

## Parental Control and Autonomy Support during Childhood as Predictors of Students' Academic Motivation and Success

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### ABSTRACT

**Background.** Based on self-determination theory, the present study examines autonomy-supportive and controlling parenting as the two most important parenting styles. The autonomy-supportive style includes offering choices within certain limits, explaining the reasons behind demands and limits, and accepting and recognizing the child's feelings, while the controlling style is operationalized as threatening to punish the child, inducing guilt, and encouraging performance goals.

**Objective.** We sought here to analyze the relationships between autonomy support and parental control during childhood and indicators of academic functioning, namely, intrinsic and extrinsic academic motivation, amotivation, and students' academic achievement, controlling for gender, academic year, and family's financial status.

**Design.** This is a cross-sectional study. The participants were Russian University students,  $N=467$ , mean age = 21.08 ( $SD = 4.08$ ), 83% females and 17% males. The measures used included the Perceived Parental Autonomy Support Scale (P-PASS, Mageau et al., 2015), the Academic Motivation Scale (Gordeeva, Sychev, Osin, 2014), and their GPA at University.

**Results.** Structural equation modeling shows that parental autonomy support during childhood is positively associated with students' academic achievement, and this relationship is mediated by intrinsic academic motivation. On the other hand, it has been demonstrated that the controlling parenting style is a predictor of extrinsic motivation and amotivation, which in turn is negatively associated with all three types of intrinsic motivation. Parents with higher financial status are more prone to the autonomy-supportive style than poorer parents.

**Conclusions.** This study's results indicate the important role of parental practices that characterize psychologically mature parent-child relationships in students' motivation and academic achievement. The importance of supporting the child's autonomy and

the negative contribution of parental control in childhood are shown at much later stages of socialization, in emerging adulthood.

**Keywords:** Parenting style; autonomy support; parental control; academic motivation; academic performance; self-determination theory; university students

**Highlights:**

- Parental autonomy support during childhood is positively associated with Russian university students' intrinsic motivation and academic achievements;
- A controlling parenting style during childhood predicts university students' external motivation and amotivation;
- Autonomy-supportive and controlling styles of parenting during childhood may have long-lasting results;
- SDT-based studies show that parents with higher financial status are more prone to autonomy-supportive styles than poorer parents.

**АННОТАЦИЯ**

**Актуальность.** В исследовании, проведенном с позиций теории самодетерминации рассматривается роль поддержки автономии и контроля родителей как двух наиболее важных факторов родительского воспитания. Автономный стиль включает возможность выбора, объяснение причин требований, принятие чувств и признание мнения ребенка, а контролирующий стиль операционализируется как склонность использовать угрозы ребенку наказанием, индуцировать чувство вины и поощрять ориентацию на результаты, высокие достижения и превосходство.

**Цель исследования:** проанализировать связи поддержки автономии и контроля родителей в детстве с показателями академического функционирования, а именно внутренней и внешней учебной мотивацией, амотивацией и академическими достижениями студентов при контроле факторов пола, курса и материального достатка семьи.

**Методы.** Использовался кросс-секционный дизайн исследования. Выборку составили студенты российских университетов, N=467, средний возраст - 21,08 года (SD = 4,08), 83% женщин и 17% мужчин. Использованные показатели включали шкалу поддержки родительской автономии (P-PASS, Mageau et al., 2015), шкалу академической мотивации (Гордеева, Сычев, Осин, 2014) и средний балл студентов в университете.

**Результаты.** При использовании метода структурного моделирования было показано, что поддержка автономии родителями в детстве положительно связана с академическими достижениями учащихся, и эта взаимосвязь опосредована внутренней учебной мотивацией. С другой стороны, было продемонстрировано, что контролирующий стиль воспитания является предиктором внешней мотивации и амотивации, которые, в свою очередь, негативно связаны со всеми тремя типами внутренней мотивации. Родители с более высоким финансовым статусом более склонны к стилю поддержки автономии, чем родители с более низким финансовым статусом.

**Выводы.** Результаты исследования свидетельствуют о важной роли родительских практик, характеризующих психологически зрелые отношения между родителями и детьми, в мотивации учащихся и их академических достижениях. Важность поддержки автономии ребенка и негативный вклад родительского контроля в детстве проявляются на гораздо более поздних этапах социализации, во взрослой жизни.

**Ключевые слова:** Родительский стиль; поддержка автономии; родительский контроль; учебная мотивация; академические достижения; теория самодетерминации; студенты

**Ключевые положения:**

- Поддержка автономии родителями в детстве положительно связана с внутренней мотивацией и академическими достижениями российских студентов университетов
- Контролирующий стиль воспитания в детстве предсказывает внешнюю мотивацию и амотивацию студентов университетов
- Поддерживающий автономию и контролирующий стиль воспитания в детстве могут иметь долгосрочные последствия
- Исследования, основанные на СДТ-теории, показывают, что родители с более высоким финансовым статусом более склонны к стилю поддержки самостоятельности, чем родители с более низким финансовым статусом

**RESUMEN**

**Relevancia.** Basado en la teoría de la autodeterminación, el presente estudio examina el estilo de crianza que apoya la autonomía y el estilo de crianza controlador como dos de los estilos de crianza más importantes. El estilo que apoya la autonomía incluye la posibilidad de tomar decisiones, explicar las razones de ciertas exigencias, reconocer los sentimientos, mientras que el estilo controlador se define como la tendencia a amenazar al niño con castigos, inducir sentimientos de culpa y fomentar el enfoque en los resultados, el alto rendimiento y la superioridad.

