Navigating Aspirations: Understanding What Drives Romanian Adolescents' Career Choices

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Abstract: Extensive research has underscored the critical role of aspirations in the process of status attainment, with a consensus on their significance across the literature. Building on this foundation, our study delved into the factors influencing the occupational aspirations of 8th Grade students in Bihor County (Romania), examining variables such as gender, ethnicity, socioeconomic status and academic performance. Utilising the International Socio-Economic Index (ISEI) of Occupational Status, we coded the students’ aspirations for their occupational status at age 30. Our findings revealed that gender, the occupational status of the mother (as measured by the ISEI), ethnicity and academic achievements significantly shape these aspirations. Conversely, students with a parent working abroad or belonging to the Hungarian ethnic minority exhibited lower levels of occupational aspiration. Additionally, our analysis uncovered noteworthy mediating effects: the impact of rural residency is mitigated by the introduction of social class, which is further influenced by academic performance. Similarly, the effect of having multiple siblings is neutralised by having a parent working abroad, and the negative impact of Roma ethnicity on aspirations is offset by academic achievement. A key contribution of our research is the elucidation of how adolescents in our study context conceptualised their futures in terms of occupational status, revealing the nuanced interplay of various factors in shaping their aspirations. This study not only contributes to our understanding of the determinants of occupational aspirations among adolescents but also highlights the complex interactions among these determinants.

Keywords: Occupational aspirations, academic results, socioeconomic status, teenagers.

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In contemplating the age-old enquiry, 'What do you want to be when you grow up?', it becomes evident that children's responses often align with societal ideals and occupations deemed prestigious, highly regarded occupations encapsulating a Bourdieusian 'distinction' (Bourdieu, 1984). These career aspirations, as Rojewski (2007) articulated, are the desired vocations of individuals under ideal life scenarios.

Extant research consistently underscores that students with higher aspirations tend to secure more competitive educational achievements and prestigious careers, outcomes observable even when accounting for variables such as academic aptitude, socioeconomic status, ethnicity and gender (Croll, 2008; Schoon & Polek, 2011). It is recognised that aspirations begin to develop in early childhood and that their evolution is influenced by a spectrum of factors ranging from immediate environmental elements to broader sociocultural issues.

This article delves into the influence of socioeconomic determinants and related factors on the occupational aspirations of adolescents aged 14 to 15. The theoretical framework of the study synthesises key findings from the literature on these determinants. Based on this review, we formulate hypotheses for empirical testing within the MERPAS 3 sociological survey, including the translation of students' articulated career aspirations into occupational prestige scores via the ISEI scale. Our presentation of the results encompasses both a descriptive analysis based on the applied codification and a multivariate analysis to offer deeper insights. The ensuing discussion critically examines the implications of our findings for Romanian adolescents, with a candid evaluation of the study's limitations and a summary of the principal conclusions rounding off the article.

The Impact of Socioeconomic Predictors and Associated Factors on Occupational Aspirations

The Blau and Duncan model (1967) identified four essential factors contributing to the achievement of occupational status: father's occupation, father's level of education, the individual's level of education and the socio-occupational status of the person in their first job. The Wisconsin model stresses the importance of socioeconomic background and psychological factors in determining educational aspirations and occupational well-being (Sewell et al., 1969).
Given the crucial role of aspirations in the process of adult attainment, many studies have focused on the determinants of adolescents' aspirations, such as family, socioeconomic status and individual factors, as well as ethnic/racial and gender differences.

**Gender**

According to the literature, gender represents a fundamental variable in research, with major studies focusing on the types, varieties and status of the occupations aspired to by adolescents, as well as on differences among genders. However, gender cannot uniquely predict a specific pattern of occupational aspirations (Gao & Eccles, 2020).

While status attainment for both sexes presents a number of similarities, over half a century ago Sewell and Shah (1967) found that women undergo a more complex and potentially more challenging process due to marriage, childbirth and childcare considerations. Sewell et al. (1970) further found that women are significantly influenced by family life cycles, divorce and workplace discrimination. Nevertheless, recent decades have brought significant changes for both sexes, with an increasing number of women pursuing higher education and accessing various positions in the labour market in a wide variety of jobs, including those that were previously considered strictly for men.

A significant amount of current research points out that during lower and upper secondary school girls express aspirations for higher-status occupations than boys (Guo et al., 2015; Howard et al., 2011; Mau & Bikos, 2000), and they differ from boys in their preferences for certain fields of activity (Patton & Creed, 2007). Compared to boys, adolescent girls have become more ambitious and are more likely to aspire to jobs that require numerous academic qualifications (Mello, 2008; Schoon et al., 2007); this is also the case for girls living in rural communities (Lapan et al., 2003). As in many other parts of the world, girls in Romania (Ministerul Educației, 2023a, 2023b) consistently outperform boys in academic achievement (Shapka et al., 2008).

Therefore, based on the previous results, we expected girls to have significantly higher occupational aspirations than boys.

**Minority Status**

Adolescents from ethnic, racial, religious and other minority groups often face constraints in their future plans due to discrimination, stereotypes, powerlessness or language barriers. Additionally, they present an increased
risk of academic underachievement, with low aspirations regarding their educational trajectory and career (Conger et al., 1993; Lent et al., 2000). Setting up modest or more realistic aspirations by minority students has been proven by numerous studies in the field (Hill et al., 2003; Kao & Tienda, 1998; Kerckhoff, 1976; Solorzano, 1992).

