



RESEARCH ARTICLE

# Should I Move? The Benefits and Costs of Spatial Mobility for Different Groups of the Roma Population

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**Introduction:** Moving away can be motivated by a multitude of factors, just as the reasons for not moving away might be different. The individual's social situation greatly determines the chance of turning their life situation around through moving away.

**Aims:** We investigated the factors that affected the representatives of the three Roma groups researched here (Romungro, Vlach, Boyash) in their moving in the past and in their intentions to move in the future.

**Methods:** A SEM model was developed ( $N = 570$ ) to analyze the differences between previous movers and non-movers in well-being, socioeconomic status, and social network. We also investigated the effect of the above variables on the intention to move. Data were collected via the “snowball method”.

**Results:** Out of the Vlachs, those who had moved in the past have significantly fewer confidant relatives ( $p = .021$ ) and also know significantly fewer people pursuing high-prestige vocations ( $p = .003$ ), moreover, the fewer people pursuing moderate-prestige vocations they know, the more they would like to move away from their present residence ( $p = .031$ ). Regarding the Boyash, the more favorable their socio-economic situation, the more they would like to move away ( $p = .007$ ); while regarding the Romungro, the low level of their mental wellbeing ( $p = .019$ ) and the relatively high number of their confidant relatives constitutes ( $p = .017$ ) the incentive to change their residence.

**Conclusions:** The spatially mobile Roma who had moved before possess fewer confidant relatives and weak ties. The individual factors connect to the different Roma groups' moving intentions to various extents.

**Keywords:** Roma groups, mental health, spatial mobility, weak ties, CDN

## Introduction

Spatial mobility constitutes an important feature of our present time, exerting significant effects on individuals, families, and communities of various sizes. Generally, under ‘spatial mobility’, moving within the country's borders is understood, with an emphasis on its local effects (Sik, 2003; Cseres-Gergely, 2013; Gödri, 2018), such as reducing spatial inequalities. The individual's social situation and status greatly determines the chance of improving their life situation by means of spatial mobility (Csizmady et al., 2020). According to the relevant literature (Hautzinger et al., 2014; Elekes, 2017, 2021; Husz, 2011; Ladányi, 2010; Kovács, 2014), moving is also associated with mental health risks, which may be vary among Roma groups of different socio-economic status and with different social networks.

The Roma population constitutes Europe's largest and most vulnerable ethnic minority. WHO estimates their number in Europe around 12-15 million, out of which 10 million live in EU territory, and a significant number – about 1.5 million – live in Eastern-Central Europe (Cahn & Guild, 2008); out of these, almost 900,000 reside in Hungary (Pénzes et al., 2018).

Ever since arriving into Europe, Roma people have been characteristically experiencing discrimination and exclusion. As throughout in Eastern-Central Europe, also in Hungary, one of the largest loser groups of the post-Communist regime change (1990) is the Roma population, most strongly impacted by the unemployment that the transition and its consequences caused (Fésüs et al., 2012). Despite the development endeavors that were successfully implemented in the latter decades in Hungary, the Roma population continues to be characterized by low completed schooling and a low level of presence in the workforce market; as a consequence, many experience a low income and living in permanent poverty (Fésüs et al., 2012; Diószegi et al., 2020). Poverty as a structural disadvantage is enhanced through a disadvantaged settlement structure and economic structure, as well as a big proportion of Roma population at a given location: many of them live in regions where advancement is impossible and thus, poverty is cemented (Babusik, 2007).

According to the latest statistics, Roma people in general are characterized by high levels of poverty and unemployment, and have mainly primary education (Bernát, 2019; KSH, 2021).

In spite of their large numbers and migratory lifestyle, which characterizes them even after settling down (Durst & Nagy, 2018; Durst, 2018; Virág, 2018; Elekes, 2021), numerous researches deal with their primarily employment oriented international migration that possesses a circular character – in the course of which, the contacts with their relatives and their social support does not get lost. However, their movement within country borders remains a less researched field. This constitutes an utterly different life situation than international migration: moving away is a mentally burdensome crisis situation that might negatively impact mental health, further exacerbated by low schooling levels. In the course of moving away, individuals and families may lose their social support and the control over their situation, while manifesting depressive symptoms and becoming isolated (Hautzinger et al., 2014).

The specific socio-economic situation of the Roma population in Hungary (low educational attainment, high unemployment rate, low employment rate, high risk of poverty), housing problems (poor quality houses/flats in economically underdeveloped settlements), poor mental health (e.g. high risk of depression) and their particular social network (relational vacuum) particularly justify an examination of their geographical mobility and the losses and gains in entails.

In this article, we examine the geographical mobility of the Roma population in Hungary in general while focusing on the differences between the three major subgroups of the Roma population; we try to capture characteristics that bring us closer to understanding different groups of the Roma population, which is otherwise treated as an ethnically homogeneous group. In this article, the “Roma” term is used according to the definition of the Council of Europe (2012).

## Main Tendencies of Spatial Mobility in Hungary

However, the spatial mobility in Hungary shows an increasing trend, though the Hungarian population is still less mobile than inhabitants of other European countries: 79% do not plan to move and only 4-6% move to another settlement each year, mainly to the capital and Western Transdanubia (KSH, 2016; Kincses, 2014; Bálint & Obádovics, 2021; Csizmady et al., 2020). According to data from a large sample of representative research in 2018, 19.5% of those belonging to under-integrated social groups would like to move, but only very few of them manage to realize their intentions (Csizmady et al., 2020).