**Objetivo.** Analizar las relaciones entre el apoyo a la autonomía y el control parental durante la infancia y los indicadores del funcionamiento académico, a saber, la motivación académica intrínseca y extrínseca, la desmotivación y los logros académicos de los estudiantes, controlando el género, el año académico y la situación financiera de la familia.

**Diseño.** Se trata de un estudio transversal. Los participantes fueron estudiantes universitarios rusos, N=467, con una edad media de 21.08 (DE = 4.08), 83% mujeres y 17% hombres. Las medidas utilizadas incluyeron la Escala de Apoyo Parental a la Autonomía Percibida (P-PASS, Mageau et al., 2015), la Escala de Motivación Académica (Gordeeva, Sychev, Osin, 2014) y el promedio de calificaciones en la universidad.

**Resultados.** El modelo de ecuaciones estructurales muestra que el apoyo parental a la autonomía durante la infancia se asocia positivamente con el rendimiento académico de los estudiantes, y esta relación está mediada por la motivación académica intrínseca. Por otro lado, se ha demostrado que el estilo de crianza controlador es un predictor de la motivación externa y la desmotivación, que a su vez se asocia negativamente con los tres tipos de motivación intrínseca. Los padres con mayor estatus económico son más propensos a adoptar un estilo que apoya la autonomía que los padres más pobres.

**Conclusiones.** Los resultados del estudio indican el importante papel de las prácticas parentales que caracterizan las relaciones psicológicamente maduras entre padres e hijos para la (des)motivación y el rendimiento académico de los estudiantes. En particular, se muestra la gran importancia de apoyar la autonomía del niño y la contribución negativa del control parental en etapas mucho más tardías de la socialización, en la adultez emergente.

**Palabras clave:** Estilo de crianza; apoyo a la autonomía; control parental; motivación académica; rendimiento académico; teoría de la autodeterminación; estudiantes universitarios

**Disposiciones clave:**

- El apoyo parental a la autonomía durante la infancia se asocia positivamente con la motivación intrínseca y el rendimiento académico de los estudiantes universitarios rusos.

- El estilo de crianza controlador durante la infancia predice la motivación externa y la desmotivación.
- Los estilos de crianza que apoyan la autonomía y los estilos de crianza controladores durante la infancia pueden tener resultados duraderos.
- Un estudio basado en la TAD muestra que los padres con mejor situación financiera son más propensos a un estilo que apoya la autonomía que los padres más pobres.

## RESUME

**Origines.** Fondée sur la théorie de l'autodétermination, la présente étude examine la parentalité favorisant l'autonomie et la parentalité contrôlante comme les deux styles parentaux les plus importants. Le style de soutien à l'autonomie inclut la possibilité de faire des choix, d'expliquer les raisons de certaines demandes et de reconnaître les sentiments, tandis que le style de contrôle est opérationnalisé comme la tendance à menacer l'enfant de punition, à induire un sentiment de culpabilité et à encourager la concentration sur les résultats, la réussite et la supériorité.

**Objectif.** Le but de ce travail est d'analyser la relation entre le soutien à l'autonomie et le contrôle parental dans l'enfance et les indicateurs du fonctionnement scolaire, à savoir la motivation scolaire intrinsèque et extrinsèque, l'automotivation et la performance scolaire des élèves, en tenant compte du sexe, de l'année scolaire et de la situation financière familiale.

**Méthodes.** Il s'agit d'une étude transversale. Les participants étaient des étudiants d'une université russe, N=467, âge moyen=21,08 (SD=4,08), 83% de femmes, 17% d'hommes. Les mesures utilisées comprenaient l'échelle de soutien à l'autonomie parentale perçue (P-PASS, Mageau G.A. et al., 2015), l'échelle de motivation académique (Gordeeva, Sychev, Osin, 2014) et la moyenne générale à l'université.

**Résultats.** La modélisation par équation structurelle montre que le soutien parental à l'autonomie pendant l'enfance est positivement associé à la réussite scolaire des élèves, et cette relation est médiatisée par la motivation scolaire intrinsèque. D'autre part, il a été démontré que le style parental contrôlant est un prédicteur de la motivation externe et de l'automotivation, qui à son tour est négativement associée aux trois types de motivation intrinsèque. Les parents ayant un statut financier plus élevé sont plus enclins à adopter un style de soutien à l'autonomie que les parents plus pauvres.

