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RECEIVED 09 July 2025

ACCEPTED 26 September 2025

PUBLISHED 20 October 2025

CITATION

Pachiu A-MD, Mureșan G-A and Man TC (2025) Quality education as a sustainable development goal in the context of marginalized communities at the local level: a case study in Cluj-Napoca (Romania). *Front. Educ.* 10:1662887. doi: 10.3389/feduc.2025.1662887

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Quality education as a sustainable development goal in the context of marginalized communities at the local level: a case study in Cluj-Napoca (Romania)

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This study focuses on SDG 4, “Quality Education,” as part of the 2030 Agenda for Sustainable Development, with a specific emphasis on the educational challenges faced by a marginalized community in the city of Cluj-Napoca (Romania). The research aims to capture perceptions both within and outside of this community. For this, we first gathered opinions and needs through face-to-face interviews in the community. To address educational inequalities, the study also examines the city’s population’s awareness, tolerance, and receptivity toward integrating students from disadvantaged backgrounds. This was assessed using online questionnaires, which were statistically validated by correlating response content with quantitative data. Our results found that, generally, the people of Cluj-Napoca are tolerant and very tolerant toward students from the marginalized community. The study further analyzes the key factors affecting the education of children in the disadvantaged community and suggests solutions based on the collected insights for relevant authorities.

KEYWORDS

quality education, sustainable development goal, marginalized community, informal settlements, tolerance, Cluj-Napoca

1 Introduction

Education has great importance for the global society ever since the United Nations (UN) Assembly in New York in 2000, commonly known as the “Millennium Summit.” The outcome of this meeting was the Millennium Declaration, which aimed at 8 major objectives (Millennium Development Goals - MDGs) for the period 2000–2015. The eradication of extreme poverty and hunger, which represented the first of the 8 goals, was followed by the concern related to education, the second target being to achieve universal primary education.

Because these goals were largely achieved globally (Sachs, 2018, p. e473) the UN General Assembly adopted, between September 25 and 27, 2015, 17 Sustainable Development Goals (SDGs) totaling 169 targets. These are meant to continue the mission of the previous 8 global objectives, but also to add value in other areas, on the path to sustainability. They are included in the document known as Agenda 2030, which represents the universal guide for successfully implementing them until the year 2030 (United Nations, 2015, p. 4, pp. 17–28). Education was assigned Goal 4 (SDG 4): “Quality Education,” with the full name: “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” (United

Nations, 2015, p. 19). It has 10 targets (7 effective targets and 3 implementation means) and 12 indicators related to the level of education (United Nations, n.d.; UNESCO, n.d.).

Opinions are divided in the literature on the adequacy of SDG 4 targets and indicators. Compared to MDG number 2, which emphasized access to education, SDG 4 shifts attention to quality (Smith, 2019, p. 28). However, this is often equated with student performance “measured” through grades or ratings, although the educational process depends on multiple factors such as the student’s background, his well-being at school, etc.

It is also noted that educational targets are very difficult to convert into corresponding indicators that accurately reflect the situation and that many indicators are difficult to apply at regional or local level, sometimes failing to capture real disparities (King, 2017, p. 806–809, 813). King (2017, p. 802) also suggested that there was a shift from learning needs as declared at Jomtien World Conference on Education in 1990 toward learning results, and the concern for the measuring indicators also increased.

In the Romanian education system, trends such as the establishment of private school units, individual preparations with teachers outside of school hours, closure of vocational schools and high schools, etc., have expanded. Thus, a strong emphasis is placed on excellence and performance, while those for whom even access to school itself is a difficulty are marginalized. Of course, excellence is important and desirable for any public school system, but the main priority should be to facilitate access to basic education for as many children as possible. In addition to being a fundamental right, it is essential for reducing social and economic inequalities, which in Romania are among the highest in Europe. Given that formal education is currently the primary means that contributes to the achievement of social status and the development of social stratification (Baker, 2011, p. 10–11), placing too much emphasis on quality—as indicated by SDG 4.1.1 and evaluated by student test scores—is becoming more and more counterproductive (Smith, 2019, p. 31). The shift toward prioritizing educational achievements (in the name of quality education) at the expense of equitable access to opportunities raises the question of whether some children are being forgotten. This is because, in general, students from middle- and upper-class families perform better in school, which contributes to increased inequalities (Smith, 2019, p. 33). This is evident in Romania, where the gap in underachievement in reading, mathematics and science (combined) among 15-year-olds from more advantaged socio-economic backgrounds and those from disadvantaged socio-economic backgrounds is of 48.8 percentage points (the highest in the EU) (European Commission, 2024a).

In the case of marginalized communities, it is important to realize that the issue of quality education is a complex one and cannot be addressed separately from other factors that may hinder it, such as health, living conditions, nutrition, income, access to infrastructure, discrimination, etc. These aspects were researched in several studies, which take into account the causes influencing the quality of education. For example, Salgado-Orellana et al. (2019, pp. 6–7, 9–11) studied the role of school programs or interventions, extracurricular programs and those developed in the community for the educational and social inclusion of Roma students. Their findings indicate that, in general, these programs result in better performance of Roma students, improvement of their social and educational skills, by using innovative methodologies, but also Roma teaching assistants who

know their culture and are more easily accepted within the Roma community. Zamfir et al. (2024, p.12) analyzed the influence of the socio-economic background (expressed primarily by educational attainment of parents) on students’ choice regarding the educational tracking and enrollment in higher education. They pointed out that the better the parental education, the higher the probability of choosing the general (vs. vocational) track and applying to higher education. Kallio et al. (2016, p. 659) found that there is a correlation between parents’ social and economic background and the likelihood of children completing secondary education by the age of 22 (finding that children from families with socio-economic disadvantages and with low parental education are the most prone to educational drop-out). In a paper by Filakovska Bobakova et al. (2022, p. 7) improving living conditions (e.g., access to income, access to housing, access to basic infrastructure for families) was seen as an essential prerequisite for the successful implementation of all types of educational interventions. Gambaro et al. (2015, p. 568) emphasize that the quality of early childhood education and care can be influenced by children’s background (disadvantaged areas vs. rich- areas), concluding that, in general, children from more disadvantaged areas are more likely to receive low quality education. All these studies show that both the social and economic circumstances, as well as the actors involved in children’s lives (parents, teachers, etc.) are factors that can decisively change the educational paradigm. All these being considered, is it appropriate to consider that the students’ performances are due to their own motivation and intellectual abilities (placing the responsibility on them), or should we insist on providing them with a conducive environment for qualitative learning?

The achievement of Goal 4 for education is seen as fundamental for sustainable development, as basic knowledge enables progress in all other goals (UNESCO, 2016, p. 368). Beyond access to education for all children, there is a new trend of interculturalization of education, aiming to increase social cohesion, integration capacity, and to fight against marginalization. The sustainable development goes hand in hand with intercultural/multicultural education, which is closely related to educational inclusion and, therefore, to social inclusion (Parthenis and Fragoulis, 2020, p. 239). High-quality inclusive education contributes to social inclusion (UNESCO, 2021, p. 20). As today’s society is increasingly culturally diverse, our children (who will become the citizens of tomorrow) must learn to live without prejudice, without discrimination against their peers whom they consider different and understand that there are equal opportunities for all (Salgado-Orellana et al., 2019, p. 3).

