

Research Paper

Resource or risk? The role of higher education parental involvement in students' future-aware work ethic

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Abstract

One of the key determinants of higher education students' academic progress is future-oriented work ethic, which can be reflected in persistence in pursuing long-term goals, goal-directed effort, and disciplined work practices. The aim of this study is to examine how different patterns of parental involvement in higher education are associated with students' future-aware work ethic and how these forms of involvement function as either resources or risk factors in its development. The analysis is based on a secondary examination of data from the 2023–2024 survey of the MTA–DE Public Education Development Research Program (N = 1,336), conducted among higher education students in Hungary and Hungarian minority regions of the Carpathian Basin. To identify patterns of parental involvement, cluster analysis was applied, followed by an examination of the relationship between the identified clusters and the studied attitude using analysis of variance and two-step linear regression models. The findings indicate that parental involvement does not exert a uniform effect on students' future-oriented work ethic. Students with highly involved parental backgrounds are characterized by significantly higher levels of future-oriented work ethic, and this association remains robust even after controlling for socio-demographic background variables. In contrast, ambivalent parental involvement shows a consistently negative relationship with the examined attitude. The effect of low parental involvement weakens when background factors are taken into account, suggesting a mediating role of social background. Overall, the results highlight that the quality and patterns of parental involvement play a decisive role in shaping this form of work ethic: supportive and consistent parental engagement can be interpreted as a resource, whereas ambivalent involvement constitutes a risk factor.

Keywords: higher education; parental involvement; work ethic; future awareness

Introduction

The issue of persistence in higher education and successful degree completion has become a central topic in educational research over the past decades. Alongside the massification of higher education systems, student populations within institutions have become increasingly heterogeneous, creating new challenges for interpreting academic progression and dropout (Pusztai, 2011; Pusztai et al., 2019; Kocsis & Pusztai, 2020;

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Pusztai & Szigeti, 2021; Pusztai et al., 2022). Student trajectories are becoming less and less describable as linear pathways: programme interruption, temporary withdrawal, changes of major, and prolonged time to degree are all phenomena that complicate traditional understandings of success in higher education (Hagedorn, 2012; Tóth et al., 2019; Pusztai & Szigeti, 2021; Csók & Pusztai, 2023).

Research on persistence and dropout has therefore moved beyond the mere factual description of leaving higher education and is now interpreted as a complex, multifactorial process in which individual characteristics, institutional experiences, and the social environment all play a role (Tinto, 1993; Heublein, 2014; Dinyáné & Pusztai, 2017; Bocsi et al., 2019; Váradi et al., 2019; Ceglédi et al., 2022; Kocsis et al., 2022). Studies have shown that students' academic trajectories are shaped not only by their current higher education experiences but also significantly influenced by prior socialization processes and family background (Pusztai, 2011; Bocsi et al., 2019; Pusztai et al., 2024; 2025). Within this framework, parental involvement as an intergenerational resource deserves particular attention (Csók & Pusztai, 2023; Dan, 2023; Major, 2023; Pusztai et al., 2024; 2025).

The role of parental involvement in higher education, however, appears in a contradictory manner in the literature. While some approaches interpret parental support as an important factor of student success, others draw attention to the potential negative consequences of excessive involvement, particularly in relation to student autonomy and independent decision-making (Cutrona et al., 1994; Garrett, 2015; Wartman & Savage, 2015; Whaley & Pfefferbaum, 2023; Kocsis et al., 2025; Pusztai et al., 2024; 2025). A distinctive feature of higher education is that students, due to their life stage, are already in the process of becoming independent, yet they may still rely to a considerable extent on family resources. This duality makes a differentiated examination of parental involvement particularly warranted (Cutrona et al., 1994; Kiyama et al., 2015; Lowe, 2015; Pusztai et al., 2024; 2025).