**Conclusions.** Les résultats de l'étude indiquent le rôle important des pratiques parentales qui caractérisent les relations parents-enfants psychologiquement matures pour la (dé)motivation et la réussite scolaire des élèves. En particulier, la grande importance du soutien à l'autonomie de l'enfant et la contribution négative du contrôle parental sont démontrées à des stades beaucoup plus tardifs de socialisation, à l'émergence de l'âge adulte.

**Mots-clés:** Style parental; soutien à l'autonomie; contrôle parental; motivation scolaire; performance scolaire; théorie de l'autodétermination; étudiants universitaires

### Points principaux:

- Le soutien parental à l'autonomie pendant l'enfance est positivement associé à la motivation intrinsèque et à la réussite scolaire des étudiants des universités russes
- Le style parental contrôlant pendant l'enfance prédit la motivation et l'automotivation externes
- Les styles parentaux de soutien et de contrôle de l'autonomie pendant l'enfance peuvent avoir des résultats durables
- Une étude basée sur la TAD (ou SDT en anglais) montre que les parents ayant un statut financier plus élevé sont plus enclins à adopter un style de soutien à l'autonomie que les parents plus pauvres

## **Introduction**

Parent–child relationships are a central component of the social context of a child’s development (L. Vygotsky). Since the very first academic works on parenting, including those assessing the authoritarian parenting style, parental control has been viewed as a key characteristic of parenting style; more than a thousand articles have been written on this topic (Grolnick, Pomerantz, 2009). At the same time, more than a dozen definitions of parental control have been proposed, the analysis of which allows us to conclude that there is often a mixture of two different approaches — the understanding of control as pressure and as providing the child with behavioral rules — in terms of guidance (structure), which is one of the most important parental missions. As a result, research on parental control has given, and continues to generate, conflicting outcomes, from which a conclusion can be drawn about the child’s “need for control,” which refers to the child’s need to know certain rules and restrictions.

According to self-determination theory (SDT, Ryan, Deci, 2017), the most developed and well-known modern theory of motivation, parenting styles are assessed primarily in terms of the satisfaction of basic psychological needs. Under this theory, it is not the focus of control that is important (for example, thoughts or behavior), but the extent to which parental practices are based on dominance, unreasonable demands, authority and the imposition of one’s opinions, which frustrate the need for autonomy. The controlling parenting style includes both psychological control and behavioral control; that is, parents who practice it tend to force teenagers to think, feel or act in a certain way, regardless of their own needs and feelings. Controlling parents force children to do things they would not do on their own (Deci and Ryan, 1987), valuing primarily obedience and submission. They use various incentives for control, as well as manipulate rewards, impose their own plans on the child or limit choices, and tend to use controlling language (“you must,” “you have to”) (Grolnick and Pomerantz, 2009). They also tend to threaten with punishment, use criticism, and manipulate feelings of shame and a “lack of merits.”

SDT views control and autonomy support as the two most significant factors in parenting. The autonomy-supportive parenting style has been actively studied within self-determination theory (Grolnick, Ryan, 1989; Soenens, Deci, Vansteenkiste, 2017; Soenens et al., 2007). In particular, autonomy support includes providing choices, perspective-taking, listening, and giving reasons for certain behaviors (Deci & Ryan, 1987). Also, autonomy-supportive parents strive to provide children with choices and independent decision-making by encouraging their initiatives (Soenens et al., 2007). Of course, this is not always possible, and sometimes it is necessary to limit children’s behavior, but in such cases, parents who support a child’s autonomy provide a clear rationale for the restrictions, which helps them to accept and internalize the personal importance of rules (Ryan, Deci, 2017).

Parental autonomy support is also associated with an open attitude towards children and a willingness to acknowledge and accept the child’s different feelings and opinions, including negative emotions and protest behavior. Rather than ignoring children’s negative emotions or misbehaviors, autonomy-supportive parents show attention towards and interest in such feelings and reactions in order to better under-

stand the child's perspectives and the reasons for their actions (Pomerantz, Moorman, Litwack, 2007).

An important difference between autonomy-supportive and controlling parents is their attitude towards the child's activities, the ways they endorse them, and the nature of the feedback they give. Parents who support autonomy emphasize an activity's intrinsic value as well as the pleasure it brings, while controlling parents expect high results and monitor the child, demanding that their children achieve their goals. Autonomy-supportive parents also build on children's interests or add fun elements so that children enjoy the activities they perform (Soenens, Deci, Vansteenkiste, 2017).

The significance of parental autonomy support to the intrinsic and autonomous academic motivation of schoolchildren is evidenced by a number of studies, including those performed on Russian samples (Chirkov, Ryan, 2001). This association is explained by the support for children's own volitional regulation and their basic psychological needs (autonomy, competence, relatedness) given by parents with an autonomy-supportive parenting style. A recent meta-analysis of the role of autonomy support provided by parents and teachers as a predictor of academic motivation (144 studies, more than 79,000 students, mean age 16.55) confirmed that parental autonomy support is less widely studied, but at the same time it is a significant and important factor of motivation, although somewhat inferior in importance to autonomy support provided by the teacher. Parental autonomy support was here found to be directly related to intrinsic and identified motivation and inversely related to amotivation, and these associations were mediated by the satisfaction of students' basic psychological needs for autonomy, competence, and relatedness (Bureau et al., 2022).