Since it is not even possible to give an exact number of the Roma population, providing an estimate about the Roma people's spatial mobility remains difficult. In Hungary, Roma people live in micro-villages where their proportion continues to grow as opposed to the majority population, the latter gradually moving out of these settlements due to the lack of job opportunities (Ladányi et al., 2010). In Hungary, disadvantaged people have very few opportunities to move to geographically more integrated territories. Generally, they live in low-quality, municipal social housing units, among very poor conditions. The Roma's spatial mobility opportunities are very limited, as no significant rental apartment developments occurred after the regime change, and no new rental apartments have been built (KSH, 2016). It is worth noting that a high rate of Roma people, when looking for housing (29%) (FRA [European Union Agency for Fundamental Rights], 2022), have felt discriminated against because of being Roma.

## Roma Population Living in Hungary

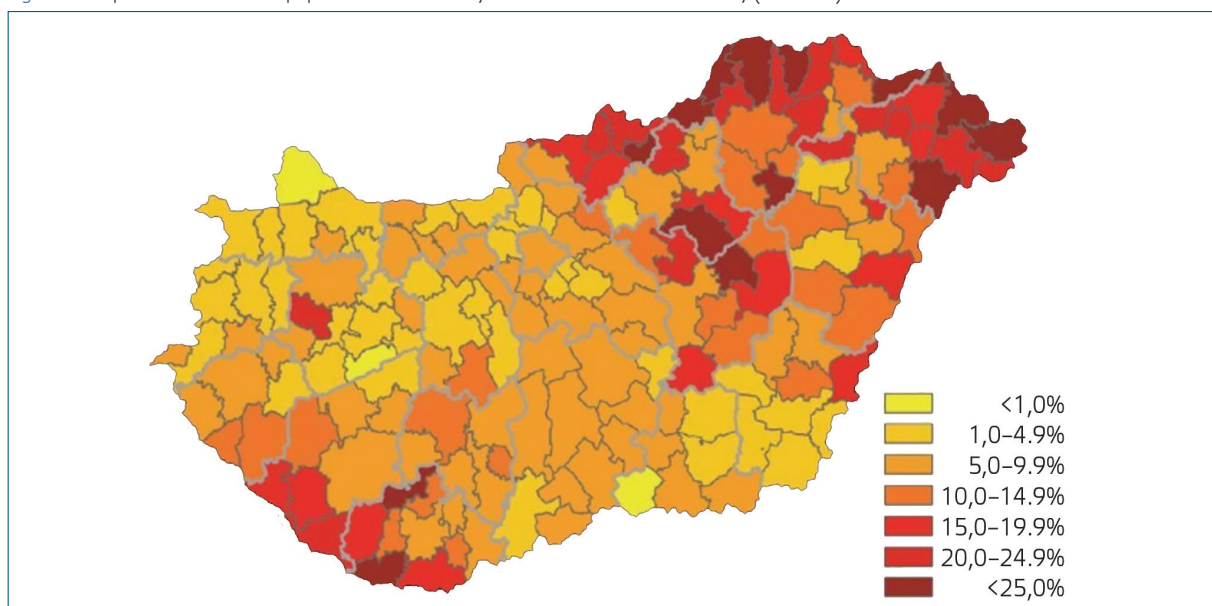
It is difficult to determine the exact number of the Roma population – since ethnic identity is considered to be a private affair in Hungary, and thus, for data protection reasons, it does not appear in the obligatory national data provision. At present, the number of the Roma population is estimated at 9% of the total population (Pénczes et al., 2018). They represent the most populous ethnic group in Hungary, and the only one whose number is continuously growing. This results in an unusual progressive population pyramid: many children and few old people. In terms of schooling, the proportion of those possessing no more than a primary school degree stands four times higher compared to the non-Roma population. The proportion of early school dropouts among the Roma amounts to six and a half times as many as among the non-Roma (60.8% vs. 9.3%) (KSH, 2021). They live mainly in less developed regions, in small settlements, and a high unemployment rate prevails among them. The unemployment rate among the Roma population amounts to 19.9%, while among the non-Roma population, this number is 3.7% (KSH, 2021). The rate of unemployment among the Roma population shows a more unfavorable picture than among the non-Roma population, with lower schooling levels (this proportion among the Roma population with a primary schooling level being 10.7% (KSH, 2021). Among these people, the inactivity rate is also high (44.9% vs. 34.1%) (KSH, 2021). Poverty and social exclusion afflict the Hungarian Roma population (Bernát, 2019). The risk of poverty rate is 77% among Roma while it is 12% among non-Roma people. The rate is higher among Roma children aged 0–17 (80%). Housing deprivation (requires at least one of the following dimensions: accommodation is too dark, has problems with humidity, has no shower/bathroom inside the dwelling or has no (indoor) toilet rate is 37% among Roma and 24% among non-Roma population. Furthermore, the rate of people living in overcrowded households stands at 91% among Roma and 20% among non-Roma people (FRA, 2022). In spite of many of them having been assimilated, the Roma tend to maintain and preserve their own cultural identity and traditions, which fundamentally determine their way of life, their lifestyle, and through that, their health attitude, as well (Nunes et al., 2018; Diószegi et al., 2020).

As individuals may show depressive symptoms, lose social support and become isolated when they move (Hautzinger et al., 2014), and as the Roma live in the most deprived regions while their housing situation has always been segregated (Kovács, 2014), it is important to understand the characteristics of Roma in terms of housing, health, and social network when analyzing their spatial mobility.

### *Geographical location and housing*

In Hungary, the Roma's residences are mostly concentrated in economically disadvantaged regions. These territories are mainly located in Northern Hungary and some districts in the Southern regions (see Figure 1). Due to selective migration and high fertility, in the regions where the Roma represent a higher proportion of the population, a ghettoization has started (Pénczes et al., 2018).

Figure 1. Proportion of the Roma population in the county district based on the DE-survey (2010–13)



Note. Source: János Pénczes, Patrik Tátrai, István Zoltán Pásztor, Területi Statisztika (Territorial Statistics), January 2018.