Recent research increasingly suggests that parental involvement is not a uniform phenomenon but manifests in different forms and intensities, which exert differential effects on students' academic trajectories (Perna & Titus, 2005; Wartman & Savage, 2015; Pusztai et al., 2024; 2025). Supportive parental engagement that fosters autonomy may contribute to persistence in studies and the maintenance of long-term goals, whereas ambivalent or overly controlling involvement can generate uncertainty in individual decision-making (Wartman & Savage, 2015; Bacskai et al., 2024; Kocsis et al., 2025). Accordingly, the examination of the effects of parental involvement cannot be separated from its qualitative characteristics (Pomerantz et al., 2007; Csók & Pusztai, 2023; Bacskai et al., 2024; Rusznák & Pusztai, 2024; Pusztai et al., 2024; 2025).

At the same time, empirical research examining the relationship between parental involvement and future-oriented work ethic remains limited, particularly within the Central and Eastern European higher education context (Pusztai, 2026). The aim of this study is to explore how different patterns of parental involvement are associated with higher education students' future-oriented work ethic, and how these patterns can be interpreted as either resources or risk factors in terms of academic progression. The study contributes to a more differentiated understanding of the role of parental involvement in higher education, as well as to a more precise identification of factors that support student success.

Theoretical Background

Student integration models constitute a key theoretical starting point for explaining academic progression in higher education. According to Tinto's classic framework, the likelihood of persistence increases with the strengthening of academic and social integration, whereas weak institutional attachment leads toward withdrawal (Tinto, 1975; 1993; Pusztai, 2011; Pusztai & Szigeti, 2021). Subsequent integrative approaches conceptualize dropout as a complex, cumulative risk process in which students' individual resources and environmental supports jointly shape academic trajectories (Heublein, 2014; Pusztai et al., 2024; 2025). Within this interpretive framework, the examination of parental involvement is also situated as an intergenerational resource in higher education progression. Family and parental relationships influence not only access to higher education but also persistence, academic advancement, and the maintenance of future-oriented goals, particularly in massified systems characterized by increasingly heterogeneous student populations (Perna & Titus, 2005; Wolf et al., 2009; Wartman & Savage, 2015; Pusztai et al., 2024; 2025). In this sense, student progression cannot be understood solely as the outcome of current institutional experiences but rather as a temporally extended sequence of future-oriented decisions, in which the interpretation of short-term academic demands and difficulties is closely linked to long-term goal formation and persistence in studies (Tinto, 1993; Hagedorn, 2012; Pusztai et al., 2024; 2025).

At the same time, when interpreting academic progression and dropout in higher education, it is important to emphasize that student trajectories cannot be described in dichotomous terms; rather, a range of intermediate states can be observed between successful degree completion and definitive withdrawal (Hagedorn, 2012; Tóth et al., 2019; Pusztai & Szigeti, 2021; Pusztai et al., 2022). Students' academic careers can thus be understood as dynamic processes, in which they continuously navigate decision-making situations, drawing on their everyday experiences and interactions when choosing between persistence and withdrawal. Accordingly, dropout should not be interpreted as the result of a single decision, but rather as a prolonged process marked by uncertainty (Tinto, 1993; Bocsi et al., 2019; Dinyáné Szabó et al., 2019; Kovács et al., 2019; Pusztai & Szigeti, 2021).

In interpreting this dynamic process, students' network-based resources and processes of institutional embeddedness play a central role. Research has shown that the structure of relationships, the strength of ties, and the multiplicity of connections are closely associated with academic achievement (Coleman, 1988; Granovetter, 1973; Pusztai, 2011; 2019; 2022). Relationships with faculty and peers serve not only as sources of information but also contribute to the internalization of academic norms and to the interpretation of institutional functioning (Tinto, 1993; Pascarella & Terenzini, 2005; Pusztai, 2011; Pusztai & Csók, 2020; Pusztai & Szigeti, 2021). At the same time, not all types of relationships equally support academic progression: strong, learning-oriented ties facilitate orientation and adaptation, whereas weaker, less goal-directed connections provide more limited support (Granovetter, 1973; Wilcox et al., 2005; Kuh et al., 2008; Pusztai, 2011; 2022).