Overall, the gap in educational performance between students of the dominant culture and those belonging to ethnic minorities is explained by cultural differences and conflicts (Boykin, 1986), by social class factors, one of which is parental involvement (Gibson & Ogbu, 1991) and by the 'oppositional culture' alongside the ecological cultural approach (Ogbu, 2003). With regard to these results, some findings indicating the presence of higher aspirations among children and youth from minority communities are the exception (Hill et al., 2004; Kao & Tienda, 1998; Khattab, 2003; Marjoribanks, 2005).

**Academic Results and Aspirations of Hungarian Adolescents**

In general, research on educational disparities regarding the majority population and the Hungarian ethnic group in the Romanian school environment reveals that Hungarian students face difficulties in terms of school integration compared to their Romanian counterparts. Survey results on adolescents from Bihor County (Romania) associate these difficulties with lower levels of satisfaction and school engagement among Hungarian students, even after adjusting for linguistic and contextual factors such as father's education level, economic background and number of siblings (Hatos, 2011). Moreover, even after controlling for the effect of teaching language differences and the previous year's results in mathematics, the academic performance of Hungarians, measured by school grades, is still lower than that of Romanians (Hatos, 2010; Hatos & Hatos, 2019). These school integration difficulties, in conjunction with reduced engagement and school satisfaction, could negatively influence the future prospects of Hungarian minorities, along with socioeconomic context and lower academic performance.

Therefore, in our study, we anticipated significantly lower occupational aspirations for Hungarian minorities compared to their majority peers.

**Membership of the Roma Ethnic Group**

Many studies highlight the fact that Roma students experience more difficulties in achieving academic success, have lower levels of educational aspirations even when compared to individuals with similar incomes (Bădescu et al., 2007) and express future plans that are circumscribed by the
barriers and limited opportunities identified in their day-to-day environment (Raiu & Roth, 2016; Vincze & Harbula, 2011). Research based on the testimonials of Roma youth explains how the negatively perceived ethnic identity of Roma adolescents and socioeconomic barriers are reflected in their diminished future aspirations (Roth et al., 2013; Vincze, 2010). Consequently, social and cultural impediments, material deprivation and difficulties in achieving academic success are critical factors in determining lower levels of future aspirations among Roma students.

Like Hungarian young people, we anticipate significantly lower occupational aspirations for Roma students compared to majority youths.

**Residency (Small Rural Towns)**

In many places around the globe, including Romania, life in rural areas holds distinct challenges, such as low-wage, effort-intensive jobs, high rates of child poverty, lack of public transportation, limited access to services and many others (O'Hare, 2009). Therefore, young people here often face a complex set of difficulties related to poverty, geographic isolation and difficulty in the pursuit of job opportunities.

There is a significant disparity between the rural and urban populations in Romania regarding socioeconomic characteristics and educational outcomes. According to the National Assessment Report (Ministerul Educației, 2023a), 39.56% of students in rural areas performed below Grade 5, compared to 13.99% of the urban school population. At the same time, approximately 22% of the rural graduates achieved averages above 7.50, compared to 54% of their urban counterparts.

Consistently recorded educational deficits in rural areas are primarily due to the fact that households here have significantly lower socioeconomic status than those in urban areas, resulting in a higher concentration of poor students. Essentially, it is not an inherent disadvantage derived from rurality or agricultural occupations, but rather a composition effect (Roscigno & Crowle, 2001).

Educational disparities in rural Romania can significantly impact the occupational aspirations of adolescents living here. Lack of resources and limited access to quality education (Burja & Burja, 2014), the significant distance from home to schools and poor school infrastructure mean many educational and occupational opportunities are perceived as inaccessible for these adolescents, leading to the development of more modest plans compared to those from urban or more privileged backgrounds. Additionally, pronounced economic disparities between different regions of the country (Stanef, 2013) can influence their future, because families with
financial difficulties tend to invest less in education, thus limiting the career options available to these youths (Clemens et al., 2017). Compared to urban communities, levels of parental education and income in rural communities tend to be lower (Crockett et al., 2000; Provasnik, 2007).

Therefore, we anticipated significantly lower occupational aspirations among young people in rural areas compared to those in urban environments. Based on previous results, we expected this effect to diminish under the conditions of controlling for the socioeconomic status variable.

**Number of Siblings and the Dilution of Resources**

Blake's perspective (1981) argued that siblings dilute the resources available for each individual child and thus limit their achievements, and population-level studies undertaken by Blau and Duncan (1967) found evidence of the effects of family size on the education and occupational status of future adults. According to Bourdieu (1966), the chances of attending secondary school systematically decrease with each additional child for the middle social classes and decrease significantly for the children of craftsmen and tradesmen. At the same time, Zajone and Markus's model (1975) defined the overall intellectual climate of families as a function of the age distribution determined by the number of children, the age gap between them and opportunities for siblings to teach and learn from each other.

However, more recent research has shown that the relationship is not always clear-cut and might be moderated by key individual and contextual characteristics, such as public investments, social policies and religious affiliation, which could condition the effect of siblings on achieving occupational status (Gibbs et al., 2016; Lu & Treiman, 2008; Park, 2008). The educational achievements of siblings influence each other, however, such that the educational level of the older sibling is more influential on the younger one (Olneck, 1976). Examining the relationship between birth order and occupational status, Retherford and Sewell (1993) contradicted causality, both for same-sex and different-sex pairs.

Therefore, in our study we assumed the presence of the sibling size effect on the occupational aspirations of adolescents.