Measuring indicators at local level remains challenging, as averages often mask territorial disparities. In recent years, there has been an increase in studies analyzing the implementation of these SDGs at the local level and also the relationship between SDGs and local governance. For example, Bexell et al. (2025, pp. 6–8) identify tensions between SDGs global objectives and local relevance, institutional continuity and innovation, as well as long-term SDG horizons versus short-term local governance politics. Tremblay et al. (2021, p. 14), analyzing the case of Quebec City, emphasize the need for multi-level governance collaboration in order to achieve the SDGs’ targets at the local level. Chen et al. (2026, pp. 1–4) recognize that the global indicator framework (GIF) proposed in 2016 by the Inter-agency and Expert Group on SDG indicators has limitations when applied to smaller territorial levels (e.g., at the city level). They build a comprehensive indicator framework that integrates all 17 goals and 80

localized indicators. This sustainable development assessment system is then applied at the level of an urban agglomeration to measure progress in achieving the SDGs. In Romania, there are only few studies conducted at the local level regarding the Sustainable Development Goals because of the difficult access to relevant data. Research suggests that local-level analysis is the most accurate way to study sustainable development goals and to build useful and complex databases (Nagy et al., 2018, p. 2; Benedek, 2023, p. 67).

Considering the aforementioned paradigms, our study focuses on the educational situation at a level below NUTS 5 in Europe, referring to the specific case of a marginalized community in Cluj-Napoca territorial administrative unit (TAU), Romania.

In many cases, marginalized communities are intra-urban, poor, educationally disadvantaged areas that are not reflected in local or county level statistics. Therefore, qualitative, empirical research is needed in order to gain information and address the “roots” of educational gaps in this kind of marginalized communities. The purpose of our research is to gain knowledge on the subject, highlight the need for a deeper understanding of the situation beyond the local level and give some recommendations for those who have the necessary skills (town hall, schools) to implement. This is useful for monitoring the situation of marginalized communities and achieving a certain uniformity in the quality of education at the TAU level.

Our study has three specific goals:

- To identify the education-related deficiencies in a marginalized community through a case study.
- To assess the level of tolerance and receptivity from the people of Cluj-Napoca toward these deficiencies and toward students from this marginalized community.
- To establish a connection among the factors that may influence the poor quality of education in a marginalized community, as part of a TAU with one of the highest scores for this SDG goal in Romania.

2 Materials and methods

2.1 Study area

Cluj-Napoca is one of the largest and developed cities in Romania, having a population of about 300,000 inhabitants. It is, on average, a “green” TAU from the perspective of Sustainable Development Goal 4 (Quality Education), meaning it is in the closest stage of achieving it (Nagy et al., 2018, p. 13). However, significant discrepancies in the quality of education within it may arise, varying by area, neighborhood, or educational institution.

The vicinity of the waste disposal site of Cluj-Napoca (part of the Someșeni neighborhood) is home to 4 informal settlements (The New Colony, Dallas, Canton and Ramp). Together, they form the largest area with marginalized communities currently present in Cluj-Napoca, known as Pata Rât. The New Colony (Noua Colonie, also known as New Pata Rât) represents the newest marginalized community in this area. Unlike the other communities mentioned before, where there are mostly families settled there voluntarily for various reasons, Noua Colonie is made up exclusively of families forcibly evicted in 2010 by the local authorities from another neighborhood in Cluj-Napoca. The Atlas of Marginalized Urban

Areas in Romania (Swinkels et al., 2014, p. 11–14) made a classification of marginalized urban communities based on qualitative research. According to this classification, the Pata Rât area falls into the Slum-type zones with improvised houses and/or shelters. These are usually old, peripheral neighborhoods that expanded after 1990, with extremely poor communities (mostly Roma, but not exclusively). In this place, between 2000 and 2,500 ethnic Roma live in poor conditions, of which more than 1,000 are children (Radio Pata-a, n.d.). In general, due to the location and history, most of the people in the community work in the waste industry, which only provides them with a subsistence living. The exception is The New Colony, the most recent one. There is no school in this community, so the children attend nearby schools in the neighborhood of Someșeni, or other educational institutions in Cluj-Napoca, where they may be exposed to: bullying, segregation, isolation, social marginalization, language difficulties, etc. Additionally, being a marginal, industrial area, certain aspects can endanger children crossing the area, such as: many stray dogs, the presence of the railway, hazardous waste, etc.

2.2 Methodology

In this paper, we combined face-to face interviews (community perspective) and an online questionnaire (wider city perspective). This approach gave us insights into the perspectives on education from within and outside the Pata Rât community, that would be essential to formulate solutions beneficial to all involved parties. For interviews, we used snowball sampling initiated via two community connectors (an adult who had something to share about a known/related/neighbor child in the community) and then asked each participant to refer others who met inclusion criteria (adult residents of New Colony with a caregiving/household responsibility for a school-age child). Snowball sampling can over-recruit within specific social networks. To reduce homophily, we seeded two independent starting nodes and encouraged referrals across streets/kin ties. As done in previous studies (Pantea, 2015, p. 902, Parthenis and Fragoulis, 2020, p. 243; Peček and Munda, 2015, pp. 430–431), a qualitative research approach is most suitable when dealing with sensitive topics or vulnerable groups.

The current educational situation in the Pata Rât together with the shortcomings and requirements expressed by the community, were found out through on-site interviews. This practice was preferred because it allowed for a closer approach and interaction with the community. A total of 10 interviews were conducted in November 2022 with people living in the New Colony. Recruitment proceeded in iterative waves until thematic saturation: after the 9th interview no new codes emerged during concurrent coding, and the 10th interview confirmed saturation, so we closed recruitment. We chose an interview target of ~10 based on the narrow scope (education related access and experiences), homogeneity of the setting, and ethical considerations in a vulnerable community. The interviews consisted primarily of long and open discussions, with respondents feeling free to express themselves and share various experiences. Subjects such as the distance of children's schools, the means of transportation they use to reach them, and how they are treated by classmates and teachers were addressed. Following the recording and transcription of the interviews, content analysis (Komor and Grzyb, 2023, pp. 145–147) was conducted to summarize the education-related needs and desires

of the community members. Additionally, the research relied on continuous monitoring (between November 2022 and April 2024) of the community website ([Radio Pata-b, n.d.](#)) to stay updated on the most important requests of residents for a better education for their children. All participation was voluntary. Before any interview, researchers delivered a verbal information script (purpose, procedures, risks/benefits, right to stop without consequence) and obtained verbal consent. No names or direct identifiers were collected. Transcripts were pseudonymized at source and stored on encrypted drives with access restricted to the research team. We assessed the project as exempt from ethics review under local norms for minimal-risk social research without identifiable data. Nevertheless, we followed best-practice safeguards for vulnerable populations (privacy during interviews, neutral locations, option to skip questions, no incentives tied to sensitive disclosures). For the online survey, we displayed an information page about the usage of the data; IP addresses were not stored, and no sensitive information were required.

At the same time, we assessed the level of awareness among the population within the TAU and its level of tolerance and receptivity toward students from Pata Rât.

In the specialized literature ([Bangwayo-Skeete and Zikhali, 2011](#), pp. 518–522; [Dima and Dima, 2016](#), pp. 441–442; [Zanakis et al., 2016](#), pp. 484–489), the level of social tolerance was calculated through various indicators, using complex mathematical and statistical operations. The present study relates to the tolerance level of the citizens only by showing the aspects toward which there is the least receptivity, but also which are the most tolerant neighborhoods, in a more qualitative than quantitative manner. Citing [Zanakis et al. \(2016, p. 480\)](#) define social tolerance as “the recognition and acceptance of differences, willingness to grant equal rights, and refraining from openly intolerant attitudes.” We use tolerance to mean the degree to which respondents accept the equal presence, rights, and participation of Pata Rât students in mainstream schools (e.g., opposition to discrimination; support for equal treatment and integration). Receptivity denotes the willingness to accommodate concrete inclusion measures (e.g., after-school support, transport solutions), even when such measures entail efforts or resource reallocation.