According to the data of population census (2011), 1633 poor ethnic ghettos existed in Hungary, as well as 280-300 segregated territories, where several thousand people lived, constituting 3% of the Hungarian population (KSH, 2014).

The poorest Roma groups mainly live in economically backward, micro-village settlements, within colony-like conditions (in the country's Eastern, Northern and Southern Transdanubian regions); these settlements constitute coherent ghettoizing territories (Kovács, 2014). 40% of the Hungarian Roma live in such settlements (Husz, 2011). In some regions (such as Borsod-Abaúj-Zemplén County), spatially segregated ghettos have come into existence, which increases the interdependency of those living secluded, resulting in a kind of outsider social identity among them (Elekes, 2017). In the country's Southern part, the Roma population could better adapt to agricultural production, and although unemployment remains high even in this region, the Roma people complement their income with gardening and animal husbandry. As a fusion of the twofold value system, a more successful integration has been realized, with one reason being the increased helpfulness of the macrosocial milieu, and the other being the much stronger Roma integrational endeavors: their willingness to adapt is higher, they conform to universal values and are open towards heterophil relationships (Elekes, 2017). Space possesses an identity-forming power, which affects social integration. This is especially important in the case of Roma youth, who tend to increasingly define themselves as a counter-culture, so adapting universalistic values remains difficult to accomplish, and the strengthening of particular values remains typical, which is, however, the basis of disintegration (Elekes, 2017). In some Roma villages, the Romungro and the Vlachs distance themselves spatially and also with their special community lives as well as in their communication; conflicts between these two groups are frequent (Elekes, 2021).

In Hungary, every second Roma lives in a neighborhood where the majority of the other residents are also Roma (Virág & Váradi, 2017). These neighborhoods vary in terms of housing conditions and social contacts, depending on which territories and how large an area the residents occupy, and how typically social exclusion appears against them.

In terms of their health condition, those living in the colonies, also characterized by a low socio-economic situation (SES) and a backward infrastructural level, suffer the worst fate (Solymosy, 2007). In the seventies, two-thirds of the Roma in Hungary lived in segregated colonies, usually located at the end of the village or on the outskirts of larger settlements, frequently separated from the majority society by natural or physical borders (brook, river, railroad track, track crossing guards). In the latter decades, significant developments have been implemented in order to improve the Roma's housing conditions, as a result of which the number of Roma colonies reduced considerably. Despite this, however, the Roma's geographical segregation still continues to prevail (Janky & Kemény, 2004; Teller, 2011; Virág & Váradi, 2017).

### *Health condition*

Besides the individual characteristics, peculiarities of the residence (such as the housing environment's poverty level) equally determine the health condition (Subramanian et al., 2003). The Roma population's highly disadvantaged health condition is determined both by their way of life and their bad social-economic situation (Forray, 2013; Kósa, 2006). The Roma's minority status carries numerous health drawbacks, fundamentally influenced by the living environment that is determined, among others, by bad housing and living conditions and overcrowded apartments; all this results in a ten years lower life expectancy among them, as compared to the majority population. Based on data from 2017, Roma women live 9 years fewer than women in the general population, and this number is 6.4 years among Roma men (FRA, 2022). Besides many of their typical illnesses – such as dental, public health, and locomotor diseases – their mental state can be considered the most alarming: 75% of them suffers from some form of depression (in contrast to the 20% proportion among the majority population) (Szabóné, 2018; ELEF, 2019). People belonging to the stratum wishing to assimilate and breaking up with their traditions as well as their old lifestyles, while experiencing failure in their adaptation endeavours, are frequently treated with depression, neurosis, suicidal intentions and attempts (Szabóné, 2008). The proportion of depression and neurosis stands high even among Roma intellectuals (in 66%, mild depression, in 8%, intermediate depression was found; in 29%, a treatment-requiring neurosis was identified); among Roma and non-Roma women with equal schooling levels, the investigations found depression to occur in Roma women at a double proportion compared to non-Roma women (50% vs. 25%) (Szabóné, 2008).

Since Roma-specific indicators are missing from Hungary's health statistics systems, we do not possess comprehensive, up-to-date data about the Roma population's health condition (Parliament Office, 2022). This holds

true to mental health indicators as well (Szabóné, 2008). However, if we take low schooling levels that are typical for the Roma population, their territorial location and bad financial situation, as a basis, then it becomes obvious that unfavorable mental health primarily characterizes these groups: the level of positive emotional state measured with the WHO-5 wellbeing index mainly distinguishes those living in Northern Hungary, those with a low schooling levels and those belonging into the lowest income quintile. The proportion of those battling at least a mild depression stands higher among those possessing a maximum primary education level, among those belonging to the lowest income quintile, and those living in Northern Hungary as well as in villages and in the capital (ELEF, 2019).

### *Social network*

Among the Roma population living in low social strata, contact poverty is typical; moreover, in recent years, among their confidants, the proportion of relatives is dwindling while they possess increasingly fewer friend contacts (Komolafe et al., 2022). This is all the more important because Roma without friends become isolated not only from mainstream society, but also from their own Roma community (Dávid et al., 2020). A considerable proportion of those who identify as Roma (40%) lives in a relationship vacuum; that is, they lack contacts with those from whom they could receive support (Messing, 2006; Messing & Molnár, 2011). The Roma population's social network is increasingly more homogeneous (Dávid et al., 2020; Huszti et al., 2021).

Among the Roma people, especially those living in segregated areas, social support differs from the average population: the more geographically isolated they live, the fewer friends and confidants they have, the worse their mental health; and the less connected they are to the representatives and institutions of the majority society (Huszti & Ember, 2019).