**Socioeconomic Status**

The importance of socioeconomic status in shaping occupational aspirations and status achievement has been highlighted by numerous theoretical perspectives. On the one hand, social reproduction theories (Bernstein, 2003; Bourdieu & Passeron, 1990) emphasise the influence of
socioeconomic and cultural background, as well as of schooling, in the reproductions of inequalities and restrictions in social mobility. On the other hand, individualistic models of status maintenance, such as effectively maintained inequality (Raftery & Hout, 1993) and maximum maintained inequality (Lucas, 2001), assign these inequalities to individual decisions, whereby wealthy social classes seek to maximise their utility by securing advantages, uninfluenced by contexts and institutional arrangements.

It is generally acknowledged that family socioeconomic status is essential for shaping children's occupational aspirations, acting both directly (Duncan, 1994; Rehberg & Hotchkiss, 1979; Schulenberg et al., 1984) and indirectly, by influencing the academic support provided by parents (Reynolds, 1992), by psychosocial experiences and by learning opportunities during childhood. Moreover, the importance of family factors outweighs that of the school or residential context (Coleman, 2007; William & Armer, 1966). Rojewski and Kim (2003) suggested that family socioeconomic status significantly influences occupational aspirations, largely determining the educational and career trajectories of adolescents.

High levels of parental education and income are strongly associated with the development of students' educational and occupational aspirations (Hill et al., 2004; Hill et al., 2003; McWhirter et al., 1998; Meece et al., 2014). Therefore, the effects of parental education level and income are well documented in the literature, and their multiple action pathways range from the family environment's structure to supporting academic performance and communicating high educational expectations (Eccles et al., 1998). The latter can regulate children's occupational aspirations by offering the academic and financial support necessary to achieve occupational status.

Furthermore, positive parental attitudes maintained constantly throughout schooling do not inevitably translate into aspirations for science in their children. In this regard, DeWitt and Archer (2015) confirmed the effects of family scientific capital in forming and maintaining strong aspirations in science, from everyday practices and valuing science to perceiving it as part of 'who we are and what we do'.

As a result, we expected students from families with higher socioeconomic status to express higher occupational aspirations.

**Family Structure (Parents Working Abroad)**

Generally, children who grow up with both biological parents achieve significantly higher educational and occupational outcomes, even after controlling for other factors (Fernández-Kelly & Konczal, 2005).
According to the research, this effect is related to the social capital of the family. Social capital tends to be greater in intact families.

Differences in educational achievements and aspirations between children from intact families and those where one parent is missing can be explained by differences in social capital, such as economic and educational resources and other forms of support that contribute to adolescents' education (opportunities, monitoring, encouragement, parents' academic aspirations for young people and general and academic support) generated by two-parent households versus single-parent household (Coleman, 1988). In this regard, Hatos and Bâlțătescu (2013) showed that non-intact family structure has a negative effect on the educational performance of secondary school students mainly through the material, cultural and living conditions it creates, and less through parental control and support factors.

Based on previous findings, we expected lower occupational aspirations among adolescents with a parent working abroad compared to students living in intact families.

**Academic Skills and Results**

School performance significantly impacts students' occupational aspirations (Astleithner et al., 2023). Academic skills are considered predictive factors in shaping young people's occupational aspirations: students with better academic performance tend to hold higher aspirations (Astleithner et al., 2023; Harrison, 1969; Sewell et al., 1970; Sewell & Shah, 1967).

High grades not only impress the family and teachers, who typically respond by shaping the adolescents' aspirations, but the students themselves have their perception of the objective requirements to perform in a particular field, and therefore engage in a process of evaluating their skills in relation to others' results. The direct effects are obvious: improved academic performance creates new expectations on behalf of the family, on the one hand, and higher educational and occupational aspirations for the young person, on the other hand. Indirectly, these will all influence the status attainment process.

Based on the literature, we expected academically performing students to express higher occupational aspirations.
Methodology

Measuring Social Positions and Aspirations through Occupational Prestige Scales

Measuring the socioeconomic status of the family or occupational aspirations through measurements or scores of occupational statuses is a valid method insofar as we conceptualised the abstract realm of social positions, particularly occupational positions, as stratified according to a fundamental aspect of social competition: prestige. Prestige is also known as respectability or status, depending on context.

If the main premises of the fundamental theories of social mobility and social reproduction are correct, we can consider that status position, measured by prestige scores, best describes occupational positions, present or future, as projected through aspirations by students.

Therefore, in this paper, the starting point comprised two fundamental premises: 1) occupational positions are distributed on a one-dimensional axis of their prestige, and 2) the measurable stake, or the observable fundamental motivator of social mobility and reproduction, is the prestige of social positions.

Social science researchers have developed several instruments for measuring the prestige of occupational positions, two of which are most commonly used: the International Socio-Economic Index of Occupational Status (ISEI) and the Standard Occupational Prestige Scale (SIOPS).

The ISEI (Ganzeboom et al., 1992) quantifies and assesses the socioeconomic status of occupations. Here, occupation can be seen as an intervention variable between education and income, transferring the knowledge, skills and abilities acquired through education to the latter. The higher the ISEI score, the higher the socioeconomic status of a person is considered to be. Examples of occupations with low scores include farmers and skilled field crop and vegetable growers (11.56), while the highest score is assigned to judges (88.96).

Data and Methods

The research data were part of the MERPAS3 (Educational Monitor of the Results, Practices and Attitudes in Bihor Schools) survey, carried out in January and February 2022 through an online survey addressed to 8th Grade students from 138 mainstream schools (70.76%) out of 195 total units in the county. The MERPAS3 sample is stratified according to type of
residence and type of school, comprising 2758 students, with sociodemographic data summarised in Table 1.