To do this, the perspective of a sample of individuals from outside the community, from Cluj society, was investigated through content analysis of a questionnaire items, followed by statistical interpretation. It is important to see if the results of the two analyses coincide and how well ordinary people can explain this complex issue.

For the online survey, we sought broad coverage of Cluj-Napoca residents and distributed the ArcGIS Survey link through neighborhood Facebook groups, university mailing lists, and local civic pages from March 9th to April 12th, 2024. This is a nonprobability, self-selected sample; consequently, generalizability is limited.

The questionnaire consisted of 25 questions divided into 4 categories ([Supplementary Data](#)). The first category comprised 4 personal questions (1–4), aimed at gathering data on respondents' gender, age, residential neighborhood, and whether they have school-aged children. The second category consisted of 5 introductory questions about the research topic (5–9), to familiarize respondents with the questionnaire's theme and to gauge their awareness of the presence of these children in schools in Cluj-Napoca. In the third category (the core), comprising 14 items (10–23), respondents were asked to indicate their level of agreement with several statements/considerations, using values from 1 to 5 on

the Likert scale, where: 1 = Totally disagree; 2 = Partially disagree; 3 = Neutral; 4 = Partially agree; 5 = Totally agree. All statements were related to the educational situation of students from Pata Rât in schools in Cluj-Napoca. The last category consisted of two optional, open-ended questions (24–25) for free expression of opinion. In the end, a total of 367 valid, anonymous questionnaire responses were obtained. The study captures perceptions from a sample predominantly composed of females (89.65%), aged between 20 and 39 years (60.76%), and without children (86.1%), while under-representing older adults and current parents of school-age children. These results may bias results toward more empathetic attitudes and lower direct experience with school logistics. We therefore interpret our findings as indicative of the recruited sample rather than the full population and we explicitly temper any city-wide inferences. As the platform algorithmic exposure likely favored younger women, we attempted to offset this by posting in mixed-audience groups and by keeping the survey live for 5 weeks across different days/times. Accordingly, we refrain from generalizing to the full population of Cluj-Napoca. All quantitative conclusions are bounded to the achieved sample, and we frame city-level implications as hypotheses for future, probability-based studies with stratified quotas by gender, age, and parental status.

We conducted a statistical validation of the survey data to verify if the obtained information is relevant and has been collected properly by examining whether there is a certain correlation between people's responses. This analysis was based on the responses to the 14 items with Likert Scale choices, which were processed using the SPSS software. Additionally, we compared the results obtained through content analysis of the questions regarding the aspects for which respondents have the lowest tolerance with those obtained statistically.

Firstly, it was necessary to code the responses in the SPSS software for the 14 items for which the Likert Scale was used. These items represent questions from No. 10 to No. 23 in the questionnaire, but they were denoted from Q1 to Q14, in the order they were addressed to the respondents ([Supplementary Table 1](#)).

After inputting them into the software, the means and standard deviations were calculated for each of the 14 items. We also needed to make clear what we mean by “tolerated” and “less tolerated.” Instead of choosing an arbitrary cut-off, we used the weighted reference mean for all 14 items in the survey. This overall mean was 4.45 (and 4.40 for the grouped variables). If the score for an item or group of items was above this reference mean, we interpreted it as an area where society shows a higher level of acceptance (“tolerated”). If the score was below the reference mean, we interpreted it as an area with relatively less acceptance (“less tolerated”).

To rigorously assess societal perceptions regarding the educational situation of students from Pata Rât, we also considered 95% confidence intervals (CIs), and effect sizes. This approach complements simple averages by quantifying both the precision and practical magnitude of respondents attitudes ([Cohen, 1988](#), pp. 25–27; [Cumming, 2014](#), pp. 12–15).

Confidence intervals represent the range in which the true population mean is expected to lie with a specified level of confidence. A 95% confidence level is conventionally used in social research because it balances reliability and precision: if the study were repeated numerous times, 95% of the calculated intervals would contain the true population mean ([Cumming, 2014](#), pp. 13–14). CIs indicate the degree of uncertainty associated with each mean, which is crucial when

interpreting societal attitudes, especially near classification thresholds. We calculated 95% CIs using the following standard formula:

$$CI = \bar{x} \pm Z \left(\frac{\alpha}{2} \right) \times \left(\frac{\sigma}{\sqrt{n}} \right).$$

Where:

$\bar{x}$ = sample mean.

σ = sample standard deviation.

n = sample size (367).

$Z \left(\frac{\alpha}{2} \right)$ = critical value from the standard normal distribution for 95% confidence, which is 1.96.

Effect sizes were calculated as the difference between each item's mean and the overall reference mean of 4.45, which served as the threshold for defining "tolerated" versus "less tolerated" items. Effect sizes quantify the strength of deviation from the reference mean, providing insight into how strongly society perceives a given educational issue as accepted or less accepted (Cohen, 1988, pp. 25–27). Large positive or negative effect sizes reflect robust tolerance or intolerance, whereas smaller effect sizes indicate that the perception is closer to neutral or borderline. We used a simple difference from the reference mean for each item:

$$d = \bar{x} - \mu_{ref}$$

Where:

$\bar{x}$ = mean of the survey item.

μ_{ref} = 4.45 (weighted mean across all 14 items).

The classification of items into "tolerated" or "less tolerated" remains based on the reference mean, independent of CIs. However, CIs offer additional context for the robustness of the classification. For example, an item with a mean slightly above 4.45 but a 95% CI that includes values below 4.45 signals that the classification as "tolerated" is less stable, while a CI fully above the reference confirms a robustly tolerated perception. Similarly, large negative effect sizes with CIs entirely below 4.45 indicate strong societal consensus regarding lower tolerance. This combination of effect size and CI allows for nuanced interpretation beyond simple mean comparisons, aligning with our goal of identifying practically meaningful differences in social acceptance across educational factors. This combined approach ensures that the interpretation of survey data reflects both central tendencies and the confidence in these estimates. In this way, it provides a rigorous and transparent view of societal tolerance toward Pata Rât students.

Furthermore, new variables were created by combining the 14 questions, merging those that address the same aspects. Each of the 5 obtained variables essentially targets a category of factors influencing the quality of education for children in Pata Rât, with their value representing how tolerated these factors are in society's perception. Obtaining these variables for each individual (Supplementary Table 2) was achieved by calculating the arithmetic mean of the scores obtained for the questions falling within the respective category. Subsequently, the same process described earlier was repeated, comparing the means of the variables with their weighted average, to determine what obtained sample perceives as hindering the education of children in Pata Rât.

We also performed a correlation analysis, with the questions addressing gender, age, and whether the respondents have school-age children or not. These were appropriately coded and added to the program as variables (Supplementary Table 3). We checked for the normal distribution of data (for both the 14 questions and separately for the 5 variables obtained later). For this purpose, a basic analysis of descriptive statistics generated by the program for each variable was necessary, paying particular attention to the values for Skewness, Kurtosis, and the Normality Test (>0.05). For the Normality Test, the Kolmogorov–Smirnov test was chosen since the data sample exceeded 100 responses. After analyzing these values (Supplementary Table 4), as well as visually inspecting the histograms and QQ Plots within SPSS, it was evident that the data sets (response values) were not normally distributed. In this case, it was necessary to use the Spearman Rank Correlation non-parametric method. The correlation matrix was created for the 5 tolerance variables and will be interpreted in the results and discussions section of the study.