### *Roma ethnic groups*

In Hungary, we can differentiate three larger Roma ethnic groups: 1. The Hungarian Roma, or Romungro, who identify themselves as Hungarian and speak Hungarian; 2. The Vlach Roma, who define themselves as Vlach, and besides Hungarian, mainly speak the Romani language; 3. The Boyash people, who identify themselves as Boyash and speak the archaic Romanian language (Kemény, 2005; Virág & Váradi, 2017). The proportion of these groups: Romungro (71%), Vlach (21%) and Boyash (8%) (Kemény & Janky, 2005, Pásztor et al., 2016). The Vlach Roma mostly live in the Counties Szabolcs-Szatmár-Bereg-, Hajdú-Bihar- and Békés, the Boyash primarily reside in Southern Transdanubia and around the capital, while the Romungro do not concentrate dominantly in any region (Kemény, 2000; Kahl & Nechiti, 2019).

Despite being viewed as a homogeneous ethnic group, significant differences exist among the Roma groups according to what they define themselves as, and what language they primarily speak. These factors also fundamentally determine their level of social inclusion into mainstream society (Havas, 1989; Virág & Váradi, 2017).

## Aims

In our study, through the data gained from a large-sample research in Hungary, we examine the effects of spatial mobility among the Roma population. On the one hand, we are interested in what motivates Roma people to change their residence, and on the other hand, we would like to find out about the gains and losses of residential mobility among them, and how this affects their mental health. Through separately examining the three sub-groups, our study contributes to enhancing the knowledge on Roma ethnicity.

According to the relevant literature (Hautzinger et al., 2014; Elekes, 2017, 2021; Husz, 2011; Ladányi, 2010; Kovács, 2014), moving also entails a mental risk, which may vary among Roma groups with different socioeconomic statuses, integrated and willing to integrate into society on different levels, and linked to society with differing networks. Based on this, considering how little knowledge we possess at present about the characteristics of different Roma groups, we set up the following hypotheses:

H1: A significant difference exists between those who have moved and those who have not, in terms of mental health, socioeconomic status, and contact network; this difference can also be detected in the three Roma groups separately.

H2: The Roma population's mental state, their financial situation and supporting networks considerably influence their intention to move, and this influence can be pointed out in the given Roma groups individually.

## Methods

### Sample and Data Collection

The data are drawn from a nationwide Roma survey, completed in 2019, in which the participants self-reported their Roma origin ( $N = 570$ ). The Regional, Institutional Scientific and Research Ethics Committee approved the survey (SE RKEB number: 201/2018.)

In accordance with the researchers' expectations regarding ethnic Roma groups, the sample contains a close to identical proportion of respondents identifying as Romungro (36%), Vlach (34%) and Boyash (30%). The research goal was for all three groups to be represented in approximately equal proportions, which turned out successful. As the research is non-representative, our statements aren't appropriate for generalizing. The questionnaire-based survey's participants were selected via the "snowball method". The interviewers collected the data through face-to-face interviews.

Summary statistics are shown in [Table 1](#) and [Figure 2](#). The respondents' mean age is 43 years. Nearly half of the surveyed population (46.2%) remains under 40 years, typically with a maximum of an 8-year-primary school degree (92.6%). Their majority resides in smaller towns (41.2%), or villages (34.9%). Regarding their family status, nearly 60% of the respondents live in a relationship (36.3% of them being married, and 22.6% in a registered partnership). Based on sex, age, educational attainment, place of residence and economic activity, no statistically significant difference exists among the surveyed ethnicity groups.

The respondents came from the regions most densely inhabited by the Roma population, that is: from North-Eastern, Southern and Central Hungary ([Figure 2](#)).

### Measures

We normalized the quantitative variables on 0-5 interval scales and the scale scores were averaged. Three out of the four scales (WHO-5, resilience, PHQ-9) possess an excellent internal consistency (see Cronbach's  $\alpha$ ; [Table 2](#)). For the variables' main features, see [Table 2](#).

#### *Subjective state of health*

We investigated the subjective state of health with the single item, "What is your state of health in general?" (Winter et al., 2007; ELEF, 2019) An individual's subjective health perception (self-rated health) has been proven by researchers to be a trustworthy indicator of the objective state of health; it is also a more trustworthy predictor of death than any screening procedure (Kopp & Martos, 2011) (see [Appendix 1](#)).