Data from studies on samples of schoolchildren from different countries show that parental autonomy support is positively associated with the academic performance of students (Diaconu-Gherasim, Măirean, 2016; Grolnick, Ryan, 1989; Grolnick, Ryan, Deci, 1991; Vasquez et al., 2016; Wang, Pomerantz, Chen, 2007; 2018), including university students (Strage & Brandt, 1999). Typically, academic performance is assessed through GPA, course grade, standardized test scores, and teacher assessments of students' competence. In a meta-analysis dedicated to the actual effects of parental autonomy support, it has been demonstrated that this support is associated with both higher academic achievement and with the indicators of adaptive functioning, including autonomous motivation, perceived competence, engagement, persistence, perceived control, positive attitude towards school, and psychological well-being and self-esteem (Vasquez et al., 2016). The contribution of parental autonomy support to academic achievement was shown in 25 studies across all age groups, ranging from elementary to middle (largest contribution) and high school, up to university students. Given the importance of students' academic achievements to their future professional careers, a crucial question is whether the perception of parenting style held in childhood loses its importance in relation to motivation and academic achievement for students at the age of emerging adulthood.

Taking into account previously produced cross-cultural data, including those collected using Russian samples (Chen et al., 2016; Chirkov, Ryan, 2001), as well as the relatively low level of Russian parents' involvement in the lives of adolescents com-

pared to other European countries (PISA, 2018, Gordeeva, Sychev, 2023) and the specifics of Russian educational environments (Gordeeva, Sukhanovskaya, Sychev, 2021), it can be assumed that in Russia, parental autonomy support will have more pronounced effects on students' motivation and performance. Previous data derived using a sample of Russian high school students indicate the primary association of parental autonomy support with identified motivation, but not with the intrinsic motivation (Chirkov, Ryan, 2001). Our goal is to test these results on a sample of Russian university students.

Research on parental control has so far focused on its association with 1) the adaptive and maladaptive functioning of adolescents, with extrinsic and intrinsic problems (Vansteenkiste et al., 2005; Wang, Pomerantz, Chen, 2007; Won, Yu, 2018), and with 2) its sources, namely, the personal and motivational characteristics of the parents who practice it, as well as their stress level (Costa et al., 2020). For example, it has been shown that the high frustration and low satisfaction of basic psychological needs, the separation anxiety of parents, and perfectionism are reliable predictors of parental control (Soenens et al., 2005, Soenens, Vansteenkiste, Duriez, Goossens, 2006).

Within the SDT framework, there is significantly less research on parental control and its effects on the motivation and academic achievements of children and adolescents (see Vansteenkiste et al., 2005) than there is research on autonomy support, which is largely due to the fact that only recently has this construct been clearly operationalized (Mageau et al., 2015). A study based on SDT conducted on a sample of university students showed that the predominance of an autonomy-supportive parental style over a controlling one was associated with less controlled academic motivation (but not significantly with autonomous motivation) and was also associated with such indicators of effective academic functioning as time management, concentration on the subject matter, and less anxiety about results and grades (Vansteenkiste et al., 2005).

However, previous results regarding the role of a controlling parenting style are contradictory. For example, a longitudinal study (Wang, Pomerantz, Chen, 2007) showed that behavioral control was a predictor of adolescents' academic success, including grades, in both the United States and China. However, the understanding of control in this study does not fully coincide with the definitions of a controlling parental style outlined in SDT. Specifically, 7th graders were asked about how often their parents ask what they are going to do in their free time, and how often parents require their child to ask their permission before going out after school. In fact, this may be perceived by the child not as control, but as a manifestation of care.

It is important to mention that SDT recognizes both the universal aspects and possible specific influences of parenting styles across cultures. In particular, the effects of a controlling parenting style and its components on the adaptive functioning of adolescents from different cultures are actively discussed (Chen et al., 2016; Soenens, Vansteenkiste, Van Petegem, 2015; Wang, Pomerantz, Chen, 2007).

*Hypothesis.* Taking into consideration the results of our previous studies on samples of Russian university students (Gordeeva, Nechaeva, Sychev, 2024), the main hypothesis of the present study is the assumption of connections between autonomy

support and parental control in childhood and students' academic achievement, mediated by academic motivation. In particular, it is expected that 1) a significant contribution is made by parental autonomy support to students' intrinsic motivation and academic achievements, and 2) a controlling parental style contributes to external motivation and amotivation.

Also, unlike our previous study (Gordeeva, Nechaeva, Sychev, 2024), in this research, conducted on a larger sample of students, we controlled for the contribution of family financial status to parenting style, and of gender to academic achievement. This was achieved by taking into account previous research showing that male students perform worse academically (see meta-analysis by Voyer, Voyer, 2014), while high financial status contributes to the use of more optimal parenting styles (Kim, Chung, 2021).