To incorporate a spatial aspect into the information, a slightly different, simpler, and less statistically based methodology was utilized. We considered the 14 items based on the Likert Scale, in addition to which we included three other questions from the questionnaire: questions 5, 7, and 8, which also express a certain level of tolerance and receptiveness toward students from Pata Rât, which can be captured in combination with the others. For these three questions, the intensity of responses was coded using a method similar to the Likert Scale (Supplementary Table 5). After establishing the scores for each question according to the coding, the final score of each respondent was calculated by summing the scores of the 17 targeted questions. The minimum score that could be obtained is 10, and the maximum is 74, with an average score of 42. The next step was to calculate the arithmetic means of the scores for each neighborhood in Cluj-Napoca. Considering that the minimum score obtained in a neighborhood was 56.5, which is above the average value, it can be inferred that all neighborhoods have a good to very good level of tolerance. However, to make a clearer differentiation between them, these average scores were standardized. Furthermore, they were divided into three intensity classes using ArcMap and ArcGIS Pro from the ESRI package (ArcGIS for Desktop Basic (RRID:SCR_011081)). The outcome was a map illustrating the level of tolerance and receptivity recorded in each neighborhood regarding the presence of students from Pata Rât in schools in Cluj-Napoca.

3 Results and discussions

3.1 Pata Rât community perspective (interviews)

First, the responses and information obtained from interviews conducted in Pata Rât were analyzed. The data, which was collected from the New Colony (or New Pata Rât) reveals the general and educational situation to be the best, as it is the colony with the best material conditions (most of the adults living here have jobs in Cluj-Napoca or in the vicinity of the city, and those working in the waste industry in the area are extremely few). The situation in the other three colonies is even more precarious.

Regarding access to education, we found that most children from New Pata Rât continue to attend schools and kindergartens, as they

have since their families were relocated here. Parents are aware that education is very important, but for them and their children, it requires many more efforts compared to a family living in the city. The schedule of the school bus includes only three trips per day, at 7:15, 12:30, and 14:30, which are not sufficient to cover the children's schedules. Since they were relocated here, things have not improved at all; no additional trips have been introduced, and children who attend school in the afternoon or have extracurricular activities do not have a special vehicle to transport them back home.

For example, look, my granddaughter is at school in Mărăști [neighborhood] at Agârbiceanu [school], and she takes the bus in the morning at 7:15 and gets out at 4 pm. Her mother has to pay for transportation daily to bring her home at 4 pm from school, by taxi, think about it... and we don't have transportation. So, if they could provide a vehicle for children and people who work from 5-6 in the morning... (Interviewed woman, New Colony)

There are two other bus routes, but the bus-stops are much further away.

Besides the effort of getting to school, these children often face judgment and exclusion not only from classmates but also from teachers. Young children are told they smell bad, that their clothes and shoes are dirty, that they live in Pata Rât, or that their parents work at the garbage dump:

Yes, yes... we went through a lot with the people from Cluj... they behaved very badly toward us. They discriminated against us, for example, our children with schools, if they go from here with mud, as you can see for yourself what it's like here, they arrive with mud... They say, 'Why did you come with mud on your shoes?' and they explain that we live in the Pata Rât colony, not in the city... (Interviewed woman, New Colony)

Parents complain that teachers, who should help their children integrate, often look down on them and isolate them from the rest of the class, even reproaching them that they should move out of the classroom. In many cases, children from Pata Rât are not accepted in Cluj schools because of their origin from this colony and are sent to inappropriate schools for their intellectual capacities, such as schools for children with special needs.

And they don't accept children to go to school unless we have a temporary residence in the city. For example, my daughter lives [in rent] on Cernei [street], has a boy and a girl... the school problem was only solved if the owner made a temporary residence. That's the only way she could enroll the child in school because they wouldn't accept him from here, only in Someșeni [neighborhood]... (Interviewed woman, New Colony)

According to the interviewed residents, few children from the Dallas, Ramp, and Canton colonies attend school compared to those from the New Colony, as their parents are more reluctant about education and do not support quality education as much.

The nearest school is about 3 kilometers away from the community, and without transportation, this distance is indeed an obstacle. Depending on the community's location, children from Pata Rât are distributed, according to the methodology for enrolling

children in education, to this school, which, however, faces a lack of places. Although it seems like the only reasonable option for community members, it does not represent an ideal educational environment and also requires a temporary residence from the parents. For example, in this school, Roma children are placed in separate classes and learn in the Romani language. This does not denote inclusion and multiculturalism but rather attempts to transfer it from the sphere of school segregation issues to the sphere of ensuring the right to education in the mother tongue. Thus, accepting Roma children in this school does not necessarily represent an act of integration. The significant reduction in the total number of students enrolled in the mentioned school, from over 700 in the 1960s and 1970s to about 300 today, is primarily attributed to the continuous withdrawal of non-Roma children due to the "increasing presence" of Roma children. This trend has led to the stigmatization of that school, labeled as the "gypsy school," without considering the general demographic decline in recent years or other contributing factors (Bertea et al., 2015, p. 18).

The stigma attached to the Pata Rât area and its residents has extended to the nearby school, affecting the children and teachers there, who have become, in the context of city schools, the social equivalent of the marginalized Pata Rât area. This place is perceived as a source of danger, to be avoided, and is blamed for various known disadvantages (pollution, conflicts, segregation, etc.). Consequently, just as the majority population of Cluj-Napoca refuses the relocation of Pata Rât families to mixed neighborhoods (Vincze and Harbula, 2011, p. 16), other schools also fear becoming like the "gypsy school" by integrating children from Pata Rât. Neither the municipality nor the County School Inspectorate had a desegregation plan for these areas. The programs and projects carried out, such as the Phare program at the mentioned school or the Pro Roma Foundation in the Dallas Colony, have improved local conditions but have not addressed socio-territorial marginalization and have not promoted socio-territorial, housing, and school inclusion. The problem does not lie in Pata Rât or the school but in the economic and social mechanisms, political decisions, and institutional neglect that generated them.

Educational and spatial segregation, as well as ensuring access to inclusive, quality mainstream education for children from marginalized communities (especially Roma children) are current topics in public policy at the European and national levels. For the 2021–2027 programming period, desegregation in education and housing is a major objective funded by the EU (European Commission, 2020a, p. 77) through cohesion policy funds, in particular the ESF + (European Commission, 2020b, p. 13). Despite this, although Member States have implemented measures addressing the socioeconomic inclusion of Roma, progress has been minimal or non-existent. As shown in a European Commission report, "a lack of political will and capacity at local level is one of the main obstacles in tackling educational and spatial segregation" (European Commission, 2024b, pp. 6–8). The results of an FRA survey on Roma (cited by European Commission, 2024b, p. 9) mention that segregation in education was particularly pronounced in Romania in 2021. As a result, a series of regulatory acts have been developed at the national level to ensure equal access to education for all children, including those from socio-economically disadvantaged backgrounds (including Roma children). However, as our study points out, there are still major discrepancies in education between Roma and majority children in terms of school attendance and differential treatment,

especially with regard to discrimination and segregation (Guvernul României, 2022, p. 16). In the case of disadvantaged communities from Pata Rât, socio-spatial segregation is the main cause of educational segregation. These communities have gradually developed a distinct social behavior (e.g., very low self-esteem, mistrust of authorities, etc.) compared to the majority population from which they are physically and residentially segregated. Due to the circumstances they are subjected to in that area (isolation, pollution, insecurity, insalubrity, etc.), the residents also experience socio-economic segregation. Most of them belong to the lower class or poor, with very low incomes. Given the high percentage of Roma people, ethnic segregation can also be considered, the main causes being discrimination and sometimes personal choices.