Measuring aspirations involved several stages of analysing students' responses regarding occupations of interest. Initially, we proceeded with a general check of the data and exclusion of irrelevant subjects. The descriptive responses were coded independently by two operators into six-digit Romanian Classification of Occupations codes COR (2024); these codes were later compared and verified to ensure their consistency. Discrepancies were examined, discussed and correlated with other student information to reach a common understanding of the occupation of interest. Absurd or inadequate responses were considered missing values. Furthermore, we determined the corresponding codes from the 2007 edition of the International Standard Classification of Occupations (ISCO-08) nomenclature and calculated the ISEI and SIOPS scores following the conversion module developed by Ganzeboom and Treiman (2018).

**Table 1 Sociodemographic data from the MERPAS 3 survey**

<table>
<thead>
<tr>
<th>Survey</th>
<th>MERPAS 3</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>1476</td>
<td>53.51</td>
</tr>
<tr>
<td>Male</td>
<td>1282</td>
<td>46.49</td>
</tr>
<tr>
<td>Missing</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Romanian</td>
<td>1970</td>
<td>71.42</td>
</tr>
<tr>
<td>Hungarian</td>
<td>611</td>
<td>22.15</td>
</tr>
<tr>
<td>Roma</td>
<td>126</td>
<td>4.56</td>
</tr>
<tr>
<td>Other</td>
<td>18</td>
<td>0.65</td>
</tr>
<tr>
<td>Missing</td>
<td>33</td>
<td>1.22</td>
</tr>
<tr>
<td>Residency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oradea (or another county residency)</td>
<td>782</td>
<td>28.35</td>
</tr>
<tr>
<td>Small town</td>
<td>380</td>
<td>13.77</td>
</tr>
<tr>
<td>Rural settlement/community</td>
<td>1587</td>
<td>57.54</td>
</tr>
<tr>
<td>Missing</td>
<td>9</td>
<td>0.34</td>
</tr>
<tr>
<td>Total sample</td>
<td>2758</td>
<td>52.92</td>
</tr>
<tr>
<td>School plan for academic year 2021–2022</td>
<td>5211</td>
<td></td>
</tr>
</tbody>
</table>
Dependent Variable

Occupational aspiration was represented by students' responses to the item *Name the occupation you would like to practice at age 30.*

Our approach was a standard form of collecting occupational data. Numerous studies have applied a similar conceptualisation. For instance, Lloyd et al. (2018) used the same item, while other researchers addressed the questions in a more explanatory manner:

- *Imagine you had all the opportunities to become what you want. What would be your ideal occupation?* (Miyamoto & Wicht, 2020).
- *Consider everything you know right now. What will probably be your occupation in the future?* (Fischer-Browne, 2022).
- *What is your preferred occupation?* (Astleithner et al., 2023).
- *Ideally, what is the occupation you would like to have?* (Chang et al., 2006).

According to the coding procedure described earlier, students' descriptive responses, such as doctor, chef, mechanic, etc., were coded into occupational prestige scores, using the ISEI and SIOPS conversion module. In our sample, we obtained 1856 valid responses regarding occupational aspirations, and the correlation between ISEI and SIOPS scores was strong (r = 0.88); this indicated that the two scores could be used interchangeably, as they measure largely the same thing.

**Independent Variables**

The independent variables are presented in Table 2.

Table 2 Independent variables

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Operationalisation/Measurement</th>
<th>Population description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Dichotomy (female = 1)</td>
<td>1 = 53.5%</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Dichotomy (Hungarian = 1)</td>
<td>1 = 22.2%</td>
</tr>
<tr>
<td></td>
<td>Dichotomy (Roma = 1)</td>
<td>1 = 4.6%</td>
</tr>
<tr>
<td>Residency</td>
<td>In what type of settlement did you spend your first 10 years? – measured by two dichotomies: Dichotomy (first decade in rural settlement = 1)</td>
<td>1 = 56%</td>
</tr>
<tr>
<td></td>
<td>Dichotomy (first decade in small town settlement, other than Oradea or county residence = 1)</td>
<td>1 = 14.1%</td>
</tr>
<tr>
<td>Variable name</td>
<td>Operationalisation/Measurement</td>
<td>Population description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>Siblings</td>
<td>How many brothers and sisters do you have?</td>
<td>Min = 0, Max = 18</td>
</tr>
<tr>
<td></td>
<td>Numeric, discreet</td>
<td>Average = 1.6</td>
</tr>
<tr>
<td>Household possessions</td>
<td>Which of the following items do you have at home?</td>
<td>Min = 0, Max = 8</td>
</tr>
<tr>
<td></td>
<td>Counter of 8 items: dishwasher, air conditioning unit, car, personal computer or laptop, high-speed internet connection, smartphone or tablet, a quiet place for studying, paid subscription to a streaming service.</td>
<td>Average = 5.45</td>
</tr>
<tr>
<td></td>
<td>Numeric, discreet</td>
<td></td>
</tr>
<tr>
<td>Cultural possessions</td>
<td>Which of the following items do you have at home?</td>
<td>Min = 0, Max = 3</td>
</tr>
<tr>
<td></td>
<td>Counter of 3 items: a library (comprising at least two bookshelves), at least 5 classical music albums, at least 5 art albums, paintings, sculptures.</td>
<td>Average = 0.98</td>
</tr>
<tr>
<td></td>
<td>Numeric, discreet</td>
<td></td>
</tr>
<tr>
<td>Father's occupation</td>
<td>What was (in case of retirement, unemployment, death or other situations) or is your father's occupation?</td>
<td>Min = 11.01, Max = 88.96</td>
</tr>
<tr>
<td></td>
<td>ISEI score for occupation</td>
<td>Average = 41.31</td>
</tr>
<tr>
<td>Mother's occupation</td>
<td>What was (in case of retirement, unemployment, death or other situations) or is your mother's occupation?</td>
<td>Min = 11.56, Max = 88.96</td>
</tr>
<tr>
<td></td>
<td>ISEI score for occupation</td>
<td>Average = 46.75</td>
</tr>
<tr>
<td>Parent working abroad</td>
<td>In the past year, has anyone in your family left to work abroad for a minimum period of 2 months?</td>
<td>1 = 21.9%</td>
</tr>
<tr>
<td>Academic results</td>
<td>What was your grade point average (GPA) in the previous school year?</td>
<td>Min = 5, Max = 10</td>
</tr>
<tr>
<td></td>
<td>Numeric, continuum</td>
<td>Average = 8.78</td>
</tr>
</tbody>
</table>
Hypotheses