## Methods

### *Participants*

The sample consisted of university students (N=467) from several regional Russian Universities, aged from 17 to 44 years old (M = 21.08, SD = 4.08); among these, 90% were 17-25 years old, 83% were females and 17% were males. Data collection was carried out online and the study was anonymous. All relevant permissions were obtained for the study in accordance with the requirements for conducting psychological research developed by the Russian Psychological Society.

### *Procedure*

To assess parenting styles, the Perceived Parental Autonomy Support Scale questionnaire (P-PASS) was used (Mageau et al., 2015, Gordeeva, Nechaeva, Sychev, 2024). The technique begins with the general phrase "When I was growing up..." and includes two blocks of three scales each. The autonomy support style includes the following three subscales, as follows: offering choices within certain limits (short name: "Choice"); explaining the reasons behind the demands, rules and limits ("Reasons"); being aware of, accepting, and recognizing the child's feelings ("Acceptance"). The controlling style includes the following three subscales: threatening to punish the child ("Punishment"); inducing guilt ("Guilt"); encouraging performance goals ("Performance"). Each subscale consists of four direct statements, for example, "My parents gave me many opportunities to make my own decisions about what I was doing". Agreement with each statement is rated on a Likert scale from 1 ("Do not agree at all") to 7 ("Very strongly agree"). For both of the main scales in this study, the overall scores were calculated as the averages of the scores for the statements included within them. The Cronbach's  $\alpha$  coefficients for this and the other scales used are shown in *Table 1*.

To assess academic motivation, we used the Academic Motivation Scale questionnaire (Vallerand et al., 1994, Gordeeva et al., 2014), including three scales of intrinsic motivation (i.e., cognitive, achievement and self-development), three scales of extrinsic motivation (i.e., identified/self-respect, introjected, external motivation), as well as the amotivation scale.



The students' success was evaluated via the average score for the last session, reported by the respondent himself/herself. For the assessment of general GPA at the university, a scale was given ranging from 3.00 to 5.00, with interval of 0.25 points (that is, 3.00, 3.25, 3.50, etc.).

The self-assessment of the family's financial status (using a 5-point Likert scale) was taken into account as a controlled variable.

A data analysis was carried out using descriptive statistics, a correlation analysis, and Welch's t-test in the statistical programming environment R. Structural equation modeling was carried out in Mplus 8 with the robust maximum likelihood estimator (MLR). A bootstrap analysis in Mplus (5000 resamples) was used to estimate the mediated effects.

## **Results**

The correlation analysis results (see *Table 1*) demonstrate that the subscales and main scales of the Perceived Parental Autonomy Support questionnaire show the expected correlations with each other; within the main subscales, the correlations are positive and significant, and between the subscales, the correlations are negative. Accordingly, the correlation between the overall scores for the autonomy support and control scales was expectedly negative and high in magnitude. The intrinsic academic motivation subscales demonstrated negative correlations with the external regulation and amotivation subscales, with no or weak positive correlations with introjected regulation. At the same time, self-respect motivation (as a variant of identified regulation), located in the center of the autonomy continuum, showed positive correlations with all subscales, with the exception of external regulation (the correlation is insignificant) and amotivation, the correlation with which is expectedly negative.

The parental autonomy support and control scales, together with their total scores, demonstrated statistically significant correlations with academic motivation scores located closer to the ends of the motivational continuum. The autonomy support subscales had positive correlations with indicators of intrinsic motivation and self-respect motivation, with a negative correlation with external regulation and amotivation. Parental control, on the contrary, demonstrated a negative correlation with intrinsic motivation and a positive correlation with introjected regulation, external regulation and amotivation. At the same time, perceived parental control in childhood is negatively related to academic performance.

The correlations with financial status, academic year and gender indicated the presence of few significant results. In particular, financial status was positively related to parental autonomy support. Academic year was negatively associated with one of the indicators of autonomy support (i.e., Acceptance of feelings) and positively related to academic performance (GPA). Gender correlated only with academic performance, indicating greater academic success among women, as expected.

To examine the likely effects of parental autonomy support on motivation and academic performance, we next tested a structural model in which academic performance was considered depending on indicators of academic motivation, parental autonomy support, and parental control. The model assumed that the three motiva-