There are evident significant inequalities between the general living standard in Cluj-Napoca and that of the residents of Pata Rât, even though they are part of the same urban area. The problem of spatial and economic segregation primarily derives from income inequality, which is influenced in turn by inequality of opportunity and vice versa. These disadvantages can easily be passed on to future generations. A child born in Pata Rât has diminished chances of escaping marginalization and succeeding educationally from the start due to the very limited, almost non-existent opportunities offered by the environment compared to the conditions within the city. If changes are not made in a coordinated and major way, sporadic and isolated actions will be “attenuated” by the so-called community consciousness. This generally refers to the living conditions in this area, the negative circumstances and influences people interact with daily. All these factors leave psychological and emotional imprints, which can influence behavioral patterns and personal choices in life, posing the risk of assimilation within the community and forming a vicious circle. Thus, a collective mental space supported by the deplorable landscape takes shape, making residents feel they belong to such a place, seriously affecting their self-esteem and perception of the importance of education.

3.2 Perception of people outside the community (survey analysis)

Through the introductory questions about the research subject in the questionnaire, we aimed to find out how aware people are of the presence of children from Pata Rât in city schools. The results show that over half of the respondents (52%) knew that these children attend schools in Cluj-Napoca before completing the questionnaire, 17% were unsure, and 31% were unaware. Considering that the majority of the sample consists of young people (20–39 years old) without children, who have probably settled in the city in recent years, this level of awareness is expected. However, it is somewhat concerning that there are still people born in Cluj-Napoca who are not even aware of the existence of this community within the city’s limits.

Through question/item no. 9, we found what respondents consider to be the main obstacles to obtaining a quality education for the children from Pata Rât. According to most answers (Figure 1), the lack of material resources (poverty of marginalized families), social discrimination in schools, and the attitudes of parents from Pata Rât are the factors that most hinder obtaining a proper education. One can note that the problem of transportation and access to schools is not seen as having as significant an impact as the previously mentioned factors. Most likely, the respondents were not aware of the issue of temporary residency permits, the distances to schools, and the insufficiency of bus routes.

The item no. 24 was an open-ended question, which targeted respondents’ experiences regarding whether they had ever witnessed situations of discrimination against these children, allowing them to share those experiences. The vast majority (81%) admitted that they had not encountered such events, but the remaining 19% shared certain examples of cases where they witnessed this segregation.

I have witnessed situations of discrimination against children from the community, discrimination that occurred due to the behavior of these children from the community and the fact that

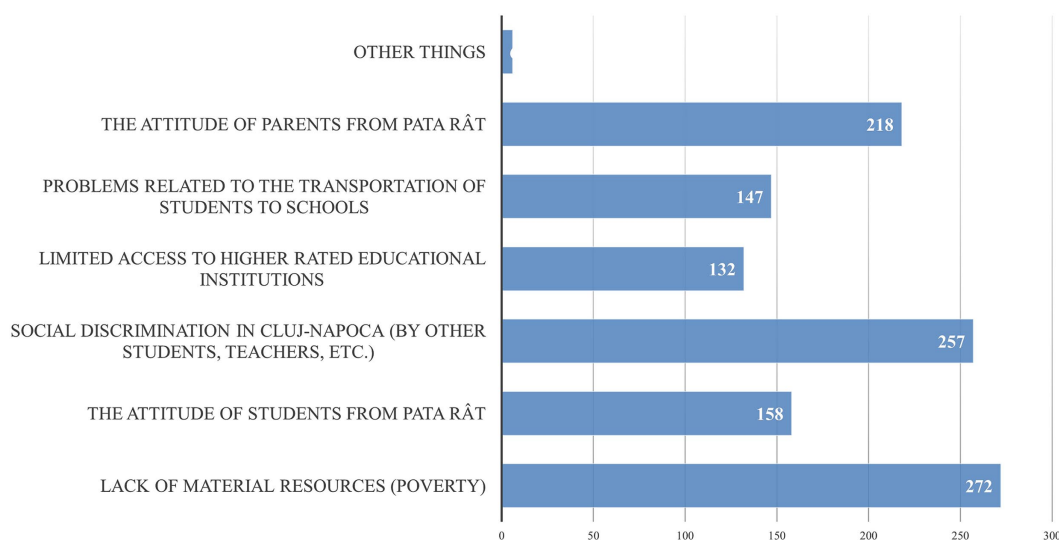


FIGURE 1

The main obstacles to a quality education for children from the Pata Rât community considered by the respondents (multiple answers). The questionnaire allows multiple selections and highlights the range of socio-economic, cultural, and institutional barriers that impede access to education.

most of them adhere to a survival law, disregarding the rules and moral norms respected by other children. As long as these children receive preferential treatment and the emphasis is placed on their rights without informing them of their responsibilities, unfortunately, situations of discrimination will continue to appear.

Yes, I worked for 3 years as a volunteer in Pata Rât [...], as a volunteer doctor. Anthropologically speaking, I observed that students from Pata Rât do not have the necessary education to integrate into a somewhat normal society, and somehow it is our duty to try to help them learn what education means (including sexual and reproductive education, basic common-sense education, and financial education).

Among the 19% of positive responses, 4% witnessed discrimination within schools:

Yes. In the case known to me, children from the marginalized community attending a well-known high school in Cluj were discriminated against by both their peers and teachers. They were subjected to different activities compared to other children present in the school, and moreover, discrimination occurred in group activities during classes (they were forbidden to participate in certain activities because of their origin and because they were shunned and rejected by their peers).

Another 3% witnessed discrimination on public transport in the city and 2% in other public spaces:

In the bus, a man forcibly removed two children who seemed to be from this community.

The question no. 25 sought to find out what types of measures respondents consider most useful in fighting against discrimination in education for children from Pata Rât (Figure 2). Again, measures such as providing bus transportation, establishing school units nearby, or distributing students in Cluj-Napoca schools were the least

mentioned. The most common suggestions referred to supporting parents from Pata Rât through education and professional training and adopting a non-discriminatory attitude from society. Actions such as providing material support, social integration programs, or intensive training of teaching staff were also mentioned:

Establishing a financial allowance to be granted to the families of students every semester for purchasing clothes/shoes/school equipment/supplies, to mitigate differences and avoid bullying by peers. This can be regulated in a way that the financial resources, which can be in the form of a voucher, can only be used in certain stores and not for alcohol, etc.

Children from the community need early education. Also, the mere involvement of teachers and the call for understanding from parents and children in general, without the support of organizations or the absence of other social integration programs, accompanied by the direct involvement of children and parents from the community, will make the efforts of those involved a fight against windmills. A social integration program is urgently needed to systematically support children from the community at least in the early years of preschool and primary education to encourage attendance and prevent school dropout. Teachers are prepared to welcome these children into the classroom community, but a bridge is needed to facilitate the school-family partnership.