H1: Influence of gender: Girls express significantly higher occupational aspirations than boys.

H2: Influence of ethnic group: Students representing the majority population express significantly higher occupational aspirations compared to ethnic minority peers.

H3: Influence of socioeconomic status: Students from affluent families express significantly higher occupational aspirations than students from low socioeconomic backgrounds.

H4: Influence of parental occupational level: Students with parents in high occupational positions express significantly higher occupational aspirations compared to peers whose parents hold lower occupational positions.

H5: Influence of parent working abroad: Students who have at least one parent working abroad exhibit significantly lower occupational aspirations compared to peers living in intact families.

H6: Mediating effects on occupational aspirations:
- Socioeconomic background mediates the effect of the student's residency during the first decade of life;
- Academic results mediate the effect of family socioeconomic status and ethnicity;
- Having a parent working abroad mediates the effect of the number of siblings.

Procedure

The research hypotheses were tested through multilevel regressions. This method allowed us to investigate the impact on the dependent variable while controlling for other independent variables, along with the possible mediating relationships of the following sets of independent variables:

Block 1 (sociodemographic characteristics): Gender, ethnicity, type of residency and number of siblings

Block 2 (socioeconomic status): Household possessions, cultural assets and parents' occupational status

Block 3 (family structure): Parent working abroad

Block 4 (academic abilities): Academic results
Results

Descriptive Results

In terms of the coding used, the students' occupational repertoire comprised 184 COR codes and 128 ISCO-08 codes, corresponding to 116 ISEI scores; approximately one-third of respondents (902) did not provide an answer for occupational aspiration.

According to the COR classification (Figure 1), students' occupational aspirations were mainly placed in major group 2 (professionals, 50.5%), followed by major group 5 (service and sales workers, 19.6%) and group 7 (craft and related trades workers, 9.5%).

Figure 1 Occupational aspirations recoded according to COR major groups

With regard to the ISCO-08 classification with 4-digit codes, students' aspirations were widespread across the occupational range; as stated above, we used 128 such codes, so a clear trend was difficult to distinguish. For this reason, we resorted to the ranking of the 10 most mentioned occupations presented in Figure 2; this covered 51.4% of the total valid responses. Thus, the majority of the future occupational plans of our teenagers were to be police officers, generalist medical practitioners, motor vehicle mechanics and repairers, ICT professionals, lawyers, psychologists, secondary education teachers, etc. When we extended the ranking with the next five occupations (architects, cooks, kindergarten teachers, hairdressers and specialist medical practitioners), we included 63.5% of the valid answers, according to the ISCO-08 classification.
Moreover, in analysing the distribution of occupational aspirations on the ISEI scale (Figure 3), we observed that the values were asymmetrically distributed to the right, with certain 'peaks' for occupations whose scores were at the lower pole and in the middle of the occupational hierarchy (this will be discussed separately). Moreover, the percentage distribution of students' aspirations by ISEI score ranges (Figure 4) revealed a major interest in prestigious occupations: half of the students considered their future plans in terms of high status, the occupations cited here, being assigned to an ISEI score above 70.00. Only 9.2% of respondents aspired to low-status occupations, under an ISEI score of 29.99.
As mentioned above, there were two important percentage values in the first half of the ISEI hierarchy, around scores 30 and 50, suggesting a certain interest for or aspirations towards lower occupational status. Specifically, 5.7% of valid responses cited the occupation of *motor vehicle mechanic*, which was assigned 30.78 ISEI points; 3.7% of valid responses referred to the occupations of *hairdresser and beautician*, which were assigned 31.08 points on the ISEI scale. We also found occupational aspirations placed around the middle of the scale, such as *policeman* (assimilated to a score of 51.50 and mentioned by 10.7% of the valid responses), and *sports and fitness workers* (athletes and sports players, sports coaches and fitness instructors), with an ISEI score of 50.90 and cited by 4.1% of the valid responses.

Further on, the distribution of occupational aspirations on the upper third of the ISEI occupational hierarchy shows two significant peaks: for 75.13 and 88.70 ISEI points. Specifically, the former corresponds to *information and communication technology (ICT) professionals, computer and data-based professionals*, while the latter refers to *medical doctors and generalist medical practitioners*. The implications of these trends are discussed below.

**Modelling Occupational Aspirations by Occupational Prestige Scores According to Regression Models**

First, the analysis of the fit coefficient obtained for the four regression models (Table 3) shows that almost one-third of the variation in occupational aspirations, as measured by ISEI scores ($R^2 = 0.28$), is explained by our regression model.