Table 1  
Descriptive statistics and correlations of all variables ( $N = 467$ )

| Tests and indicators   | 1      | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     | 12     | 13    | 14     | 15     | 16     | 17    | 18    | 19  |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|-------|-------|-----|
| <i>Perceived Parental Autonomy Support (AS) and Perceived Control (PC) Scale</i> |        |        |        |        |        |        |        |        |        |        |        |        |       |        |        |        |       |       |     |
| 1. Choice Within Certain Limits (AS)   | —      |        |        |        |        |        |        |        |        |        |        |        |       |        |        |        |       |       |     |
| 2. Rationale for Demands and Limits (AS)   | 0.75*  | —      |        |        |        |        |        |        |        |        |        |        |       |        |        |        |       |       |     |
| 3. Acknowledgement of Feelings (AS)  | 0.81*  | 0.74*  | —      |        |        |        |        |        |        |        |        |        |       |        |        |        |       |       |     |
| 4. Threats to Punish (PC)  | -0.54* | -0.44* | -0.53* | —      |        |        |        |        |        |        |        |        |       |        |        |        |       |       |     |
| 5. Guilt-Inducing Criticisms (PC)  | -0.58* | -0.44* | -0.57* | 0.84*  | —      |        |        |        |        |        |        |        |       |        |        |        |       |       |     |
| 6. Performance Pressures (PC)  | -0.29* | -0.17* | -0.28* | 0.52*  | 0.52*  | —      |        |        |        |        |        |        |       |        |        |        |       |       |     |
| 7. Autonomy Support  | 0.93*  | 0.90*  | 0.93*  | -0.55* | -0.57* | -0.27* | —      |        |        |        |        |        |       |        |        |        |       |       |     |
| 8. Parental Control  | -0.55* | -0.41* | -0.54* | 0.92*  | 0.92*  | 0.76*  | -0.54* | —      |        |        |        |        |       |        |        |        |       |       |     |
| <i>Academic Motivation Scales</i>  |        |        |        |        |        |        |        |        |        |        |        |        |       |        |        |        |       |       |     |
| 9. Intrinsic Motivation to Know  | 0.33*  | 0.31*  | 0.32*  | -0.19* | -0.23* | -0.05  | 0.35*  | -0.19* | —      |        |        |        |       |        |        |        |       |       |     |
| 10. Intrinsic Achievement Motivation   | 0.30*  | 0.34*  | 0.36*  | -0.22* | -0.19* | -0.04  | 0.36*  | -0.18* | 0.79*  | —      |        |        |       |        |        |        |       |       |     |
| 11. Intrinsic Motivation to Develop Oneself                                      | 0.32*  | 0.35*  | 0.34*  | -0.18* | -0.19* | -0.02  | 0.37*  | -0.16* | 0.82*  | 0.80*  | —      |        |       |        |        |        |       |       |     |
| 12. Extrinsic: Self-Respect Motivation   | 0.21*  | 0.23*  | 0.26*  | -0.11  | -0.10  | 0.08   | 0.26*  | -0.05  | 0.57*  | 0.56*  | 0.71*  | —      |       |        |        |        |       |       |     |
| 13. Extrinsic: Introjected Motivation  | 0.06   | 0.09   | 0.07   | 0.11   | 0.12   | 0.21*  | 0.08   | 0.16*  | 0.12   | 0.09   | 0.20*  | 0.50*  | —     |        |        |        |       |       |     |
| 14. Extrinsic: External Motivation   | -0.17* | -0.15  | -0.16* | 0.36*  | 0.36*  | 0.33*  | -0.17* | 0.40*  | -0.19* | -0.22* | -0.12  | 0.15   | 0.64* | —      |        |        |       |       |     |
| 15. Amotivation  | -0.18* | -0.18* | -0.16* | 0.32*  | 0.34*  | 0.26*  | -0.19* | 0.35*  | -0.46* | -0.35* | -0.40* | -0.20* | 0.25* | 0.56*  | —      |        |       |       |     |
| 16. Grade Point Average  | 0.18*  | 0.10   | 0.15   | -0.18* | -0.18* | -0.10  | 0.16   | -0.18* | 0.26*  | 0.24*  | 0.28*  | 0.21*  | 0.02  | -0.17* | -0.18* | —      |       |       |     |
| 17. Financial Status of the Family   | 0.18*  | 0.23*  | 0.19*  | -0.06  | -0.09  | -0.05  | 0.22*  | -0.08  | 0.14   | 0.12   | 0.10   | 0.09   | 0.05  | -0.04  | -0.08  | -0.04  | —     |       |     |
| 18. Academic Year  | -0.12  | -0.11  | -0.16* | 0.07   | 0.07   | 0.03   | -0.14  | 0.07   | -0.07  | -0.03  | -0.03  | -0.02  | 0.01  | -0.02  | 0.07   | 0.17*  | -0.12 | —     |     |
| 19. Gender (0 — F, 1 — M)  | 0.01   | 0.10   | 0.03   | 0.01   | 0.03   | 0.12   | 0.05   | 0.06   | 0.01   | 0.05   | -0.04  | -0.04  | 0.03  | 0.06   | 0.02   | -0.37* | 0.04  | -0.15 | —   |
| Cronbach's $\alpha$  | 0.84   | 0.84   | 0.88   | 0.91   | 0.89   | 0.76   | 0.94   | 0.92   | 0.88   | 0.90   | 0.88   | 0.86   | 0.75  | 0.76   | 0.88   | —      | —     | —     | —   |
| Means  | 5.24   | 4.96   | 4.81   | 3.05   | 2.91   | 3.83   | 5      | 3.26   | 3.86   | 3.56   | 3.82   | 3.68   | 3.33  | 2.9    | 2.19   | 4.35   | 3.22  | 2.06  | .17 |
| Standard Deviations  | 1.32   | 1.38   | 1.48   | 1.65   | 1.66   | 1.43   | 1.28   | 1.38   | 0.9    | 0.99   | 0.94   | 1.03   | .98   | 1.04   | 1.15   | 0.5    | .71   | 1.21  | .37 |