Teachers who are not up to date with the methods of social integration and personal development of this century cannot provide children with that feeling of “closeness”. Parents have their faults, but teachers are not far behind. My opinion is that teachers' education needs to be updated as well. Parents cannot attend seminars or pedagogical circles to understand why their child, who grew up among Roma, is not accepted by other children in Cluj, but teachers are paid for this. My advice is to also consider

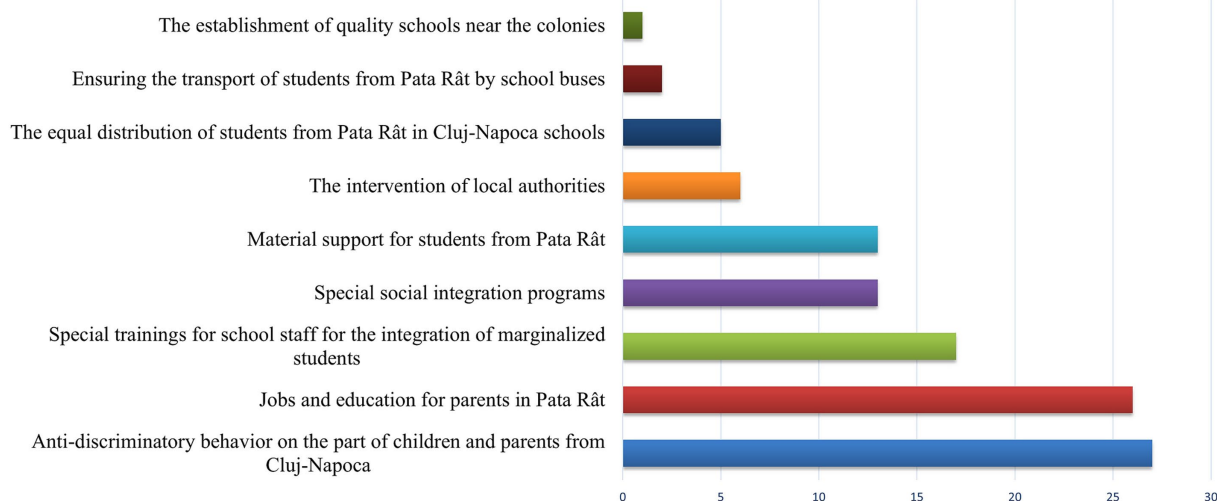


FIGURE 2

The measures against discrimination most mentioned by respondents. The responses illustrate the variety of strategies perceived as effective in promoting equal educational opportunities, aimed at reducing social exclusion and fostering acceptance of children from marginalized groups.

the teaching staff of the school. The methods by which children are encouraged to be part of the collective. The teacher is the third parent with whom the child spends eight hours a day.

These opinions are consistent with other studies on the education of Roma children which reveal numerous obstacles in their access to education. However, the conclusions reached by these studies are not unanimous. On the one hand, socio-economic disadvantages, associated with the low socio-economic status of Roma families and social discrimination, are identified as some of the key causes of the reduced educational participation of Roma children. At the same time, cultural differences, the lifestyle of Roma families in which certain rules are not observed, the language barrier are additional limiting factors (Tiryakioglu and Bulbul, 2025, p. 401, pp. 411–412). Some individuals, including teachers, attribute the educational failure of Roma pupils to their parents, who are perceived as neglectful and as placing little value on education (Makan et al., 2023, p. 240). The structure of the current education system—shaped by the dominant culture and ignoring Roma cultural values—is also important (Tiryakioglu and Bulbul, 2025, p. 416). On the other hand, in many cases, Roma themselves acknowledge the benefits of formal education. They express openness toward schooling, motivated by the desire to learn and acquire knowledge (Herțanu et al., 2023, p. 3). There are also teachers who believe that they themselves play an essential role in ensuring the educational success of Roma pupils and that schools must foster an inclusive culture (Nagy, 2025, p. 14).

The 14 items from Section III of the questionnaire were statistically analyzed.

Following the calculation of the mean of the variables and the overall weighted average, each aspect was considered either tolerated or less tolerated by the respondents by comparing each mean to the weighted average. The latter was calculated to be 4.45, against which only 4 variables had a lower mean, specifically: the first 2 items related to the parents from Pata Rât, the 3rd item related to the unfavorable environment in which these children were raised, and the 6th item related to the inclusive policies of the schools (Table 1). Thus, it appears that the origin of the children does not have a significant influence on their opportunities and academic outcomes, and increasing the number of places for Roma students may not be necessarily required.

The same procedure was carried out after grouping the items into more concrete variables by combining the previous 14 items (Table 2). The value of the weighted average obtained this time was 4.40, and only one of the five variables had a lower average (3.62), specifically the one related to the attitude of the parents from Pata Rât. From the two analyses, it is clear that the lowest tolerance from society, statistically speaking, exists in terms of the attitude and intentions of these parents, who are considered to be minimally responsible and involved in their children's education.

Next, we created the correlation matrix for the 5 variables obtained, along with items related to age, gender, and whether the respondents have children (Table 3). As we can see, there are no significant correlations between age, gender, having children, and the other variables, indicating that the results are not strongly influenced by various socio-demographic categories. This is somewhat logical and expected, as these categories are not well-balanced, with a dominant pattern described in the methodology section. However, we can observe that the correlations between the 5 variables are

higher, even exceeding 0.5–0.6, especially the last three being quite strongly correlated (e.g., V3 with V4, V4 with V5). Weaker correlations are noted between Variable 1 and the others, with the topic of parents from Pata Rât remaining more distinct. Regarding this, the questionnaire responses were more evenly distributed between tolerance and intolerance, compared to the others, where the balance tilted much more toward tolerance. These correlations support the fact that the data collected through the snowball method is quite representative and relevant for the obtained sample.

The analysis reveals that both the content analysis of open-ended questions and the statistical analysis highlight the aspect of parents from Pata Rât as the least tolerated. However, it is important to note that this reflects the perception of a limited sample and does not represent the general truth for the entire municipality. What has been obtained is, in fact, the way this sample of individuals explains social exclusion (and implicitly educational exclusion), attributing it primarily to the situation of the parents in the marginalized community. In an effort not to blame and to show empathy toward the children, the society in Cluj-Napoca tends to place most of the responsibility on the parents. However, it overlooks the fact that these parents are a product of a system that fails to provide equal opportunities to all, and people tend to view the issue as isolated rather than structural and integrative.

According to the score obtained by the respondents, calculated for the spatialization of information (Figure 3), the sample population is generally tolerant and very tolerant, having no issues with the integration of children from Pata Rât into schools in the city. Nevertheless, if things were exactly as such, it would imply that only those from the marginalized community are to blame for non-integration into society, which cannot be asserted due to the inherent limitations of our study. The sample has its limitations, and thus, the resulting perception may be influenced by the characteristics of the respondents. The majority of them being female, the high level of tolerance may be explained by the fact that this gender is often more empathetic and receptive, lacking sufficient male perceptions. Additionally, as the sample is predominantly young and without children, modern, inclusive conceptions are highlighted, but also a lack of parental experience, which likely contributes to a lack of understanding regarding the attitudes of parents from Pata Rât.

In terms of spatial representativity, one can note that responses were not obtained from Becaș neighborhood, which is also the second least populated in Cluj-Napoca. There were also cases with few recorded responses (for example, 1 response in the Făget neighborhood), but overall, the received responses were well proportioned to the population of each neighborhood. Another limitation, inherent to the pilot nature of this study, is the inability to generalize the results across all neighborhoods in Cluj-Napoca. Although our findings cannot be considered representative of the general perception of Cluj-Napoca's residents, the methodology employed can be applied to a larger and more representative sample.