<table>
<thead>
<tr>
<th>Model</th>
<th>Adjusted R square – occupational aspirations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.106</td>
</tr>
<tr>
<td>2</td>
<td>0.175</td>
</tr>
<tr>
<td>3</td>
<td>0.184</td>
</tr>
<tr>
<td>4</td>
<td>0.287</td>
</tr>
</tbody>
</table>

A second important observation is that, with the exception of the block comprising the variable indicating the situation of a parent working abroad, each block significantly improved the explanatory capacity of the regression models by approximately 10%. It is important to point out that these final coefficients of determination are of considerable magnitude, with variance inflation factor (VIF) tests of multicollinearity being insignificant.
This confirms that our models have good specifications, including a solid theoretical frame supporting them. Furthermore, we can state that such robust coverage of the variances of ISEI occupational aspiration scores indicates that adolescents already design their occupational plans in terms of status and, hence, validates the measurement of aspirations according to prestige or occupational status score.

Analysis of the Regression Models – Testing the Hypothesis

In relation to the dependent variable (occupational aspiration, measured by ISEI occupational prestige score), we observed significant differences after introducing all blocks of independent variables. Even after controlling for these factors, significant differences persisted, particularly corresponding to gender, mother's occupational status, parent's employment abroad and overall academic results in the previous school year (Table 4).
### Table 4  Block regression models: Occupational aspirations

<table>
<thead>
<tr>
<th>Block</th>
<th>Independent variable</th>
<th>B</th>
<th>Beta</th>
<th>sig</th>
<th>B</th>
<th>Beta</th>
<th>sig</th>
<th>B</th>
<th>Beta</th>
<th>sig</th>
<th>B</th>
<th>Beta</th>
<th>sig</th>
<th>B</th>
<th>Beta</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>67.031</td>
<td>0.000**</td>
<td>64.359</td>
<td>0.000**</td>
<td>48.109</td>
<td>0.000*</td>
<td>-18.876</td>
<td>0.002*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sex_female_1</td>
<td>9.43</td>
<td>0.229</td>
<td>0.000**</td>
<td>9.3</td>
<td>0.226</td>
<td>0.000**</td>
<td>9.123</td>
<td>0.221</td>
<td>0.000*</td>
<td>5.869</td>
<td>0.142</td>
<td>0.000*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ethnicity_Hungarian_1</td>
<td>-6.479</td>
<td>-0.127</td>
<td>0.000**</td>
<td>-4.642</td>
<td>-0.091</td>
<td>0.002**</td>
<td>-4.477</td>
<td>-0.088</td>
<td>0.003*</td>
<td>-3.284</td>
<td>-0.065</td>
<td>0.019*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ethnicity_Roma_1</td>
<td>-26.222</td>
<td>-0.127</td>
<td>0.000**</td>
<td>-20.231</td>
<td>-0.098</td>
<td>0.001**</td>
<td>-18.184</td>
<td>-0.088</td>
<td>0.002*</td>
<td>-9.865</td>
<td>-0.048</td>
<td>0.078</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>First 10 years in rural settlement_1</td>
<td>-5.498</td>
<td>-0.135</td>
<td>0.000**</td>
<td>-2.015</td>
<td>-0.049</td>
<td>0.135</td>
<td>-1.958</td>
<td>-0.048</td>
<td>0.144</td>
<td>-2.273</td>
<td>-0.056</td>
<td>0.070</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>First 10 years in small town settlement_1</td>
<td>-2.976</td>
<td>-0.052</td>
<td>0.113</td>
<td>-0.974</td>
<td>-0.017</td>
<td>0.592</td>
<td>-0.8</td>
<td>-0.014</td>
<td>0.659</td>
<td>-1.343</td>
<td>-0.024</td>
<td>0.427</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Siblings. How many brothers and sisters do you have?</td>
<td>-1.463</td>
<td>-0.105</td>
<td>0.000**</td>
<td>-0.827</td>
<td>-0.06</td>
<td>0.044*</td>
<td>-0.731</td>
<td>-0.053</td>
<td>0.073</td>
<td>-0.51</td>
<td>-0.037</td>
<td>0.181</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Counter of 8 household possessions</td>
<td>1.041</td>
<td>0.09</td>
<td>0.006**</td>
<td>1.021</td>
<td>0.088</td>
<td>0.006*</td>
<td>0.538</td>
<td>0.046</td>
<td>0.126</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Counter of 3 cultural possessions</td>
<td>1.02</td>
<td>0.0048</td>
<td>0.134</td>
<td>1.075</td>
<td>0.005</td>
<td>0.113</td>
<td>1.005</td>
<td>0.047</td>
<td>0.112</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>What was (in case of retirement, unemployment, death or other circumstances) or is your father's occupation? (ISEI)</td>
<td>0.05</td>
<td>0.055</td>
<td>0.109</td>
<td>0.041</td>
<td>0.045</td>
<td>0.190</td>
<td>0.018</td>
<td>0.02</td>
<td>0.533</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>What was (in case of retirement, unemployment, death or other circumstances) or is your mother's occupation? (ISEI)</td>
<td>0.166</td>
<td>0.196</td>
<td>0.000**</td>
<td>0.156</td>
<td>0.184</td>
<td>0.000*</td>
<td>0.082</td>
<td>0.097</td>
<td>0.003*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Parent working abroad_dummy_1</td>
<td>-5.429</td>
<td>-0.1</td>
<td>0.001*</td>
<td>-3.72</td>
<td>-0.068</td>
<td>0.013*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>What was your GPA in the previous school year?</td>
<td>8.305</td>
<td>0.363</td>
<td>0.000*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < 0.05 level, **p < 0.01 level
Girls had higher-status occupational aspirations than boys; the effect of gender was the most important quantitatively, as measured by the size of the beta coefficient, after the effect of academic results. Mother's occupation prestige level also had an important net positive effect on occupational aspirations. Interestingly, unlike mother's occupation, father's occupational status had a clearly insignificant effect on the dependent variable. Variations in the significance tests of the coefficients of this variable suggest that the impact of the father's occupational status was possibly mediated, for example, through educational attainment, whereas the impact of the mother's occupational status was direct. In other words, the father's occupation statistically conditions offspring aspirations only indirectly by providing resources for status attainment, whereas the mother's status apparently directly determines aspirations for a particular status attainment. Consistent with our hypotheses, having a parent working abroad had a significant negative effect on occupational aspirations. In this case, the independent variable was, in our opinion, an indicator of material constraints and possibly of exclusion from the labour market. This aligns with the extensive research conducted on the impact, particularly within educational settings, of parental labour migration on children (Giannelli & Mangiavacchi, 2010; Lahaie et al., 2009; Meyerhoefer & Chen, 2011). However, more recent evidence points to a limited or indirect effect of parental work migration (Chen, 2023), emphasising other individual factors and institutional mechanisms that shape occupational aspirations.

