academic goal, $n = 73$). Participants in the higher-order goal condition were asked to write about their career goals, while those in the lower-order goal condition were asked to write about their academic goals for the week. After describing their goals, participants responded to questionnaires asking about perceived parental control related to the goals they described, their intrinsic motivation for the goals, and competence beliefs in regard to the goals. Finally, participants were also asked about demographic characteristics including age, gender, and race/ethnicity.

Measures

Parental behavioral control Parental behavioral control over goal setting was measured using six items modified from Reeve et al. (2003) based on 7-point Likert scale (1: Not at all true, 7: Very true; e.g., "I set the goal that my parents wanted me to set," 2) "I feel that my parents have control to decide which goal I pursue."). Students responded to these questions with reference to both parents. The last three items were reversed coded before analysis. We computed an average score across the items, with higher scores indicating greater perceived parental behavioral control over goal setting. The reliability of the measure was acceptable in the present study (*Cronbach* $\alpha = 0.78$).

Intrinsic motivation The first outcome variable, intrinsic motivation, was measured with seven items from the intrinsic motivation questionnaire (Elliot & Church, 1997; e.g., "I enjoy the process of pursuing the goal", "I think it is interesting to pursue the goal," or "I think it is fun to pursue

the goal."). The scale originally included eight items, but we chose to exclude one item ("I intend to recommend this class to others.") because the item was not easily adaptable to goal pursuit, as recommending a goal, unlike recommending a class, is uncommon. The response categories ranged from 1 (Not at all true) to 7 (Very true). We calculated an average score across the items, with higher scores indicating greater intrinsic motivation for goal pursuit. The reliability of the measure was acceptable (*Cronbach* $\alpha = 0.90$).

Competence beliefs The second outcome variable, competence beliefs, was measured with four items that were modified from a measure of goal coping confidence developed by Carver et al. (1989). These items were adapted to better align with the study's focus on participants' perceived competence in managing goal pursuit. For instance, we modified the original item, "I do what has to be done, one step at a time", to "I can, one step at a time, do what has to be done to achieve the goal" to emphasize the perceived competence in managing the steps required to reach the goal. This measure was chosen for its relevance to confidence in handling challenges related to goals of various hierarchical levels, making it appropriate for assessing competence beliefs across different contexts of goal pursuit. We calculated an average score across the items, with higher scores indicating stronger competence beliefs in managing goal pursuit. Participants answered these items based on 7-Likert scale ranging from 1 (Not at all true) to 7 (Very true). *Cronbach* α was 0.86.

Statistical analysis

We conducted path analyses using Mplus 8.0 (see Fig. 1). Parental behavioral control (continuously measured), goal hierarchical position (high = 1, low = 0), and their interactions were included as predictors. Participants' gender was also included as a covariate (men = 0, women = 1). Intrinsic motivation and competence beliefs were included as dependent variables and the correlation between the two outcome variables was also assumed in the path model. We employed maximum likelihood as an estimation method and full information maximum likelihood (FIML) estimation to address missing values. FIML produces less biased parameter estimates compared to methods like listwise deletion or older imputation techniques (Peugh & Enders, 2004). We did not evaluate the model fit as the model was fully saturated, resembling a typical regression analysis (with degrees of freedom, *df*, equal to 0). In a fully saturated model, each data point is accounted for, and the model perfectly fits the observed data, eliminating the need for traditional fit indices.

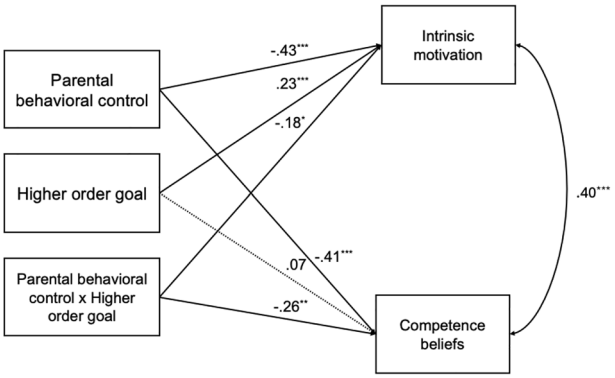

Fig. 1 The Results of the Path Analysis Showing the Interaction Between Parental Behavioral Control and Goal Hierarchy in Association with Intrinsic Motivation and Competence Beliefs (Study 1). *Note*. Standardized coefficients are shown. Dashed paths were statistically not significant. Higher order goal (vs. lower order goal) = Career goal (vs. weekly academic goal). Participants' gender was included as a covariate in the model but omitted in the figure for graphical simplicity. $^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