Thus, even though the numerical level of tolerance appears high, the true perceptions are reflected in the responses to open-ended questions and the results of statistical processing, which validate each other. Therefore, it can be said that the blame cannot predominantly fall on the attitude of the marginalized community; society holds certain mistaken stereotypes. The responsibility largely rests with the local authorities who must manage each social category appropriately, especially those already disadvantaged.

TABLE 1 The population's perception of the elements that can influence the quality of education for children in Pata Rât.

Items	TD (%)	PD (%)	N (%)	PA (%)	TA (%)	Mean	σ	Decision
Parents from Pata Rât want the best possible education for their children.	23 (6.3)	55 (15.0)	135 (36.8)	90 (24.5)	64 (17.4)	3.32	1.116	Less tolerated
Parents from Pata Rât are entitled to enroll their children in more prestigious schools in Cluj-Napoca.	17 (4.6)	31 (8.4)	66 (18.0)	96 (26.2)	157 (42.8)	3.94	1.167	Less tolerated
The school-related challenges faced by the students of Pata Rât are mostly related to the context of the unfavorable place in which they live, not necessarily to their intellectual and behavioral characteristics.	7 (1.9)	21 (5.7)	40 (10.9)	143 (39.0)	156 (42.5)	4.14	0.957	Less tolerated
Students from Pata Rât must be integrated as best as possible into the school collectives in Cluj-Napoca.	7 (1.9)	7 (1.9)	26 (7.1)	78 (21.3)	249 (67.8)	4.51	0.858	Tolerated
Pata Rât students must not face prejudice or discrimination from others.	8 (2.2)	5 (1.4)	12 (3.3)	32 (8.7)	310 (84.5)	4.72	0.782	Tolerated
Schools in Cluj-Napoca must be as inclusive as possible, being able, for example, to supplement places for Roma students.	15 (4.1)	15 (4.1)	28 (7.6)	76 (20.7)	233 (63.5)	4.35	1.058	Less tolerated
Students from Pata Rât must have the same rights as their colleagues who live in Cluj-Napoca, be treated the same and be involved in the same activities.	3 (0.8)	2 (0.5)	11 (3.0)	32 (8.7)	319 (86.9)	4.80	0.591	Tolerated
The teachers and directors of the schools in Cluj-Napoca must be prepared and responsive to the specific needs of the students in the respective community.	6 (1.6)	6 (1.6)	14 (3.8)	70 (19.1)	271 (73.8)	4.62	0.780	Tolerated
The relationships between the children from Pata Rât and their colleagues from the schools in Cluj-Napoca must be characterized by acceptance, friendship and mutual support.	3 (0.8)	4 (1.1)	13 (3.5)	43 (11.7)	304 (82.8)	4.75	0.652	Tolerated
Parents in Cluj-Napoca should not be disturbed by the fact that their child's class includes students from the marginalized Pata Rât community.	9 (2.5)	7 (1.9)	23 (6.3)	52 (14.2)	276 (75.2)	4.58	0.883	Tolerated
The presence of children from Pata Rât going to school on the buses in Cluj-Napoca should not disturb anyone.	5 (1.4)	5 (1.4)	18 (4.9)	37 (10.1)	302 (82.3)	4.71	0.743	Tolerated
The fact that sometimes students from the marginalized Pata Rât area have damaged/dirty clothing/shoes should not be a reason to judge or discriminate against them, given their background.	7 (1.9)	3 (0.8)	12 (3.3)	51 (13.9)	294 (80.1)	4.69	0.746	Tolerated
Taking into account the long distance they have to travel from home to school and the difficulty for parents to adapt their schedule to this distance, it would be a good solution for students in Pata Rât to benefit from certain activities or programs afterschool type, without being marginalized.	7 (1.9)	5 (1.4)	20 (5.4)	51 (13.9)	284 (77.4)	4.63	0.808	Tolerated
The simple fact that they come from a disadvantaged, marginalized socio-economic environment and do not have the same conditions as other children, does not automatically mean that students from Pata Rât do not like school and do not want to learn.	5 (1.4)	8 (2.2)	19 (5.2)	69 (18.8)	266 (72.5)	4.59	0.801	Tolerated

No. = 367 (answers). TD = Totally disagree; PD = Partially disagree; N = Neutral; PA = Partially agree; TA = Totally agree. Decision – based on – Weighted Average = $62.35/14 = 4.45$.

3.3 Integrated interpretation of qualitative and quantitative results

Interviews strongly foregrounded transport logistics (only three school-bus trips/day at 7:15, 12:30, 14:30; safety and cost concerns for returns after 16:00), institutional gatekeeping (residency requirements) and stigmatizing experiences with teachers and

peers. In contrast, survey respondents prioritized poverty, discrimination, and parental attitudes as key obstacles, while under-rating transport/access—likely reflecting the non-parents, younger composition of the sample. This convergence/divergence pattern suggests that material and access problems are salient to families but less visible city-wide, whereas value-based inclusion is broadly endorsed.

Open-ended survey comments corroborate interview themes of stigmatization (reports from schools, buses, public spaces) and also surface system-level remedies (teacher training, early

education, vouchers/allowances). These align with our policy suite. Thus, the qualitative approach explains the mechanisms behind quantitative patterns (e.g., why “transport” scores lower in salience outside the community). Together, the results provide a fuller picture: structural barriers (transport, zoning, documents) and relational barriers (stigma, low expectations) interact to depress educational access.

We acknowledge the limitations of the obtained perceptions and do not claim generalizability. The results of this study should be interpreted as reflecting the situation of the Pata Rât community only, as the number of interviews and responses does not allow for generalization to the broader population of Cluj-Napoca. However, we believe that with the number of responses