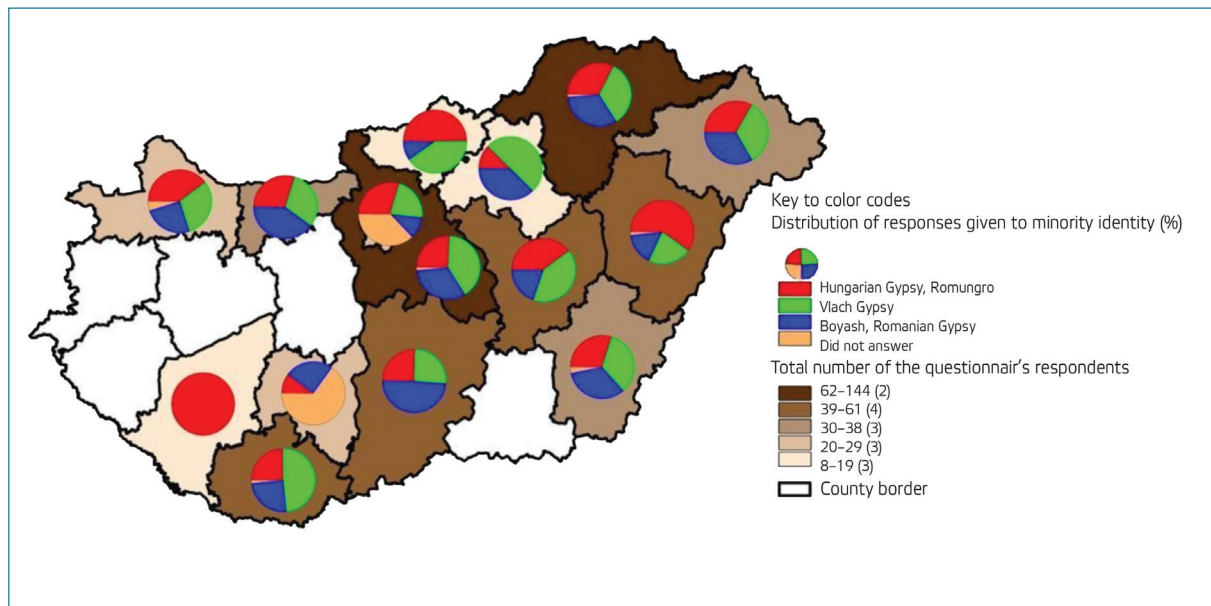
#### *WHO-5 Wellbeing Index*

We measured mental health with the WHO-5 Wellbeing Index (5-item) (Topp et al., 2015). The scale measures general wellbeing and condition during the last two weeks. Validating the Hungarian-language version was based on the 2002 Hungarostudy survey (national, household based health survey; Cronbach's  $\alpha = .85$ ) (Susánszky et al., 2006) (see [Appendix 2](#)). In our study, Cronbach's  $\alpha$  is .94.

**Table 1.** Respondents' socio-demographic characteristics ( $N = 570$ )

	<i>N</i>	%
<b>Sex</b>		
Male	269	47.2
Female	301	52.8
<b>Age groups</b>		
18-29	148	26.0
30-39	115	20.2
40-49	118	20.7
50-59	89	15.6
60+	100	17.5
<b>Education</b>		
Primary (8 classes)	528	92.6
Secondary or higher	42	7.4
<b>Type of settlement</b>		
Capital city	18	3.2
County towns	118	20.7
Other towns	235	41.2
Villages	199	34.9
<b>Ethnicity groups</b>		
Romungro	206	36.2
Vlach	194	34.0
Boyash	170	29.8
<b>Employment status</b>		
active	316	55.5
inactive	247	43.3
no data available	7	1.2
<b>Marital status</b>		
single/unmarried	145	25.4
married	207	36.3
registered partnership	129	22.6
divorced	38	6.7
widowed	49	8.6
NA	2	0.4

Figure 2. Distribution of responses given to minority identity (%)



\*Where the picture indicates the total number of the questionnaire's respondents, the data in parentheses show the number of affected counties.  
Source: Roma survey, 2019 István Balcsók (edit.)

Table 2. Main features of variables

Scale	Cronbach's $\alpha$	N	Min	Max	M	SD
How is your health in general?	NA	569	0	5	3.23	1.24
WHO-5	.94	565	0	5	3.09	1.24
Resilience	.98	564	0	5	3.18	1.08
PHQ-9	.93	563	0	5	1.88	1.26
SES	NC*	558	0	5	3.01	1.43
Confidant kin (Romungro)	NA	176	0	5	1.12	1.36
Confidant non-kin (Romungro)	NA	176	0	5	0.91	1.43
Confidant kin (Vlach)	NA	165	0	5	1.16	1.41
Confidant non-kin (Vlach)	NA	165	0	5	0.86	1.27
Confidant kin (Boyash)	NA	151	0	5	1.34	1.40
Confidant non-kin (Boyash)	NA	151	0	5	0.81	1.21
Confidant kin (all groups)	NA	492	0	5	1.20	1.39
Confidant non-kin (all groups)	NA	492	0	5	0.87	1.31
High prestige acquaintances (KSH)	NA	568	0	7	1.85	2.06
High prestige acquaintances (KSH) (without mayor)	NA	568	0	6	1.34	1.77
High prestige acquaintances (know/do not know)	NA	568	0	1	0.65	0.48
Medium prestige acquaintances (KSH)	NA	568	0	7	2.75	2.13
Low-prestige acquaintances (KSH)	NA	568	0	7	3.93	2.14

Min = Minimum, Max = Maximum, M = Mean, SD = Standard Deviation

\*Since the index was constructed by examining different dimensions of socio-economic status, which cannot be assumed to be interrelated, internal consistency between them cannot be expected, hence Cronbach's  $\alpha$  was not determined.

### *Connor-Davidson Resilience Scale*

We measured resilience with the 25-item Connor-Davidson Resilience Scale (Connor & Davidson, 2003). Resilience is a mental resistance capacity, which helps successfully cope and adapt even in spite of difficult circumstances, besides diminishing the effects of distress. Related to positive emotions, it appears as a protective factor against depression and other psychiatric disorders; the scale investigates the measure of resilient behavior. (Kiss et al., 2015) The questions probe into how typical the items' statements were in the last month regarding the individual (see [Appendix 3](#)). In the Hungarian adaptation of the scale (Kiss et al., 2015), the Cronbach's  $\alpha$  was .87, while in our study it is .98.

### *Patients Health Questionnaire*

For assessing depressive disorders, we used the PHQ-9 (Patients Health Questionnaire) (Kroenke et al., 2001). This questionnaire has nine items and is highly suitable for screening depression in population surveys. Out of the nine items, we questioned eight items. (ELEF, 2019; Torzsa et al., 2009; Kósa & Bíró, 2018) (see [Appendix 4](#)). In the validation of the instrument (Kroenke et al., 2001), Cronbach's  $\alpha$  was .89, while in our study it is .92.

### *SES index*

The SES (socio-economic status) index was constructed by calculating the mean of the answers to the corresponding four items to measure families' financial state. (Havasi & Kóczé, 2010) (see [Appendix 5](#)).