However, the most significant parameter for occupational aspirations, among those calculated in our research, was represented by school or academic results. A change of one standard deviation in GPA from the previous school year corresponded to a change of one standard deviation in the same direction of more than one-third of a standard deviation in the prestige score of the occupation aspired to by our student at the age of 30. Similar results for adolescents were obtained by Lekfuangfu and Odermatt (2022): an increase in the standard deviation of cognitive ability led to an increase in the level of career aspirations by 0.24 standard deviations. In addition, Furlong and Biggart (1999) found evidence regarding the direct impact of educational attainment on the variation in the status levels of occupational aspirations among 13- to 16-year-old adolescents.

**Mediating Effects**

Block linear regression allows for examining the mediating relations and causal influences between the independent variables and the dependent variable. As expected, in modelling aspirations related to occupational prestige
acquired at age 30, our models revealed several variables mediating the relations between other independent variables and the dependent variable.

Socioeconomic origin, measured by social class (as measured here by the material affluence or wealth score) and parental social status (as measured here by the prestige parameter of the parents' occupation, primarily that of the mother, on the ISEI scale) mediated the impact of the residential settlement in which the student lived during the first decade of life. Specifically, the significant negative effect of living during the first 10 years of life in a rural area disappeared after adding the block of variables indicating socioeconomic status. This confirms the results of other studies (Furlong & Biggart, 1999) that found no inherent rural disadvantage for the social opportunities of children and young people, but the fact that rurality is often a covariate of low socioeconomic status.

The negative impact of the number of siblings on aspirations disappeared if one parent was working abroad. This situation confirmed that the number of siblings per se is not a cause of low aspirations, but is merely a confounding variable of poor socioeconomic position and social exclusion, which was indicated by emigration for work.

By far, the most important moderator of occupational aspirations was educational attainment, as measured here by academic results. Their inclusion in the model cancelled out the positive impact of household possessions or goods (a measure of affluence or social class), with the notable exception of Hungarian ethnicity. For Hungarian students, the negative impact of ethnicity on aspirations remained significant, even after considering the previous school year's GPA.

Particular attention to block regression models was dedicated to the analysis of the effects of Hungarian ethnicity. It was observed that the net (negative) effect of being a Hungarian student after the introduction of academic results from the previous school year was only partially mediated by this variable. Thus, the impact of belonging to the Hungarian ethnic category remained significant.

In other words, in equal conditions in terms of other independent variables, including academic results, a young Hungarian from Bihor County had lower occupational aspirations than the sample average. This was not the case for Roma subjects, where the effect of ethnicity on aspirations was mediated by academic results.
Discussion

Our investigation aligned with the foundational theories of status attainment, suggesting that adolescents' occupational aspirations are pivotal in guiding both immediate educational paths and long-term career trajectories. This study sought to ascertain how factors such as gender, ethnicity, residence, family composition, socioeconomic status, parental employment abroad and academic performance impact these aspirations. Utilising data from the MERPAS3 sociological survey, which surveyed 8th Grade students in Bihor County (N = 2758), we transformed students' occupational aspirations into ISEI scale prestige scores, thereby facilitating a nuanced analysis of aspiration levels across diverse demographics.

The findings corroborated the existing literature (Astleitner et al., 2023; Cochran et al., 2011) in demonstrating that gender, maternal occupational status, ethnicity and academic achievement significantly influence the aspirations of adolescents. Notably, our data revealed a nuanced landscape in which aspirations were modulated by a complex interplay of demographic and socioeconomic factors, highlighting that a substantial portion ($R^2 = 0.28$) of aspirations can be elucidated through these variables.

The gender disparity in aspirations, with girls tending towards higher prestige careers, echoes broader societal trends and underscores the evolving ambitions of today's youth. This trend is notably pronounced in our Romanian cohort, which presented higher aspirations compared to Austrian counterparts (Korlat et al., 2023); this suggests the potential influences of educational system structures and broader socioeconomic contexts on occupational aspirations.

Academic achievement emerged as a paramount factor, asserting the strongest influence on aspirations. Yet, intriguingly, young Hungarians from Bihor County, despite academic success, harboured lower aspirations than the sample average. This observation points towards a perceived marginality affecting their aspirations and perceived success pathways, a finding that resonates with prior research on the region's demographic dynamics.