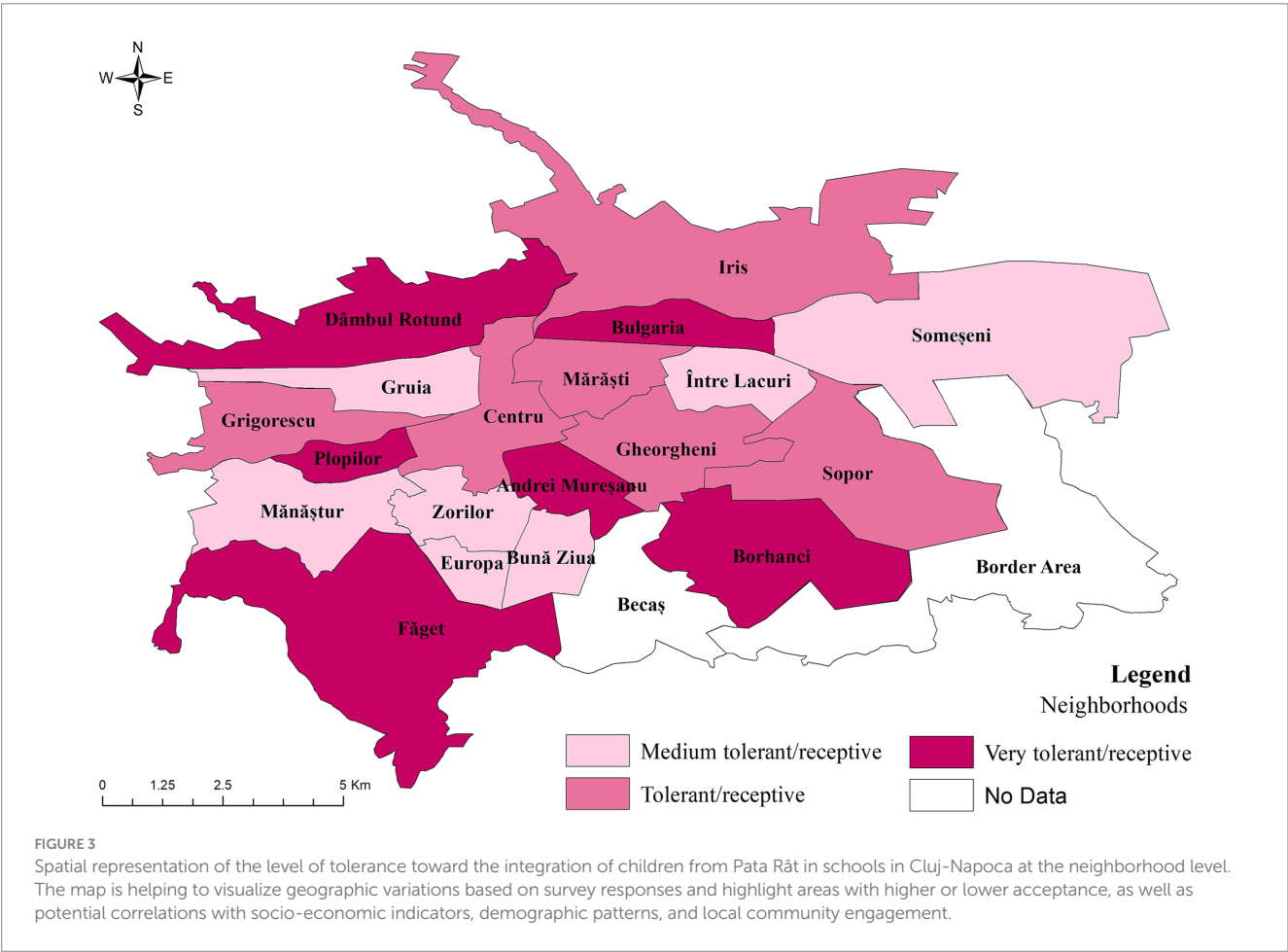
TABLE 2 Population perception regarding the 5 concrete variables.

Statistic		V1	V2	V3	V4	V5
N	Valid	367	367	367	367	367
	Missing	0	0	0	0	0
Mean		3.62	4.47	4.71	4.66	4.58
Std. Deviation		0.924	0.670	0.659	0.705	0.666

Weighted Average = 22.04/5 = 4.40.

TABLE 3 Correlation matrix of variables.

Variable	Mean	SD	Gender	Age	Children	Var1	Var2	Var3	Var4
Gender	1.89	0.32	1						
Age	1.90	0.63	−0.12*	1					
Children	1.86	0.34	−0.11*	−0.40**	1				
V1	3.62	0.92	0.02	−0.12*	0.06	1			
V2	4.47	0.67	0.13*	−0.1	0.15**	0.44**	1		
V3	4.71	0.65	0.08	−0.01	0.03	0.29**	0.49**	1	
V4	4.66	0.70	0.17**	−0.04	0.03	0.36**	0.57**	0.63**	1
V5	4.58	0.66	0.13*	−0.11*	0.14**	0.44**	0.57**	0.58**	0.62**



received, we have managed to gather valuable and objective information, both from within and outside the community. Although our research is a pilot study, it holds significant potential for expansion, both spatially and methodologically. With additional resources, a fully representative level of tolerance can be achieved.

4 Conclusions and recommendations

To ensure equal access to educational resources for marginalized individuals (socially, spatially, etc.), it is necessary to implement institutional mechanisms that facilitate this accessibility. Broader measures than the usual educational policies or projects (mostly oriented toward performance) are required, focusing primarily on access to education. The issue of access requires an integrative and cross-sectoral approach, as even the best-intentioned inclusive educational policies will not bring about lasting changes in Roma people's lives without addressing the underlying issues equitably (Vincze and Harbula, 2011, p. 151).

Daily life in a segregated, isolated, and polluted area, combined with poor housing conditions and social insecurity, leads to instability in school participation. These issues cannot be resolved solely through educational programs but require the desegregation of the Pata Rât area. The combination of poor living conditions in a segregated area and the concentration of children from this area in a single school perpetuates social marginalization from one generation to the next.

As many studies have shown, another important indicator of equal opportunity is the link between the educational performance of young people and the socio-economic status of their parents. The strong correlation between poor academic results and the reduced involvement or competence of parents suggests that public services, particularly education, are not sufficiently adapted to promote equal opportunities for all children, regardless of their social environment. Providing quality social services is essential to fight against the increasing inequality of opportunity. Among the fundamental means to stop the transmission of disadvantages between generations are accessible and high-quality child care services, social housing, education, and healthcare.

In our study, through qualitative and quantitative methods, we found two perspectives within the same administrative unit, highlighting the importance of equitable management of disadvantaged groups from both educational and social viewpoints. Ignoring this situation will lead to increased pressure on the city from these communities over time. Timely and equitable support and ensuring access to education will benefit the entire community by: providing skills, improving living standards, relieving social assistance/unemployment structures, and boosting the city's economic growth by integrating disadvantaged individuals into the labor market. Inclusive education starts with ensuring that all children have access to appropriate learning and ends with delivering multiple benefits manifested in a prosperous, sustainable, and equitable society.

Based on the gained insights, we propose the following measures to be implemented into the Pata Rât community:

- Add high-frequency student bus routes and nearer stops (supported by interviews citing three fixed trips/day misaligned with schedules; the under-recognition in the survey highlights the city's lack of information about this issue).
- Rezone catchment areas and remove temporary-residence barriers (interviews describe rejected enrollments and diversion to inappropriate schools; aligns with literature on segregation and inclusion).
- Free afterschool programs (on site or school-based) (survey item on after-school solutions rated "tolerated"; addresses long commutes and caregiver schedules reported in interviews).
- Parents upskilling and support (survey's least-tolerated factor—perceived parental attitudes—indicates a public desire for constructive support rather than blame; open-ended responses call for social integration and early education).
- Structured school-family partnerships across social groups (bridges relational barriers documented qualitatively and in open-ended survey narratives).
- Targeted teacher professional development and recognition (multiple open-ended responses request updated integrated methods: interviews report stigmatization practices).
- Material support (meals, transport, supplies) for disadvantaged children enrolled in the public education system (repeated in open-ended responses).

Data availability statement

The original contributions presented in the study are included in the article/[Supplementary material](#), further inquiries can be directed to the corresponding author/s.

Ethics statement

The studies involving humans were approved by the "Babeş-Bolyai" University institutional review board. The studies were conducted in accordance with the local legislation and institutional requirements. The institutional review board waived the requirement of written informed consent for participation from the participants or the participants' legal guardians/next of kin because the research did not involve the collection of sensitive personal data, interventions with human participants, or any activity that would raise ethical concerns under current national and institutional regulations. The study relied on publicly available information and/or anonymized qualitative data gathered in accordance with standard academic protocols.

Author contributions

A-MP: Writing – original draft, Investigation, Data curation, Formal analysis, Conceptualization, Methodology. G-AM: Writing – review & editing, Supervision, Writing – original draft, Project administration, Conceptualization. TM: Methodology, Validation, Supervision, Writing – review & editing, Formal analysis.

Funding

The author(s) declare that no financial support was received for the research and/or publication of this article.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Supplementary material

The Supplementary material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/feduc.2025.1662887/full#supplementary-material>

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