### *Confidant ties*

We investigated social relationships with the presence of strong ties, promoting microsocial integration, and weak ties, enhancing macrosocial integration. We measured the strong ties with the number of trusted relationships, and within those, the number/proportion of related and non-related trusted persons, with one question. ("Considering the past half year, who are the people with whom you discussed your important issues, problems, complaints?") (the possible answers see [Appendix 6](#)).

### *Position generator*

We measured weak ties with a list containing 21 professions (position generator), on which the respondent had to indicate whether he or she knows anyone who pursues the given profession. Based on a prestige scale (21 item), we divided the listed professions into three groups (Janák, 2018): high-prestige professions, medium-prestige professions, and low-prestige professions (see [Appendix 7](#)).

[Table 3](#) contains the main variables providing the starting point for investigating spatial mobility. More than half of the respondents were born in the settlement where they live now (52%), so they cannot be considered spatially mobile. Those who had moved earlier to their current location – that is, realized a spatial mobility – did so mostly for family reasons (53.2%). The overwhelming majority (63.6%) would not like to move away, while those who would still like to do so are essentially motivated by the hope of better housing conditions (46.1%). See [Table 3](#).

## Statistical Analysis

Since the number of elements for each group and sub-group reached 30, we assumed the normality distribution of the statistics calculated from the sample based on the central limit theorem. To compare means of sub-groups, we used analysis of variance (ANOVA), homoscedasticity was tested using the Levene's test. In each case, we have only shown the result of the parametric test corresponding to the test for homogeneity of variance. Relationships between nominal variables (similarity of the distribution of responses in different subgroups) were tested using the  $\chi^2$  test to test. The mental health, socio-economic and social network characteristics of the respondents, along with the fact of past moving and their impact on the intention to move, were examined using a structural equation model. All analyses were performed using IBM SPSS Statistics version 25.0 and Stata version 13.0, with a significance level set at 5%.



Table 3. Spatial mobility of respondents

	N	%
Were you born in the settlement where you live now? (N = 570)		
yes	297	52.1
no	273	47.9
Reason of moving (n = 269)		
family reasons	143	53.2
because of work	32	11.9
other reasons	31	11.5
because of better housing conditions	28	10.4
for financial reasons (such as high maintenance costs)	17	6.3
wanting to move to a settlement with a better infrastructure	11	4.1
schooling reason	7	2.6
Would you like to move away from here? If yes, then only from your apartment/house or also from the settlement? (n = 539)		
yes	343	63.6
no	196	36.4
What is your most important reason for wanting to move away? (n = 197)		
because of better housing conditions	91	46.1
financial reason	26	13.2
because of work	25	12.7
family reason	22	11.2
other reason	22	11.2
wanting to move to a settlement with a better infrastructure	10	5.1
schooling reason	1	0.5

## Results

### Subjective Health Status and Mental Health

On average, the respondents evaluated their health state ( $(M(SD)) = 3.23(1.24)$ ); a considerable part of them found their health state to be satisfactory, or good (84.6%). *Bad* and *very good* states appeared less typical. The three Roma groups' health states did not differ significantly from one another ( $F(2, 566) = 2.05, p = .129$ ).

In terms of the entire sample, we can state that in general, the respondents had moderate mental well-being ( $(M(SD)) = 3.09(1.24)$ ) on the scale of 0 to 5 regarding the assessed mental dimensions: they felt moderately *merry*, *cheerful*, *active*, *vivid*; feeling *relaxed* is moderately typical, while *waking up rested* as well as *having interesting days* is a bit less typical. The three Roma groups' mental health does not significantly differ from one another ( $F(2, 562) = 2.62, p = .074$ ).

The majority of respondents have a medium ( $(M(SD)) = 3.18(1.08)$ ) level of flexibility. The three Roma groups' resilience levels significantly differ from one another ( $F(2, 561) = 3.64, p = .027; \eta^2 = .013$ ). A significant between-group difference can be observed between the Romungro and Boyash groups (Tukey HSD;  $p = .024$ ), indicating that Romungros have higher levels of flexibility.

Concerning depressive disorders, we can state that these are moderately typical ( $(M(SD)) = 1.88(1.26)$ ) for the Roma groups' representatives, and no significant difference exists among the Roma groups ( $F(2, 560) = 1.21, p = .300$ ).

## Economic Status

A bad financial situation characterizes the majority of the respondents; a considerable part of them has experienced not having enough money for food. Furthermore, many of them have encountered problems with properly heating up the apartment or paying unexpected expenses as their own contribution. The three Roma groups' socioeconomic statuses did not significantly differ from one another ( $F(2, 555) = 1.23, p = .295$ ).

## Spatial Mobility

The proportion of non-mobiles (*Were you born on the settlement where you live now?*) manifests a significant difference depending on the minority group ( $\chi^2(2) = 10.325, p = .006$ , Cramer's  $V = .135$ ). The most mobile are the Boyash (57.1%), while the least mobile are the Vlach (40.2%). Concerning the reason for moving, the three groups do not significantly differ from one another ( $\chi^2(12) = 13.464, p = .336$ ).

The intention to move, however, does differ in terms of minority groups ( $\chi^2(6) = 7.575, p = .023$ , Cramer's  $V = .119$ ): the Romungro are the most likely (36.4%), while the Boyash are the least likely (24.7%) to move away from their current residence. Regarding the reason for the intended move, the Roma minority groups do not significantly differ from one another ( $\chi^2(6) = 23.002, p = .114$ ).