The network-based perspective is closely linked to the role of family background. Parental education and resources are traditionally considered indicators of the cultural capital available to students; however, their effects are not always unequivocally positive (Perna & Titus, 2005; Pusztai, 2011). Highly educated parents often orient their children toward more ambitious educational pathways, which in some cases may lead to the selection of study programmes that are less well aligned with students' individual interests or abilities. This may increase academic uncertainty, slow down progression, and contribute to disillusionment with higher education (Lareau, 2011; Pusztai, 2011; Pusztai & Szigeti, 2021; Csók & Pusztai, 2023).

One of the most common causes of dropout is inadequately grounded career choice, as well as disillusionment experienced during the course of studies. Some students lose motivation due to discrepancies between expectations and experiences regarding programme content, the learning environment, or labour market prospects, which may lead to programme interruption or a change of major. In many cases, changing majors can be interpreted as a transitional state preceding dropout, further reinforcing the non-linear nature of academic trajectories (Csók et al., 2019; Kovács et al., 2019; Pusztai & Szigeti, 2021).

At this point, the role of intergenerational relationships becomes particularly salient. Parental involvement cannot be interpreted merely as a background factor, but rather as an active resource that contributes to students' informational, normative, and emotional support (Perna & Titus, 2005; Kiyama et al., 2015; Pusztai et al., 2024; 2025). In international practice, the institutionalization of parental involvement is increasingly observable, appearing as a factor that supports students' academic progression (Wartman & Savage, 2015; Rappaport, 2023; Pusztai et al., 2024; 2025).

A deeper understanding of the relationship between parental involvement and student progression requires consideration of future orientation and self-regulation. Future orientation enables students to interpret their present efforts within the context of long-term goals, thereby fostering persistence and resilience in the face of obstacles (Zimbardo & Boyd, 1999; Husman & Shell, 2008; Hagedorn, 2012; Pusztai et al., 2026). Future-oriented work ethic represents the behavioral manifestation of this orientation, reflected in goal-directed effort, disciplined work practices, and long-term commitment (Zimmerman, 2002; Duckworth et al., 2007; Pusztai et al., 2026).

In this context, parental involvement may also contribute indirectly to students' academic progression by supporting the formation and maintenance of future-oriented goals (Nurmi, 1991; Miller & Brickman, 2004; Seginer, 2009; Pusztai, 2026). At the same time, its effects are neither linear nor uniform in quality: overly controlling parental involvement may undermine autonomy and self-regulation, whereas supportive involvement that allows for autonomy can foster responsibility and persistence (Grolnick & Ryan, 1989; Soenens & Vansteenkiste, 2005).

Parental involvement can be conceptualized as a multidimensional phenomenon that exerts its influence through multiple channels (Epstein, 1995; Hill & Tyson, 2009; Wartman & Savage, 2015; Kovács et al., 2022; Kocsis et al., 2024; Kocsis, 2025). Academic involvement is directly related to learning activities, social involvement facilitates integration, while communication and contact contribute to stable academic progression

by providing continuous emotional and communicative support (Hill & Tyson, 2009; Wolf et al., 2009; Kiyama et al., 2015). These dimensions shape students' future-oriented work ethic in different but interrelated ways (Grolnick & Slowiaczek, 1994; Pomerantz et al., 2007; Pusztai et al., 2024; 2025; Pusztai, 2026).

Within these decision-making processes, parental involvement exerts its influence in a differentiated manner: consistent and supportive parental presence may function as a resource contributing to persistence in studies and goal-oriented progression, whereas overly controlling or ambivalent forms of involvement may weaken students' autonomous decision-making and be associated with increased academic uncertainty and a higher risk of withdrawal (Grolnick & Ryan, 1989; Soenens & Vansteenkiste, 2005; Segrin et al., 2013; Wartman & Savage, 2015; Pusztai et al., 2024; Kocsis et al., 2025; Pusztai et al., 2025; Pusztai, 2026). Thus, the effects of parental involvement are not uniform but differentiated in quality, and may be linked in different ways to persistence in higher education and the development of students' future-oriented attitudes (Pusztai et al., 2024; 2025; Pusztai, 2026). The literature also indicates that empirical investigations of these relationships – particularly in the context of higher education – remain limited. Accordingly, the aim of the present study is to empirically examine the relationship between different patterns of parental involvement and students' future-oriented work ethic.