Results and Discussion

Descriptive Analyses

Descriptive statistics and bivariate correlations among all variables are presented in Table 1. Goals that participants listed as their career goals include "Being a successful scientist," "Become a CEO of a large financial institution," "Being a great speech language pathologist," and "Being a fashion magazine editor." Goals listed as weekly academic goals include "Getting an A+ on my test this week," "Complete all readings and write up a summary of them," "Don't skip class," "Not fail my test," and "Review the reading."

Intrinsic Motivation

The path model explained 44.7% of overall variance in intrinsic motivation. The results identified the negative main effect of parental behavioral control on intrinsic motivation (see Fig. 1 for standardized coefficients). Specifically, college students who perceived greater parental behavioral control over their goals had lower intrinsic motivation for their goals than those who perceived less control regardless of hierarchical position of goals, $b = -0.44$, $SE = 0.09$, $p < 0.001$. Furthermore, students reported greater intrinsic motivation in pursuing a higher-order goal (i.e., career goal pursuit) as compared to a lower-order goal (i.e., weekly academic goal), $b = 0.55$, $SE = 0.15$, $p < 0.001$. Finally, gender was not associated with intrinsic motivation, $b = -0.09$, $SE = 0.15$, $p = 0.535$.

More importantly, we found an interaction between perceived parental behavioral control and goal hierarchical

Table 1 Means, Standard Deviations, and Intercorrelations among Variables (Study 1)

Variable	Mean (SD)		Intercorrelations			
	Higher goal	Lower goal	1	2	3	4
1. Perceived parental behavioral control	2.25 (1.05)	2.87 (1.21)	–	−0.46***	−0.44***	0.08
2. Intrinsic motivation	5.67 (1.03)	4.76 (1.19)	−0.74***	–	0.51***	−0.03
3. Competence beliefs	5.70 (1.07)	5.21 (1.07)	−0.72***	0.73***	–	−0.26*
4. Women (vs. men)	0.48 (0.50)	0.40 (0.49)	−0.27*	0.11	0.23*	–

Intercorrelations for higher-order goal condition (career goal, $n = 75$) are presented below the diagonal, and intercorrelations for lower-order goal condition (weekly academic goal, $n = 73$) are presented above the diagonal

*$p < 0.05$. ***$p < 0.001$

position in relation to intrinsic motivation, $b = -0.29$, $SE = 0.13$, $p = 0.03$. We conducted a follow-up analysis to investigate the interaction pattern. The interaction pattern supported the hypothesis; for the higher-order goal, parental behavioral control had a strong negative relationship with intrinsic motivation, $\beta = -0.72$, $b = -0.73$, $SE = 0.10$, $p < 0.001$ (see Fig. 2a). The negative relation was weaker for the lower-order goal, $\beta = -0.43$, $b = -0.44$, $SE = 0.09$, $p < 0.001$ (Fig. 2a). The significant interaction term formally tests whether the effect of parental behavioral control varies across levels of goal hierarchy and confirms that the simple slopes at high and low levels of the moderator differ significantly (Aiken & West, 1991; Hayes, 2022). Thus, no additional statistical comparison between the coefficients is necessary, as this difference is already captured by the interaction term.

Competence Beliefs

Results of the path analysis for competence beliefs suggested that 39.6% of overall variance in coping confidence was explained by the model. We found that students who perceived greater parental behavioral control over their career and weekly academic goals had lower competence beliefs, $b = -0.39$, $SE = 0.08$, $p < 0.001$ (see Fig. 1 for standardized coefficients). The gender, $b = -0.29$, $SE = 0.14$, $p = 0.149$, and goal hierarchical position, $b = 0.16$, $SE = 0.15$, $p = 0.285$, were not associated with competence beliefs.