## Social Relationships: Strong Ties And Weak Ties

The respondents have ( $M(SD) = 2.02(1.35)$ ) confidant persons on average, while 22% of them do not have any confidant relationships. The average of kin confidant is 1.20 ( $SD = 1.39$ ), and the average of non-kin confidant is 0.87 ( $SD = 1.31$ ). 42.7% have no confidant relatives, while 58.5% have no confidant non-relatives. One-quarter (24.8%) of the respondents has one confidant relative, and 18.7% has one confidant non-relative. We can state that no significant difference exists among the Roma groups regarding both confidant relatives ( $F(2, 489) = 1.11, p = .329$ ), and confidant non-relatives ( $F(2, 489) = 0.24, p = .788$ ).

Most of the respondents mainly know people pursuing low-prestige professions (unskilled worker, store assistant), with the exception of caregivers (54% know such), as well as local government representatives and mayors (51% know them). Among the three Roma groups, only one profession (waiter) appears to be different in this aspect: the Romungro know a bigger proportion of people pursuing this profession (55%) than those belonging to the other two groups (48 vs. 40%, respectively).

Table 4 illustrates the examined variables' group differences in mean and percentage values.

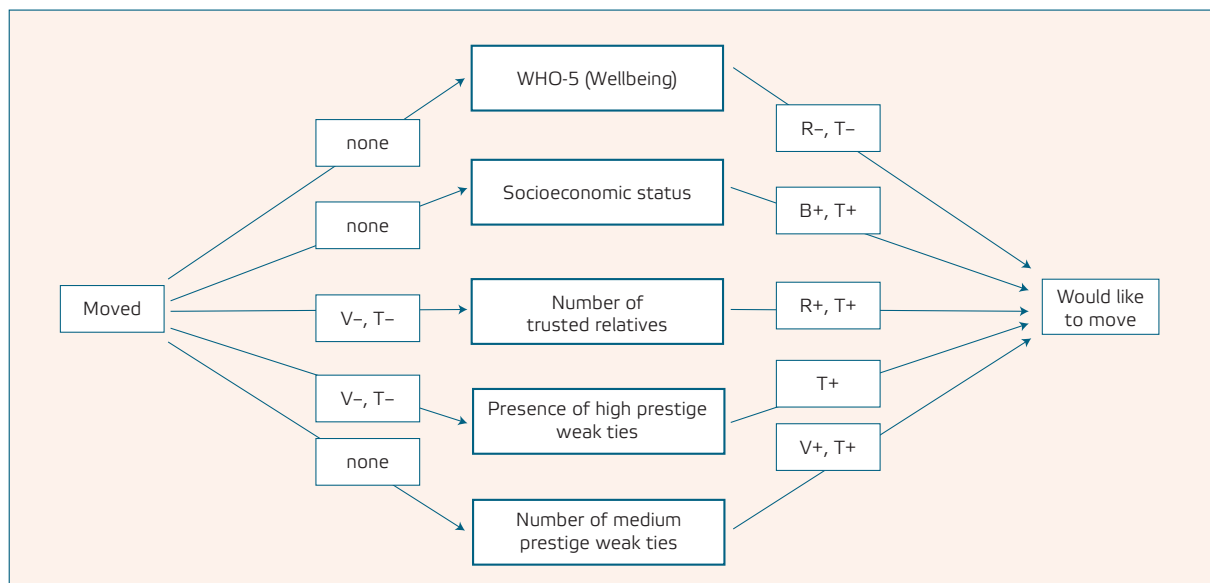
**Table 4.** Respondents' mean and percentage differences in the examined variables by ethnicity groups (The letters after the means indicate the results of Tukey's post hoc tests. If the code consisting of the letters in parentheses belonging to one group contains the code in parentheses following the mean of the other group, they form a homogeneous subset, so there is no significant difference between them based on Tukey's post hoc tests. An example of this is if one group average is followed by an 'a' in the brackets and the other group average by an 'ab', or if the mean of both groups is followed by the same letter in the brackets ('a' and 'a'). In the case where the code following the group average in the table for two groups does not contain one another (e.g. 'a' and 'b'), a significant difference between them can be detected on the basis of the post-hoc test results.)

	Romungro	Vlach	Boyash	Total
What is our health like in general?	3.6 (a)	3.7 (a)	3.5 (a)	3.6
WHO-5 (wellbeing)	3.2 (a)	3.2 (a)	2.9 (a)	3.1
Resilience	3.3 (a)	3.2 (ab)	3.0 (b)	3.2
PHQ9 (depressive symptoms)	1.4 (a)	1.4 (a)	1.6 (a)	1.5
SES (socio-economic status)	2.0 (a)	2.1 (a)	1.8 (a)	2.0
	%			
Has moved	47.6	40.2	57.1	47.9
Would like to move	36.4	26.3	24.7	29.5
Has a confidant relative	55.1	54.5	62.9	57.3
Has a confidant non-relative	40.3	42.4	41.7	41.5

## Models of Moving Intentions

We arranged the intention to move and its influencing factors into a model by means of SEM – Structural Equation Modeling (see Figure 3). A theoretical SEM model was fitted both to the full sample and to the three Roma groups separately. The model only contains the significant variables, which practice a traceable effect on the ultimate end variables in case of the entire sample (that is: whether the respondent plans to move). The full model was not verified, only some of its paths. Significant paths are indicated in Figure 3 and statistics for all paths of all

Figure 3. SEM-model involved in illustrating connections with significant variables



Note. Meaning of abbreviations: none: no significant connection exists among the given variables; R/B/V/T: regarding the Romungro/Boyash/Vlachs/Total, a significant connection exists; +/-: indicates the strengthening or weakening role of significant connections. Table 5 contains the results of main connections.

four models are presented in Table 5. Out of the researched variables, WHO-5, the SES, the number of confident relatives and the existence of high- and moderate-prestige contacts proved significant. We calculated the impact assessment of past movings with linear regression, while we used logistic regression for analyzing the connections regarding future moving intentions. This means that the first part of the path analysis is based on a multivariate linear regression (differences between those who had previously moved and those who had not moved, regarding wellbeing, SES, confident relatives' count, presence of high prestige weak ties, count of medium prestige weak ties), and the second part is a relationship modeled by logistic regression, in which we modeled the effect of the dependent variables of the linear regression models on the intention to move. Since all the variables are included simultaneously in the model, their confounding effects on each other are eliminated because only their partial effects are present in the model.