Methodology

This study is based on a secondary analysis of the database from the 2023–2024 survey of the MTA–DE Public Education Development Research Program. Access to the dataset was provided by Prof. Dr. Gabriella Pusztai, the principal investigator of the research. In addition to Hungary, the data collection also covered students from Hungarian minority communities in neighboring countries. The total sample size is $N = 1,336$. The sample consists of full-time students enrolled in bachelor's and undivided master's programmes. The survey of students in the 5th, 6th, as well as the 9th and 10th semesters is representative across faculties and fields of study. In terms of regional distribution, 52.5% of the sample are from Hungary, 28% from Transylvania, 9.5% from Transcarpathia, nearly 7% from Vojvodina, and 3% from Slovakia. The gender distribution is as follows: 68.2% female and 31.8% male students (Pusztai, 2026). The aim of the analysis is to identify different patterns of parental involvement in higher education and to examine their relationship with students' future-oriented work ethic. As a first step, descriptive statistics were used to characterize the distribution of parental involvement items in the sample. This was followed by a cluster analysis based on the same variables, through which distinct groups of students were identified according to patterns of parental involvement. The relationship between the identified clusters and future-oriented work ethic was examined using analysis of variance (ANOVA). To explore multivariate relationships, a two-step linear regression analysis was conducted. In the first model, the identified clusters of parental involvement were included as explanatory variables, while in the second step the model was extended with demographic and socio-economic background variables. This approach made it possible to assess the extent to which parental involvement shows an independent association with future-oriented work ethic after controlling for background factors (Pusztai, 2026).

Variables Used in the Analysis

The following section presents the dependent and independent variables included in the analysis.

Dependent Variable

The dependent variable of the study is students' future-oriented work ethic, which serves as a measure of the behavioral component of future orientation (Pusztai, 2026). The indicator was constructed using relevant items from the Perseverance of Effort subscale of the Grit Scale (Duckworth et al., 2007, cited in Pusztai, 2026), as well as from the Work Ethic Scale (Ten Have & Jehoel-Gijsbers, 1985, cited in Pusztai, 2026; Leenders et al., 2017, cited in Pusztai, 2026). These items capture persistence in pursuing long-term goals, disciplined and norm-oriented work attitudes, and perseverance in the face of obstacles. In the analysis, we used an index constructed by the MTA-DE Development of Future Consciousness Research Group through principal component analysis and transformed onto a 0–100 scale. Based on appropriate reliability indicators and the normal distribution of the scale, the variable was treated as continuous in the statistical analyses (Kovács, 2026; Miklódi-Simon & Kovács, 2026; Pusztai, 2026).