More importantly, similar to the results for intrinsic motivation, there was a statistically significant interaction between perceived parental behavioral control and goal hierarchical position, $b = -0.38$, $SE = 0.06$, $p = 0.002$. Follow-up analyses supported our hypothesis. Perceived parental behavioral control over the higher-order goal negatively associated with college students' competence beliefs, $\beta = -0.81$, $b = -0.76$, $SE = 0.10$, $p < 0.001$ (see Fig. 2b). This negative relation was weaker for the lower-order goal, $\beta = -0.41$, $b = -0.44$, $SE = 0.09$, $p < 0.001$ (see Fig. 2b). As with intrinsic motivation, the significant interaction term confirms that the effect of parental behavioral control differs by goal hierarchy level, indicating statistically different simple slopes at higher- and lower-order goals (Aiken & West, 1991; Hayes, 2022).

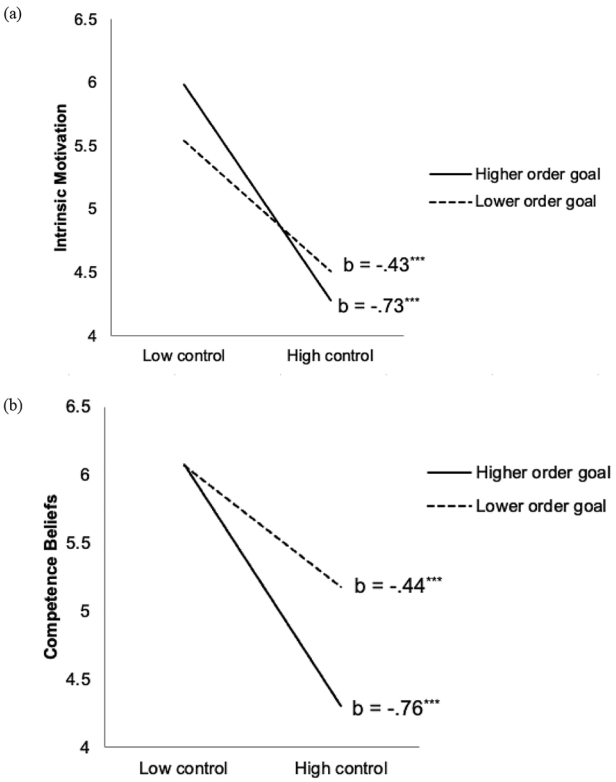

Fig. 2 The Interaction Patterns Between Parental Behavioral Control and Goal Hierarchy in Relation to Intrinsic Motivation and Competence Beliefs (Study 1). **a** Intrinsic motivation and **b** competence beliefs. *Note*. "High" indicates one standard deviation above the sample average, and "low" indicates one standard deviation below the sample average. ***$p < 0.001$

Study 2

In Study 2, we aimed to test the hypothesis using a different sample, along with different measures and designs. This

study utilized a nationally representative sample of South Korean middle school students. In Study 2, we sought parental input on parental behavioral control. This method allows us to investigate whether the findings can be reproduced with an alternative reporting source. We also assessed students' motivation toward general schoolwork, which is a broader outcome than motivation toward specific goals measured in Study 1. Finally, we used a within-subjects design, where participants reflected on both higher- and lower-order tasks, maximizing statistical power. Our hypothesis posited that parental behavioral control over students' career decision-making (higher-order goal) would have a more negative association with the intrinsic motivation and competence beliefs of South Korean middle school students compared to how parental behavioral control over students' homework completion (lower-order goal) would.

Methods

Participants

We used publicly available, de-identified data from the Korean Educational Longitudinal Study (KELS). KELS is a nationally representative student sample collected by the Korean Educational Development Institute funded by South Korean government. In 2005, seventh-grade students ($N = 6{,}908$, 52.4% boys; age: $M = 14.74$, $SD = 0.44$) from 150 public and private middle schools across the nation were randomly selected by a multistage sampling design. First, schools were randomly sampled, followed by sampling teachers within schools and students within each classroom by proportional stratified cluster sampling. A survey was administered to students, parents, teachers, and principals, with only those who provided informed consent included in the study. The survey was administered in a pencil-and-paper format. Korean Educational Development Institute (KEDI) was responsible for all aspects of data collection, and all research procedures were reviewed and approved by the institution's Institutional Review Board (IRB). Since the secondary data were non-identifiable and publicly accessible, this study did not require an IRB approval.