Note. Statistical significance: \* —  $p \leq 0.001$ . The numbers of the variables in the columns correspond to their numbers in the rows.

tional indicators—intrinsic motivation, external motivation, and amotivation—that characterize the most representative ends of the motivation continuum depend on the factors of parental autonomy support and control, combining the scales included within them. To simplify the model, types of motivation located closer to the continuum's center, which did not show pairwise correlations with perceived parental style, were not taken into account. The model also included controls for gender, year of study, and family financial status, with all their possible effects on parental style factors, indicators of motivation, and academic performance. In addition, the model allowed for the dependence of academic performance (GPA) on all indicators of motivation and parental style factors, and also assessed all possible relations between motivation and the two parental styles' factors.

Consistent with the research hypotheses, the effect of parental autonomy support and control on academic achievement was expected to be fully mediated by academic motivation. Specifically, parental autonomy support was expected to be related to intrinsic motivation and academic achievement, whereas parental control was expected to be associated with external motivation, amotivation, and low academic achievement. Testing this structural model showed its acceptable fit to the data:  $\chi^2 = 64.82$ ;  $df = 36$ ;  $p = 0.002$ ;  $CFI = 0.986$ ;  $TLI = 0.970$ ;  $SRMR = 0.027$ ;  $RMSEA = 0.041$  (90% CI = [0.025, 0.057]);  $PCLOSE = 0.799$ ;  $N = 467$ . Figure 1 demonstrates the statistically significant relationships in this model.

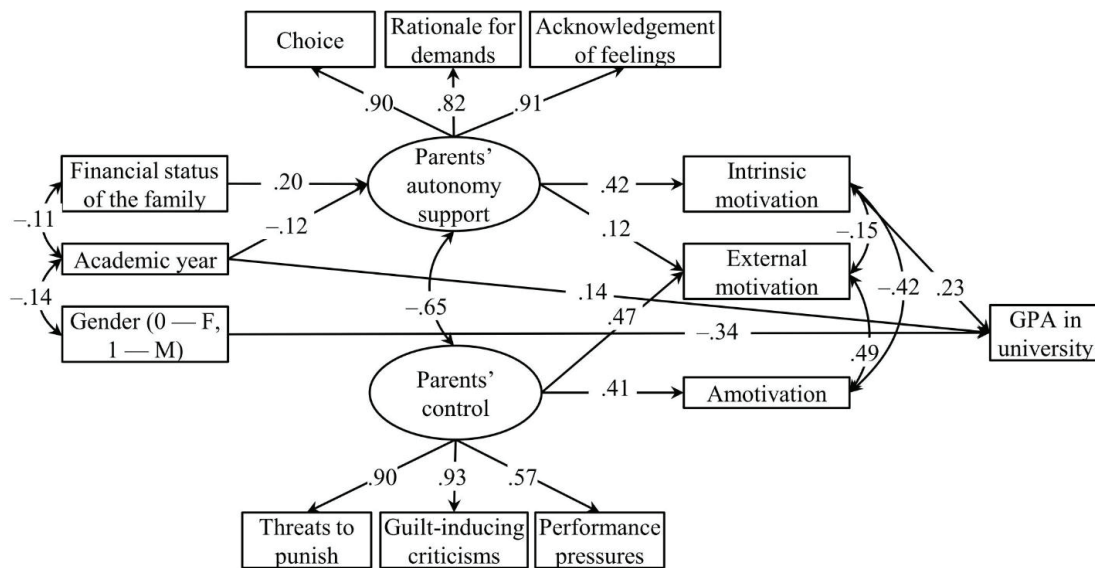


Figure 1. Structural equation model of the relationships between indicators of perceived parental autonomy support and control, academic motivation and academic performance (the residuals and insignificant coefficients within the relevant paths are omitted for the sake of parsimony; all coefficients shown in the model are significant at  $p < 0.05$ )

The model presented in Figure 1 shows that the most significant predictors of academic performance are intrinsic motivation, gender, and year of study. At the same time, parental autonomy support was positively related to intrinsic motivation, also showing a weak positive relation to external motivation; however, the latter also

depends on parental control. Parental control is also positively related to amotivation. Parental autonomy support is more pronounced in families with higher financial status, as indicated by the corresponding path coefficient. Moreover, senior university students rate parental autonomy support somewhat lower.

The analysis of the indirect effect of parental autonomy support on academic performance showed that it was statistically significant (0.10;  $p = 0.001$ ). The weak indirect effect of family financial status on academic performance is also statistically significant (0.02;  $p = 0.012$ ), while the indirect effect of the year of study is insignificant.