Our study further underscores the critical role of academic achievement in shaping future occupational plans, challenging the notion that merely elevating aspirations can drive educational attainment and success, especially among underprivileged groups. The evidence advocates for a dual approach: fostering high aspirations while equipping students with the necessary academic competencies and opportunities, particularly those from marginalised backgrounds.
Limitations, such as potential sample biases due to online data collection and missing responses, prompt caution in generalising findings. Nevertheless, the study contributes valuable insights into the complex web of factors influencing occupational aspirations among adolescents, emphasising the significance of academic success and the nuanced effects of sociodemographic variables. Future research should continue to explore these dynamics, especially the impact of parental socioeconomic status and educational systems on shaping young people's career goals and outcomes.

Limits

The interpretation of our findings is subject to several limitations, primarily stemming from the sample's representativeness, which is influenced by the data collection method utilised in schools. The online distribution of the MERPAS3 survey by headmasters and teachers, coupled with its self-administered completion, potentially introduced systematic biases. This method may have inadvertently excluded or underrepresented students at risk of low school engagement, such as those from socioeconomically disadvantaged backgrounds or marginalised communities (e.g., students with disabilities or Roma minority children). Consequently, we encountered a significant amount of missing data (32%) regarding occupational aspirations, with responses varying from uncertainty ('Don't know', 'Not sure') to a lack of engagement or future planning. This gap suggests that a substantial portion of our sample may grapple with occupational indecision, complicating our analysis of this uncertainty against other sociodemographic factors, such as gender, ethnicity and parental occupation.

Moreover, while our survey explored a wide range of factors, it revealed discrepancies in students' clarity about their educational versus occupational futures. Despite a 32% rate of occupational uncertainty, 82% of respondents articulated definite plans for pursuing higher education. This divergence points to the nuanced nature of occupational uncertainty, which, depending on the perspective, can either signify a normal stage of career exploration and openness to opportunities or indicate a lack of direction and potential social disadvantage impacting future occupational status.

Another significant challenge was the high rate of nonresponse to questions about parents' occupations, with approximately 45% and 39% missing data for mothers' and fathers' occupations, respectively. This absence of information disproportionately affects our understanding of the aspirations of students from more vulnerable backgrounds, such as those from rural areas, of Roma ethnicity or with parents working abroad and introduces biases into our models of occupational aspirations.
These limitations highlight the need for cautious interpretation of our results and suggest avenues for future research to address these gaps. Enhancing data collection methods to ensure broader and more inclusive participation, alongside deeper exploration of the implications of occupational uncertainty, could provide more comprehensive insights into adolescents' aspirations and future prospects.

Conclusion

Our study underscores the significance of gender, parental occupation, ethnicity and academic achievement as pivotal determinants in shaping the occupational aspirations of adolescents, revealing a direct and positive influence on their ambition levels. Notably, the presence of a parent working abroad and having Hungarian ethnicity emerged as factors associated with diminished aspirations. Furthermore, our analysis illuminated critical mediating effects: the impact of rural residence dissipates upon considering social class (gauged by household possessions), which itself is moderated by academic performance. Similarly, the influence of family size is mitigated by the scenario of a parent working abroad, while academic achievements offset the effects of Roma ethnicity on occupational aspirations.

Looking forward, we advocate for a focused exploration of how parental migration for work impacts the occupational dreams of adolescents. This includes delving into the effects of parental absence on students' educational outlook and aspiration formation within altered family dynamics. Additionally, the role of the at-home parent in influencing these aspirations warrants deeper investigation. Another fruitful avenue for research could involve assessing the efficacy of educational support programs (e.g., dual education paths and financial incentives) in bolstering the occupational aspirations of socioeconomically disadvantaged students. A nuanced understanding of gender disparities and stereotypes in occupational aspirations, especially how they intertwine with socioeconomic and cultural influences within the Romanian context, is also essential. Moreover, the connection between academic success and occupational aspirations deserves further scrutiny to delineate how educational achievements translate into career ambitions.

Equally important is the exploration of strategies to enhance the skills and competencies necessary for occupational success, aiming at bridging the gap between aspirations and achievable career paths. Our contributions enrich the body of research emphasising the crucial role that occupational aspirations play in facilitating social mobility and achieving
status, providing a foundation for future inquiries to build upon and expand our understanding of these complex dynamics.

References


Clemens, E. V., Helm, H. M., Myers, K., Thomas, C., & Tis, M. (2017). The voices of youth formerly in foster care: Perspectives on educational attainment gaps.
Navigating Aspirations: Understanding What Drives Romanian Adolescents’ …
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_Children and Youth Services Review_, 79, 65-77.  
[https://doi.org/10.1016/j.childyouth.2017.06.003](https://doi.org/10.1016/j.childyouth.2017.06.003)


[https://doi.org/10.3886/ICPSR06389.v3](https://doi.org/10.3886/ICPSR06389.v3)

[https://doi.org/10.1037/0012-1649.29.2.206](https://doi.org/10.1037/0012-1649.29.2.206)

_Clăsificarea Ocupațiilor din România_ (Classification of Occupations in Romania), (2024).  
[https://www.rubinian.com/cor_1_grupa_majora.php](https://www.rubinian.com/cor_1_grupa_majora.php)


[https://doi.org/10.1080/02671520701755424](https://doi.org/10.1080/02671520701755424)

[https://doi.org/10.1080/09500693.2015.1071899](https://doi.org/10.1080/09500693.2015.1071899)

[https://doi.org/10.1086/444088](https://doi.org/10.1086/444088)


https://doi.org/10.1080/01419870500224513

https://doi.org/10.17645/si.v10i2.5056


https://doi.org/10.1016/j.jvb.2019.103367


https://doi.org/10.3102/0002831214565786


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Longitudinal assessments of individual, social, and cultural influences. (pp. 27-54). American Psychological Association.