Independent Variables

Parental involvement in higher education, as an explanatory variable, was measured using a 26-item question block with Likert-scale responses ranging from 1 to 4. The measurement instrument applied in this study was developed based on Oliver (2011). The adapted items of the original questionnaire were adjusted to the Hungarian higher education context and supplemented with additional statements to more accurately reflect the experiences of domestic students (Pusztai, 2026). Among these items, the highest mean values were observed for indicators related to communication with parents. Frequent home visits (3.36), maintaining contact via phone or online communication ($M = 3.36$), and personal conversations with parents (3.36) were particularly characteristic among students. Similarly, high mean values were found for parental interest in students' studies (3.33) and for the perceived appropriateness of parental involvement (3.20). The lowest mean values were associated with negatively worded items. Students reported relatively low levels of perceived parental hindrance regarding their integration into higher education (1.37) and their learning activities (1.42). Using the items of the question block, a cluster analysis identified six groups of students based on patterns of parental involvement in higher education: students with supportive parental backgrounds, relationship-oriented parents, low-involvement parents, highly involved parents, balanced parental involvement, and ambivalent parental involvement. Students in the ambivalent parental involvement group are characterized most strongly by the perception that parental involvement hinders their learning and integration. In the low-involvement cluster, parental engagement is minimal across all dimensions, with the lowest values observed both in terms of academic support and communication. In the supportive parental background group, parental involvement is high across most domains; however, involvement in administrative aspects of studies (e.g., knowledge of timetables, exam and assignment deadlines, and assistance with course registration) is comparatively lower. This contrasts with the highly involved group, where parents are the most actively engaged in nearly all aspects of students' higher education experience. In the relationship-oriented cluster, parental involvement is typically high in terms of communication (although not consistently exceeding the levels observed among supportive or highly involved parents), while it remains moderate or lower in other domains. Finally, in the balanced involvement group, parental engagement is generally at a moderate to relatively high level across almost all dimensions. The cluster analysis of the items revealed that the largest proportions in the sample were represented by students with supportive parental backgrounds (19.5%; $N = 214$) and those with relationship-oriented parents (18.6%; $N = 204$). Students with highly involved parental backgrounds ($N = 187$) accounted for 17.0% of the sample, while the balanced involvement group ($N = 186$) comprised 16.9%. The groups characterized by low parental involvement (14.9%; $N = 164$) and ambivalent parental involvement (13.1%; $N = 144$) were present in smaller, yet still substantial proportions. For the purposes of bivariate and multivariate analyses, six new binary variables were created based on the cluster groups (0 = other groups; 1 = current group: supportive/low-involvement/highly involved/relationship-oriented/balanced/ambivalent parental background). Based on the relevant literature and the conceptual framework of the original measurement instrument, the items were grouped into three theoretically grounded dimensions of parental involvement following Oliver (2011): (1) parental involvement in higher education institution choice, (2) academic (study-related) involvement, and (3) social involvement. Reverse-coded items ("Did your parents' involvement hinder your learning?"; "Did your parents' involvement hinder your integration into higher education?") were recoded prior to this classification. In addition to these three dimensions, a fourth dimension was identified, based on items introduced in this study concerning personal and telephone communication: parent–student communication (Lánczi et al., 2026).

Demographic and socio-economic background variables were also included in the multivariate analyses in order to examine both the independent effect of parental involvement on future-oriented work ethic and its association when controlling for background factors. The control variables incorporated into the model included students' gender, minority status within the country of the institution, family structure, parental educational attainment, type of settlement of residence, subjective financial status, and parental employment status. Most background variables were entered into the analysis in dichotomous form. In the case of family background, separate variables indicated intact family structure and so-called ideal family structure. Parental educational attainment was operationalized separately for mothers and fathers using binary variables indicating primary and tertiary levels of education. Economic background was captured through a variable measuring students' subjective financial status, while the broader social environment was approximated by the type of settlement of residence (Lánczi et al., 2026; Pusztai, 2026).

In line with the aims of the study, the following research questions were addressed: 1. What patterns of parental involvement can be identified among higher education students? 2. What is the direction and strength of the relationship between patterns of parental involvement and students' future-oriented work ethic? 3. To what extent do social and demographic factors modify the relationship between parental involvement and future-oriented work ethic?

The following hypotheses were tested in the analysis:

- H1. Different patterns of parental involvement are significantly associated with higher education students' future-oriented work ethic.
- H2. Higher-intensity, consistent, and supportive forms of parental involvement are positively associated with students' future-oriented work ethic.
- H3. Low-level or ambivalent forms of parental involvement are negatively associated with students' future-oriented work ethic.
- H4. The relationship between parental involvement and future-oriented work ethic varies in a differentiated manner when controlling for social and demographic background variables.