Measures

Parental behavioral control Parental behavioral control on a higher-order goal (career decision-making) was measured with an item asking parents about whose opinion they consider the most regarding their child's career decisions ("When deciding your child's career, whose opinion do you think the most important?"). Parents who regarded their children's opinion the most were coded 0, and those who valued their opinion the most were coded 1, reflecting a tendency to assert control over the child's higher-order goals.

Parental behavioral control on a lower-order goal (daily homework completion) was measured with an item asking parents about how much they control their child's homework completion ("I have my child finish his or her homework"). Parents answered the item based on a five-point Likert scale (1: Not at all, 5: Very much), with higher scores indicating greater parental control over their child's homework completion.

Academic intrinsic motivation The first outcome variable, academic intrinsic motivation was measured using eight items asking students' interest in three core academic subjects, including mathematics, reading, and English (e.g., "I will not give up studying Mathematics because it is fun," "I study English because I enjoy it," "I sometimes do not want to stop reading because I enjoy it so much). Students responded to the items based on a four-point Likert scale (1: Not at all true, 4: Very true). We calculated an average score across the items, with higher scores indicating greater intrinsic motivation for academic subjects. The reliability of the measure was acceptable (*Cronbach* $\alpha = 0.77$) in the present study.

Competence beliefs The second outcome variable, competence beliefs, was measured using four items asking students' feeling of competence on academic tasks (e.g., "Even if a subject is difficult, I believe I can learn it if I try," "I can pick up things well if I want to," "I can achieve good scores on my school exams," "If I try to get a good score, I can do it."). Students answered the items based on a four-point Likert scale (1: Not at all true, 4: Very true). We calculated an average score across the items, with higher scores reflecting stronger competence beliefs in academic performance. The reliability of the scale was acceptable (*Cronbach* $\alpha = 0.84$).

Gender and family income Students' gender and family income were included as control variables. Boys were coded 0 and girls were coded 1. In regard to family income, parents were asked to record their family's average total monthly income. The unit was converted to represent one million Korean-won, which values approximately 1000 U.S. dollars.

Statistical analysis

To test the associations between parental behavioral control and Korean students' intrinsic motivation and competence beliefs, we employed structural equation modeling using Mplus 8.0. The substantial sample size of Study 2 enabled

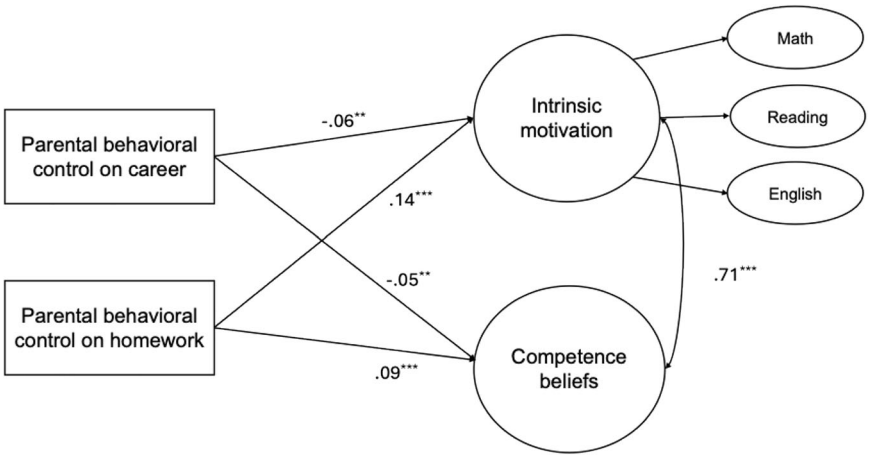

Fig. 3 The Results of Latent Structural Equation Modeling Revealing Distinctive Associations Between Parental Behavioral Control and Motivational Outcomes for Higher (Career) and Lower Order (Homework) Tasks (Study 2). *Note*. Standardized coefficients are shown. Gender and family income were included as covariates in the model but omitted in the figure for graphical simplicity. ***$p < 0.001$, **$p < 0.01$

Table 2 Means, Standard Deviations, and Intercorrelations among Variables (Study 2)