The lack of a direct impact of autonomy support on academic performance suggests that the relationship between them is entirely mediated by intrinsic motivation. At the same time, this model does not confirm the presence of direct or indirect relations between parental control and academic performance.

## **Discussion**

This study continues the line of research dedicated to assessing the parents' effects on the motivation and academic success of Russian students (Gordeeva et al., 2024). The study results reveal the important effects of perceived parental autonomy support and control on the academic motivation and success of university students. In particular, parental autonomy support, which included the possibility of making choices, explaining reasons for certain demands, and the acknowledgement of feelings in the structural model, showed an effect on student performance that was mediated through intrinsic motivation. At the pairwise correlations level, a direct association was found between parental autonomy support and all three types of intrinsic motivation and academic performance, and an inverse correlation was observed with external motivation and amotivation. The direct relationship found here between parental autonomy support and students' intrinsic motivation is consistent with the findings of a corresponding meta-analysis (Vasquez et al., 2016). Further, again consistent with the results of another meta-analysis (Howard et al., 2021) and past studies on Russian samples (Gordeeva et al., 2016, 2024), students' academic performance was here directly associated with their intrinsic motivation, and inversely related to external motivation and amotivation.

Our study also continues the line of SDT research regarding parental autonomy support and its role in student academic motivation and success (Chirkov & Ryan, 2001; Vasquez, Patall, Fong, Corrigan, Pine, 2016). The findings align well with research showing that autonomy-supportive parenting promotes the development of an "inner compass", an integrated set of personal values, preferences, and interests (Assor, 2017), leading to important positive outcomes, such as well-being and positive results in academic activity, on which foundation the success of professional ventures is laid.

The study's novelty and advantages are based on a new systemic conceptualization of the controlling parenting style (Mageau et al., 2015), which includes the tendencies to threaten a child with punishment, induce feelings of guilt and encourage performance goals, as well as their joint and separate impacts on the intrinsic motiva-

tion, different types of extrinsic motivation, and academic achievements of university students. It has been demonstrated that a controlling style is a reliable predictor of the least productive motivation types, such as external motivation and amotivation. However, the structural model did not confirm the connection between parental control and low academic performance, despite the presence of such a weak connection at the pairwise correlations level.

Our results are consistent with those of previous research and confirm the theory that autonomy support and controlling parenting practices are highly and inversely related to each other (Gordeeva, Nechaeva, Sychev, 2024, Soenens et al., 2007).

Our results are also in good agreement with the data collected on another sample of Russian university students from one of the best Russian universities (Gordeeva, Nechaeva, Sychev, 2024). This means that specialty, university type and residence region are insignificant factors when studying different types of parent–child relationships. Also, in the present study, we controlled for the factors of gender and family financial status, and their contributions to parenting style. As expected, and in accordance with the previous results, male gender made a negative independent contribution to academic success (Voyer, Voyer, 2014), while a high family financial status directly contributed to parents' use of autonomy-supportive parenting styles.

The data obtained also support the validity and reliability of the Russian-language version of the parenting style questionnaire (P-PASS, Mageau et al., 2015) that we have developed.

## **Conclusions**

Using a sample of Russian university students, it was demonstrated that parental autonomy support and parental control are important psychological variables that characterize parent–child relationships and make different contributions to students' academic motivation and performance.

It was confirmed that parental control increases external motivation and amotivation in university students, while parental autonomy support strengthens intrinsic academic motivation and, through it, has a positive effect on academic performance (GPA).

The results obtained suggest the important role of parental practices in characterizing psychologically mature and healthy parent–child relationships, in particular, the role autonomy support at much later socialization stages, such as the emerging adulthood stage, in students' academic success. This calls for the broad dissemination of practices and recommendations for parents, including awarding opportunities to make their own choices, offering explanations for demands, and accepting the child's feelings, based on SDT (Ryan, Deci, 2017).

## **Limitations**

The main limitation of this study is its correlational nature, which does not allow us to draw unambiguous causal conclusions about the effects of parent–child relation-

ships, in particular autonomy support and control in childhood, on the academic motivation and academic performance of university students. It can be assumed that motivated and successful students demonstrate partially distorted memories of their childhood, for example, somewhat idealizing it, while less successful ones, on the contrary, see it in more pessimistic terms. M. Csikszentmihalyi spoke about similar phenomena when analyzing the memories of famous artists regarding their childhood (Csikszentmihalyi, 1996). The limitations may also include the self-reporting nature of the academic performance indicator; however, previous data suggest a good agreement between objective and self-reported data in affecting students' performance (grades) (Vasquez et al., 2016).

Another limitation is associated with only taking into account indicators of parenting style reported by students, not their parents; on this, research shows that the former approach best predicts indicators of positive functioning in young people, and so is preferable (Costa, Gugliandolo, Barberis, Cuzzocrea, Liga, 2019). However, future research would be benefited by examining assessments of childhood parenting style given by both students and their parents.

### **Ethics Statement**

All research procedures followed the ethical standards of the Russian Psychological Society.

### **Conflict of Interest**

The authors declare no conflicts of interest.

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