Results

The results of the ANOVA analyses indicate significant associations between the clusters of parental involvement, as well as its specific dimensions, and students' future-oriented work ethic. These findings suggest that parental involvement does not influence the development of students' future-oriented attitudes in a uniform manner. Notably, students with highly involved parents are characterized by significantly higher mean values, indicating that consistent, intensive, and multidimensional parental engagement functions as a supportive resource in terms of persistence toward long-term goals and disciplined work practices. In contrast, students whose parents are involved at a low level ($p = 0.005$) or in an ambivalent manner ($p = 0.01$) exhibit significantly lower levels of future-oriented work ethic compared to other groups. In addition to differences between clusters, significant associations were also observed across the individual dimensions of parental involvement. Among students whose parents were actively involved in the selection of the higher education institution and in supporting decisions related to further studies ($p = 0.006$), higher levels of future-oriented work ethic were observed. A similarly strong association was found for the dimension of social involvement ($p \leq 0.001$), which encompasses support for students' integration into a new environment and related communication processes. Academic involvement – such as monitoring study-related tasks and expressing parental interest in academic performance – also showed a significant positive association ($p \leq 0.001$), as did various forms of ongoing parent–student communication ($p = 0.004$). These findings suggest that parental involvement contributes to the strengthening of students' future-oriented attitudes across multiple dimensions, particularly when it is manifested as supportive engagement and a stable relational background (Table 1).

Table 1. Associations Between Parental Involvement in Higher Education and Future-Oriented Work Ethic

Variable	Mean	SD	F	p	N
Students with supportive parental background	60.23	16.29	0.05	0.823	206
Other groups	59.94	16.68			846
Students with relationship-oriented parents	60.34	15.98	0.105	0.746	199
Other groups	59.92	16.75			853
Students with low parental involvement	56.61	17.43	7.847	0.005	159
Other groups	60.60	16.38			893
Students with highly involved parents	66.70	16.31	35.584	≤0.001	176
Other groups	58.65	16.34			876
Students with balanced parental involvement	58.34	15.50	2.155	0.142	178
Other groups	60.34	16.80			874
Students with ambivalent parental involvement	56.56	16.39	6.638	0.01	134
Other groups	60.50	16.58			918
Parental involvement in institutional choice	60.08	16.57	2.33	0.006	1244
Social involvement	59.99	16.54	2.652	≤0.001	1236
Academic involvement	59.96	16.68	2.99	≤0.001	1217
Parent–student communication	60.07	16.67	2.407	0.004	1126

Source: HEPI 2024 (Higher Education Students on Parental Involvement), N = 1,336

Notes: Statistically significant associations ($p < .05$) are presented in bold.

The effects of parental involvement clusters on students' future-oriented work ethic were examined using two-step linear regression analysis (Table 2). In the first model, only the parental involvement clusters were included as explanatory variables, while in the second model the analysis was extended with demographic and socio-economic background variables. The results indicate that students with highly involved parents showed a positive and statistically significant association with the dependent variable in both models. This effect remained robust even after controlling for background variables (Model 1: $B = 6.353$; $\beta = 0.143$; $p \leq 0.001$; Model 2: $B = 6.436$; $\beta = 0.145$; $p \leq 0.001$), suggesting that consistent and supportive parental involvement has an independent explanatory power in shaping students' future-oriented efforts. At the same time, ambivalent parental involvement exhibited a negative and statistically significant relationship with the dependent variable in both models (Model 1: $B = -4.098$; $\beta = -0.082$; $p = 0.025$; Model 2: $B = -3.978$; $\beta = -0.080$; $p = 0.031$), indicating the persistence of this effect even after accounting for control variables. In the case of students with low parental involvement, a significant negative association was observed in the first model ($B = -4.074$; $\beta = -0.088$; $p = 0.019$), but this relationship was no longer statistically significant in the second model ($p = 0.099$). The relationship-oriented and balanced involvement clusters did not show statistically significant associations in either model. Among the control variables, minority status was negatively and significantly associated with future-oriented work ethic ($B = -2.853$; $\beta = -0.086$; $p = 0.011$), while subjective financial status showed a positive and significant relationship ($B = 2.454$; $\beta = 0.073$; $p = 0.020$). The remaining background variables did not exhibit statistically significant effects.