Variable	Mean (SD)	*N*	1	2	3	4	5
1. Parental behavioral control	0.09 (0.28); 2.98 (1.03)	6294	–	0.10***	0.08***	−0.08***	0.05***
2. Intrinsic motivation	2.67 (0.51)	6787	−0.03**	–	0.48***	−0.03*	0.17***
3. Competence beliefs	2.87 (0.58)	6791	−0.04***	0.48***	–	0.03*	0.05***
4. Girls (vs. boys)	0.48 (0.50)	6908	−0.04***	−0.03*	0.03*	–	−0.05***
5. Family income	3.54 (2.29)	6207	−0.01	0.17***	0.05***	−0.05***	–

Two means are reported for parental behavioral control: the first corresponds to the higher-order goal (career goal) and the second to the lower-order goal (homework completion). All other variables have a single set of values because they were measured in relation to academic tasks or general demographic information, not separately for the higher- and lower-order goals. Intercorrelations for higher-order goal are presented below the diagonal, while intercorrelations for lower-order goal are presented above the diagonal

***$p < 0.001$, **$p < 0.01$, *$p < 0.05$

us to employ a second-order structural equation modeling approach using latent variables (as shown in Fig. 3), which allowed for control of measurement errors. We included intrinsic motivation and competence beliefs as latent variables. Intrinsic motivation encompassed three subfactors, representing latent variables of intrinsic motivation towards three major subjects. Additionally, family income and participants' gender were incorporated as covariates in the model. Excluding family income as a covariate (as in Study 1) did not alter any path coefficients or statistical conclusions. Variances of latent variables were fixed to be one in order to allow estimation of all path coefficients. All errors were assumed to be independent from each other. Consistent with Study 1, we used maximum likelihood estimation method and applied FIML to estimate missing data.

Results and Discussion

Descriptive analyses and model fit

Descriptive statistics and correlations among variables are shown at Table 2. Many of parents reported that they regard their child's opinion the most when deciding the child's career ($n = 5{,}736$, 83%). Five hundred and fifty-eight parents (8.1%) reported that their opinion is more important than their child's in deciding the child's career. We excluded participants whose parents prioritized other factors, such as career experts, teachers, relatives, or religion, as the most important in career decisions ($n = 434$, 6.3%). These cases were excluded from the analysis because it was unclear whether they reflected parental behavioral control, the student's desire to respect others' opinions, or a co-decision process. This exclusion allowed us to focus specifically on parental behavioral control rather than general external influences on students' career goals. Parents of 180 participants (2.6%) did not respond to the question in the data.

The fit indices of the second-order measurement model showed adequate fit, $\chi^2(50) = 1150.45$, $p < 0.001$, CFI = 0.96, RMSEA = 0.06, SRMR = 0.03, which satisfy the joint criteria to retain a model (RMSEA ≤ 0.06 and SRMR ≤ 0.10) suggested by Hu & Bentler (1999). All standardized factor loadings exceeded $\beta = 0.67$. Therefore, we proceeded to the structural model. The fit indices of the structural model also showed adequate model fit, $\chi^2(90) = 1161.45$,

$p < 0.001$, CFI = 0.95, RMSEA = 0.05, SRMR = 0.03. We explain results for each outcome in the following.

Intrinsic motivation

The results of the structural equation modeling supported our hypothesis that parental behavioral control on a higher-order goal would more negatively associate with students' intrinsic motivation than parental behavioral control on a lower-order goal would (see Fig. 3 for standardized coefficients). Parental behavioral control on a higher-order goal (i.e., career decision-making) was negatively associated with students' intrinsic motivation, $b = -0.21$, $SE = 0.07$, $p = 0.004$. In contrast, parental behavioral control on a lower-order goal (i.e., daily homework completion) positively associated with Korean middle school students' intrinsic motivation, $b = 0.14$, $SE = 0.02$, $p < 0.001$.

We also examined differences in path coefficients by constraining them to be equal for higher- and lower-order goals and assessing the change in model fit using a chi-square different test (e.g., Kline, 2016). This approach allowed us to evaluate whether the paths differed significantly between higher- and lower-order goals. Constraining the paths resulted in a significant deterioration in model fit, $\Delta\chi^2(1) = 21.36$, $p < 0.001$, indicating that the relationships between parental behavioral control over higher-order versus lower-order goals and students' intrinsic motivation differ significantly.