Overall, the results of the regression models indicate that the effects of parental involvement are neither linear nor homogeneous, but are structured along markedly different directions and strengths of association. Notably, the effects of certain patterns of parental involvement persist even after controlling for social background, whereas for other forms this relationship disappears, highlighting the differentiated role of parental involvement in shaping students' future-oriented attitudes.

Table 2. Explanatory Model of Future-Oriented Work Ethic in the Context of Parental Involvement

	Variable	B	Std. Error	Beta	t	p	Tolerance	VIF
1	(Constant)	60.49	1.153		52.47	≤0,001		
	Students with relationship-oriented parents	-0.218	1.652	-0.005	-0.132	0.895	0.629	1.59
	Students with low parental involvement	-4.074	1.738	-0.088	-2.344	0.019	0.661	1.513
	Students with highly involved parents	6.353	1.693	0.143	3.753	≤0.001	0.645	1.551
	Students with balanced parental involvement	-2.277	1.682	-0.052	-1.353	0.176	0.641	1.561
	Students with ambivalent parental involvement	-4.098	1.828	-0.082	-2.242	0.025	0.691	1.447
2	(Constant)	60.231	2.297		26.22	≤0.001		
	Students with relationship-oriented parents	0.486	1.665	0.011	0.292	0.77	0.615	1.626
	Students with low parental involvement	-2.932	1.774	-0.063	-1.653	0.099	0.631	1.586
	Students with highly involved parents	6.436	1.699	0.145	3.788	≤0.001	0.635	1.574
	Students with balanced parental involvement	-2.286	1.683	-0.052	-1.358	0.175	0.636	1.573
	Students with ambivalent parental involvement	-3.978	1.846	-0.08	-2.155	0.031	0.673	1.486
	Minority status in the country of the institution	-2.853	1.114	-0.086	-2.562	0.011	0.828	1.208
	Intact family structure (two-parent household)	-0.936	1.674	-0.022	-0.559	0.576	0.58	1.723
	Ideal family structure (mother, father, siblings)	-0.239	1.364	-0.007	-0.175	0.861	0.587	1.705
	Father: at most primary education	-0.131	1.286	-0.004	-0.102	0.919	0.719	1.391
	Mother: at most primary education	0.785	1.441	0.019	0.545	0.586	0.737	1.356
	Father: tertiary education	1.277	1.392	0.034	0.917	0.359	0.687	1.455
	Mother: tertiary education	0.556	1.27	0.016	0.438	0.662	0.695	1.439
	Urban residence (city vs. village)	-0.196	1.114	-0.006	-0.176	0.86	0.839	1.192
	Favorable subjective financial status	2.454	1.05	0.073	2.337	0.02	0.945	1.059
	Father employed	1.391	1.297	0.036	1.072	0.284	0.817	1.223
	Mother employed	-0.888	1.308	-0.023	-0.679	0.497	0.804	1.244

Source: HEPI 2024 (Higher Education Students on Parental Involvement), N = 1,336

Notes: B = unstandardized regression coefficient; β = standardized regression coefficient; statistically significant coefficients ($p < .05$) are presented in bold.

Discussion

The findings of our analysis support the assumption that parental involvement is differentially associated with students' future-oriented work ethic. The first hypothesis – posited that different patterns of parental involvement are significantly related to higher education students' future-oriented work ethic – was confirmed, as significant differences emerged in students' work-related attitudes along distinct patterns of parental involvement. These results are consistent with approaches that interpret student progression as the outcome of complex relational and socialization processes (Tinto, 1993; Pusztai, 2011). Notable differences were observed between the student groups identified through cluster analysis, suggesting that qualitative differences in parental involvement are associated with variations in students' future orientation. Our second hypothesis, which assumed that higher-intensity, consistent, and supportive parental involvement is positively associated with students' future-oriented work ethic, was partially confirmed. Based on the regression models, a highly involved parental background is positively associated with future-oriented work ethic, and this relationship remains significant even after controlling for socio-demographic background variables. This suggests that certain forms