Regarding control variables, family income positively related to students' intrinsic motivation, $b = 0.10$, $SE = 0.01$, $p < 0.001$, which is in line with many previous studies (e.g., Gonzales et al., 1996; Meece, 2002; Stipek & Ryan, 1997). Students' gender was not related to intrinsic motivation after accounting for other variables in the model, $b = -0.08$, $SE = 0.04$, $p = 0.072$.

Competence beliefs

The results of the structural equation modeling supported our hypothesis that parental behavioral control on a higher-order goal would more negatively associate with students' competence beliefs than parental behavioral control on a lower-order goal would (see Fig. 3 for standardized coefficients). Parental behavioral control on a higher-order goal (i.e., career decision-making) had a negative relation to students' academic competence beliefs, $b = -0.18$, $SE = 0.06$, $p = 0.002$, after controlling for the effects of gender and family income. In contrast, parental behavioral control on a lower-order goal (i.e., homework completion) had a positive relation with competence beliefs, $b = 0.09$, $SE = 0.02$, $p < 0.001$.

We also examined differences in path coefficients by constraining them to be equal for higher- and lower-order goals and assessing the change in model fit using a chi-square different test (e.g., Kline, 2016). This approach allowed us to evaluate whether the paths differed significantly between higher- and lower-order goals. Constraining the paths resulted in a significant deterioration in model fit, $\Delta\chi^2(1) = 20.32$, $p < 0.001$, indicating that the relationships between parental behavioral control over higher-order versus lower-order goals and students' competence beliefs differ significantly.

In regard to control variables, girls reported higher competence beliefs than boys, $b = 0.08$, $SE = 0.03$, $p = 0.015$, which is in line with prior research showing a gender difference among Korean students (e.g., Joo et al., 2000). Also, family income positively associated with students' academic competence beliefs, $b = 0.02$, $SE = 0.01$, $p = 0.002$, indicating that students with wealthy parents tend to feel more confident in their academic ability.

Discussion

Deciding whether to support children's autonomous decisions or engage in control with the intention to help their children accomplish desirable outcomes is often a source of internal conflict for parents. It is particularly challenging when scientific research findings are unclear about why the extent to which parental behavioral control, defined as behaviors that pressure or demand specific outcomes from children rather than guiding their autonomous decision-making through clear guidelines and expectations, varies in its detrimental effects on students' motivation (e.g., Bregman & Killen, 1999; Guay et al., 2006; Lease & Dahlbeck, 2009). This ambiguity persists even after clarifying the distinctions between parental behavioral control and related concepts, such as parental psychological control, parental structure, and parental monitoring.

The purpose of this research was to examine whether the hierarchical position of goals is an additional factor that may explain heterogeneity in the associations between parental behavioral control and students' motivation. Specifically, we hypothesized that parental behavioral control on higher-order goals, such as career goals, would have a stronger negative relation with students' motivation, including intrinsic motivation and competence beliefs, than parental behavioral control on lower-order goals. To enhance the robustness of our conclusions through triangulation with multiple samples, measures, and designs, we tested the hypothesis using two distinct samples (U.S. college students vs. South Korean middle school students), different measures (students' self-report of parental control vs. parental report of parental control), and designs (between-subject design vs. within-subject design). This

offers a more comprehensive perspective on the association between parental control and students' motivation.

The results of both studies supported the hypothesis that parental behavioral control has a stronger negative relation with students' motivation for higher-order goals than for lower-order goals. U.S. college students who perceived greater parental control over their career goals exhibited lower intrinsic motivation and confidence in pursuing these goals compared to those who perceived less parental control. As we hypothesized, the negative association between parental behavioral control over career goals (i.e., higher-order goals) and students' motivation was substantially larger than the association involving weekly academic goals (i.e., lower-order goals). Similarly, Korean middle school students whose parents tended to control their children's choice over career (i.e., higher-order goal) displayed lower intrinsic motivation and confidence in school tasks than students with parents who respected their career choice.

The relationship between parental behavioral control over lower-order goals and students' motivation differed between the two studies. U.S. college students in Study 1 reported lower intrinsic motivation and competence beliefs when parents controlled their lower-order goals, whereas South Korean middle school students in Study 2 reported higher intrinsic motivation and competence beliefs for schoolwork. This difference may reflect cultural and developmental variations, as younger students in interdependent cultures might view such parenting as supportive rather than controlling (Iyengar & Lepper, 1999; Mata et al., 2018). Additionally, the studies differed in key methodological aspects: parental control was reported by students in Study 1 and by parents in Study 2, which may influence how control is perceived or enacted. Moreover, motivation in Study 2 was measured more comprehensively, encompassing general academic motivation, while Study 1 focused more narrowly on motivation for specific goals. These variations may have contributed to the differing results. While the consistent findings for higher-order goals across both studies are a strength, the reasons for these discrepancies remain unclear. Future research is needed to disentangle these factors and explore ways to mitigate the potential negative effects of parental behavioral control.

Importantly, we do not interpret our findings as broadly generalizable across all populations or cultures. Rather than claiming broad generalizability, we view the diversity of samples, designs, and informants as a methodological strength that allows for an initial test of the robustness of the hypothesized pattern across developmentally and culturally distinct contexts. Similarly, we do not interpret any differences in findings across the studies as evidence of specific cultural, developmental, or methodological effects, as these factors are confounded and cannot be disentangled. The convergence of findings across distinct contexts, while not definitive, suggests that there may be greater harm in thwarting students' autonomy for their higher-order goals, such as deciding on a future career. Observing similar patterns across two studies' contexts bolster confidence in the robustness of the findings, while observed differences, though not attributable to any single factor, can inform future investigations.

Taken together, these results suggest the importance of supporting students' autonomy for their higher-order goal setting and pursuits. Some parents may intervene in their children's goal pursuit with the very best intentions, thinking that students may not be as able as their parents to decide on goals or tasks that fit with their interest and ability. Indeed, there is some research to suggest this. For instance, a study showed that college students with the autonomy to choose deadlines for course assignments received lower grades than students with a professor who controlled the deadlines (Ariely & Wertenbroch, 2002). The authors argued that the poor performance was because students set ineffective goals compared to their professor. While some parents may think that intervening in their children's decision-making such as deciding a college major will serve their children well, our findings suggest that this strategy may backfire and lead their children to have low interest and confidence, if the tasks are higher-order ones.

Limitations

First, the current research findings are limited by the correlational design of the investigation. Although we included two important demographic variables known to covary with parenting and motivation as covariates (i.e., gender and family income), correlational research cannot rule out all potential confounding variables. Future studies using longitudinal random-intercept cross-panel designs, which better capture the direction of effects, would be particularly useful.

Second, while both studies examined the relationship between parental behavioral control and student motivation, they differed in several important ways beyond their between- and within-subjects designs. Specifically, the studies used different measures of parental behavioral control, relied on different informants (student vs. parent report), and sampled participants from distinct developmental stages (college vs. middle school) and cultural contexts (individualistic vs. collectivistic). In Study 1, students reported on the control exercised by "both parents," though mothers and fathers may differ in their approaches to controlling their children, whereas in Study 2, parental control was reported by parents and reflected their own behaviors. These variations introduce ambiguity and make it difficult to isolate whether the observed differences, particularly in the findings related to lower-order goals, are

due to developmental, cultural, or measurement-related factors. At the same time, these differences offer the advantage of testing the robustness of the observed patterns across diverse contexts. Examining the same theoretical question through varied lenses allows for a broader understanding of how parental behavioral control may operate across cultures and age groups, even if exact comparisons are not possible. Future research should build on this work to clarify how developmental stage, cultural norms, and informant perspectives interact to shape the effects of parental behavioral control on student motivation.

Third, we acknowledge that the Study 2 data were collected in 2005. While specific parenting practices may have evolved over time, parental behavioral control remains a prevalent aspect of family life, even if its forms vary across generations. We believe the dataset remains relevant, particularly given its nationally representative sampling and parent-reported measures of parenting behaviors that continue to be practiced today (e.g., homework control). Nonetheless, the generalizability of the findings to current parenting practices should be interpreted with caution, and future research using more recent data will be important for establishing the robustness of these conclusions.

Finally, in Study 2, we excluded approximately 6% of participants who regarded others' opinions as more important than their parents. While this decision was aligned with our specific focus on parental behavioral control, we acknowledge that this exclusion may have narrowed the scope of our findings, potentially overlooking the broader impact of other significant social influences on student motivation. Future research could address this by examining the combined influence of parents and other social figures, allowing for a more comprehensive understanding of motivational dynamics.