of parental involvement operate through independent mechanisms. At the same time, the findings also indicate that higher intensity of involvement alone does not necessarily lead to higher levels of future-oriented work ethic, as not all patterns of involvement showed significant associations. This supports the argument of Wartman and Savage (2015), who emphasize that the effects of parental involvement depend on its quality and mode of operation. The third hypothesis, which posited that low-level or ambivalent parental involvement is negatively associated with students' future-oriented work ethic, was also partially confirmed. Ambivalent parental involvement exhibited a negative relationship with future-oriented work ethic in both models, suggesting that unstable parental presence should be interpreted not only as a lack of resources but also as an independent risk factor. In contrast, the negative effect of low parental involvement disappeared after the inclusion of control variables, suggesting that this relationship is not independent but rather operates in conjunction with social background. The difference between these two forms of involvement highlights that the absence of parental involvement and its ambivalent form affect students' future orientation in distinct ways. The fourth hypothesis, which assumed that the relationship between parental involvement and future-oriented work ethic varies when controlling for social and demographic background variables, was clearly confirmed. The inclusion of these background variables modified the effects of different patterns of parental involvement in a differentiated manner. In particular, the association weakened for low parental involvement after controlling for background factors, whereas the effects of highly involved and ambivalent parental patterns remained robust. This suggests that certain forms of parental involvement are associated with students' future-oriented attitudes even after controlling for social background.

The role of control variables further refines the interpretation of the results. Minority status showed a negative association, while favorable subjective financial status was positively associated with future-oriented work ethic. This suggests that structural conditions and access to various resources contribute to the development of future orientation. At the same time, the fact that parental educational attainment and other classical background variables did not show statistically significant effects further supports the interpretation that the influence of family background operates not directly, but rather through the quality of parental involvement.

Overall, the findings indicate that parental involvement does not exert a uniform effect on higher education students' future-oriented work ethic; rather, its qualitative characteristics and internal structure are of decisive importance. Two forms of involvement stand out in particular: highly involved parental background, which shows a stable positive association with future-oriented work ethic, and ambivalent involvement, which consistently demonstrates a negative relationship. The effects of these patterns remain significant even after controlling for social background, indicating that the quality of parental involvement contributes as an independent factor to the development of students' future-oriented attitudes.

Conclusion

The aim of this study was to examine how different forms of parental involvement are associated with higher education students' future-oriented work ethic as a key component of academic persistence. The findings clearly demonstrate that parental involvement does not exert a uniform effect on students' future-oriented attitudes; rather, its influence is structured along pronounced qualitative differences.

Among the patterns of parental involvement identified through cluster analysis, students with highly involved and supportive parental backgrounds are characterized by significantly higher levels of future-oriented work ethic, whereas low-level – and particularly ambivalent – involvement is associated with lower levels. The multivariate analyses further confirmed that consistent and supportive parental involvement has independent explanatory power even after controlling for social and demographic background variables, while contradictory and unpredictable forms of involvement function as risk factors in shaping students' future-oriented aspirations.

Our findings indicate that it is not merely the presence of parental involvement, but rather its quality and patterns that are decisive in shaping students' future-oriented work ethic. Particularly noteworthy is that two forms of involvement – highly involved and ambivalent parental backgrounds – remain significant even after controlling for social background, underscoring the independent importance of parental involvement.

The empirical contribution of this study lies in conceptualizing parental involvement as an active and differentiated intergenerational resource that may function not only as a source of support but also as a potential risk factor in shaping higher education students' future-oriented attitudes. The findings are particularly relevant in the context of Central and Eastern European higher education and contribute to a deeper understanding of the social embeddedness of student persistence.

From a practical perspective, the findings suggest that higher education institutions should recognize parents as potential partners in supporting students' academic progression while preserving students' autonomy. Universities may benefit from developing communication channels and information programs that encourage supportive rather than controlling forms of parental involvement. At the same time, students may also benefit from guidance aimed at strengthening self-regulation and promoting balanced family relationships during higher education.

Future research could examine the longitudinal effects of parental involvement on students' future-oriented attitudes and academic persistence. It would also be worthwhile to investigate whether the observed relationships differ across fields of study, cultural contexts, and institutional environments.

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