Implications

Despite this limitation, the present research makes an important contribution to theory and parenting practice. First, we believe the findings of the current research have theoretical implications by identifying an additional factor that may help explain the heterogeneity in parental control research. As we reviewed earlier, extant literature on parental behavioral control has shown inconsistent results, reporting positive as well as negative relations between parental behavioral control and youth's motivational outcomes (e.g., Guay et al., 2003; Bregman & Killen, 1999; Stice et al., 1993; Lease & Dahlbeck, 2009). Although several researchers have provided excellent conceptual frameworks to clarify the contrary findings of earlier research (e.g., Grolnick & Pomerantz, 2009; Hasebe et al., 2004; Soenens & Vansteenkiste, 2010), we believe there are still empirical findings left that need further explanation. Our results suggest that some studies reporting weak negative or positive relations between parental behavioral control and students' outcomes may have focused on lower-order goals while those reporting moderate to strong negative relations may have targeted higher-order goals. We propose that the variation in the hierarchical position of goals and tasks may provide a plausible explanation for the inconsistencies observed in previous studies.

The findings of this research provide practical implications for parents, emphasizing the importance of minimizing control over students' decision-making, especially for their higher-order goals. Parents may often feel tempted to control their children with the good intention of helping them, even more so when they see their children make unnecessary mistakes or poor choices. Although some parental behavioral control may be necessary and may not harm their children's motivation, we found that students lose interest and confidence in their goal pursuits and school tasks when they perceive their parents as infringing on their autonomy over a higher-order goal. We suggest that parents may consider helping their children's pursue higher-order goals using strategies that do not involve pressure, demands, or control. For instance, expressing interest in and support for students' career goals or their school activities is positively associated with their motivation (Hill et al., 2004; Molina, 2025; Shin et al., 2015).

Our findings also hold important implications for practitioners and policymakers working with families and students. Practitioners in educational and counselling settings, such as school counselors, should be aware of the potential differential impacts of parental control on students' motivation, especially when advising parents on effective ways to support their children's aspirations. Practitioners may consider encouraging parents to support their children's higher-order goals by promoting autonomy rather than using controlling approaches, as excessive control can reduce motivation. For example, school counselors can guide parents to engage in supportive discussions around academic and career choices rather than imposing their own desires. Policymakers could also consider developing resources and parent education programs aimed at fostering autonomy-supportive parenting practices. By establishing or enhancing such programs, policymakers can raise awareness of autonomy-supportive practices, equipping parents to foster their children's independence while maintaining motivation for academic and career goals.

Conclusion

Many parents wrestle with the dilemma of whether to respect their children's autonomy or steer them toward outcomes they believe are best. Despite decades of research, it remains unclear why parental behavioral control has

inconsistent links with student motivation. This study addressed that gap by testing whether the hierarchical level of the goal being controlled matters: specifically, whether parental behavioral control is more detrimental when directed at students' higher-order goals (e.g., career pursuit) versus lower-order goals (e.g., daily academic tasks). Across two studies using different designs, measures, informants, and cultural groups, we found consistent evidence that parental behavioral control is more strongly negatively associated with youths' intrinsic motivation and competence beliefs when it targets higher-order goals. While findings for lower-order goals were mixed, the convergence across both samples for higher-order goals suggests a meaningful pattern. These results offer a novel contribution to the literature by helping to explain why past findings on parental behavioral control have been inconsistent and highlight the significance of autonomy over long-term, identity-relevant goals during adolescence and early adulthood. The findings have important implications for how parents, educators, and policymakers support youth motivation, not by pressuring or dictating their long-term paths, but by affirming their autonomy and competence in making personally meaningful decisions.

Compliance with ethical standards

Conflict of Interest The authors declare no competing interest. The research involves human participants. For Study 1, the institutional review board (IRB) approved the study through the expedited review process (approval number: 2013-02-0063). Informed consent was obtained from all participants. Study 2 is a secondary data analysis involving publicly available data. The Korean Educational Development Institute obtained IRB approval for their original study and collected informed consent from parents and assent from children who participated.

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