### The Effects of the Completed Move

The fact of a past, completed move did not have a significant effect on the respondents' financial-economic situation, whether examining the three Roma groups separately or in total: no significant difference existed between the financial situation of respondents who had previously moved and those who had not ( $\beta = -.06, p = .132$ ). So, we can only assume that the fact of moving will not make a difference to the financial situation of the respondents, but we do not know whether their financial resources changed in the present, as opposed to the past, or not – such as a previously unemployed person becoming employed, or gone on maternity leave, or possibly receiving benefits since then. And even though no significant effects exist in this aspect: regarding the representatives of the Vlach group, a kind of tendency is worth mentioning: among them, the significance-value was on the threshold of the margin of error ( $\beta = -.14, p = .054$ ), which indicates that the financial situation of those who have moved is worse than that of those who have not moved. (In the case of a large item number, the effect would be significant.)

Table 5. SEM model in illustrating the connections with significant variables

	Romungro	Vlach	Boyash	Total
SES <-				
moved	-.12 (.728)	.14 (.054)	-.06 (.430)	.06 (.133)
constant	2.074 (<.001)	1.822 (<.001)	3.235 (<.001)	1.892 (<.001)
WHO-5 <-				
moved	-.00 (.980)	.14 (.050)	.06 (.397)	.08 (.065)
constant	3.163 (<.001)	2.969 (<.001)	2.831 (<.001)	2.989 (<.001)
number of confidant kin <-				
moved	-.08 (.308)	<b>-.18 (.021)</b>	-.13 (.111)	<b>-.13 (.003)</b>
constant	1.220 (<.001)	1.456 (<.001)	1.484 (<.001)	1.380 (<.001)
high_prestige acquaintances (know/do not know_KSH) <-				
moved	-.06 (.435)	<b>-.25 (&lt;.001)</b>	.04 (.635)	<b>-.09 (.028)</b>
constant	.708 (<.001)	.782 (<.001)	.608 (<.001)	.694 (<.001)
medium_macro_integrity (KSH) <-				
moved	.10 (.161)	-.13 (.071)	-.06 (.469)	-.02 (.600)
constant	2.656 (<.001)	3.051 (<.001)	2.742 (<.001)	2.801 (<.001)
would like to move <-				
SES	.21 (.125)	.04 (.777)	<b>.45 (.007)</b>	<b>.22 (.008)</b>
WHO_5	<b>.71 (.019)</b>	.82 (.167)	.85 (.253)	.81 (.007)
number_of_confidant kin	<b>0.37 (.017)</b>	0.02 (.858)	.020 (.183)	<b>.017 (.028)</b>
high_prestige_acquaintances (know/do not know_KSH)	.96 (.142)	.79 (.195)	.17 (.753)	<b>.74 (.033)</b>
medium_macro_integrity (KSH)	.14 (.178)	<b>.22 (.031)</b>	.12 (.294)	<b>.16 (.010)</b>
constant	.52 (.300)	.34 (.108)	.20 (.11)	.31 (.001)

Note. Data in brackets indicate significance and constant values.  $\beta$  values are shown for linear regression models and Exp(B) values for logistic regression models. Significant results are highlighted in parentheses.

The difference in mental health as a result of having moved previously is neither significant for the whole sample ( $\beta = .08, p = .065$ ), nor when examined separately (even though – again – among the Vlachs, we can observe a tendency-like improvement ( $\beta = .14, p = .050$ )).

In terms of social support, for the Vlachs, a significant difference ( $\beta = -.18, p = .021$ ) exists in the number of relative confidants, depending on whether the respondent has moved or not: those who have moved in the past have significantly fewer relative confidants. This probably means that these respondents left their supportive confidant relatives at their former residence, and at their current residence, they have been unable to replace these social

contacts, which primarily offer emotional support. Viewing the three groups together, the comparison based on the fact of having moved in the past has a stronger negative significant effect on the number of confidant relatives than among the Vlach group ( $\beta = -.13, p = .003$ ): those who had moved have considerably fewer confidant relatives (possibly for the very same reason as what we surmised concerning the Vlachs).

Researching the social support providing weak ties, we can state that out of the three groups, a past move only becomes a significant effect in the case of the Vlachs ( $\beta = -.25, p < 0.001$ ) regarding whether, at present, these respondents know people pursuing high-prestige professions. The results show that among those who had moved, there were significantly lower proportions of those who had a high-prestige relationship. Looking at the three groups together, once again, a negatively directed significant effect can be stated ( $\beta = -.09, p = .028$ ) in connection with this aspect.

The presence or absence of moderate-prestige acquaintances related to a past move did not indicate a significant relationship regarding the three Roma groups, whether we examined them separately or together ( $\beta = -.02, p = .600$ ). This might signify that among the Vlach Roma, the number of contacts with relatives and the presence of high-prestige acquaintances amounted to a much stronger effect than with medium- or low-prestige acquaintances, and the diminishing number of these latter resulted in a motivation to move for them in the past.

### Differences in Moving Intentions

Investigating the future intention to move, we can observe considerable differences among the three Roma groups. Among the Boyash, those who would like to move are in a significantly more advantageous socioeconomic situation ( $\text{Exp}(B) = .45, p = .007$ ), and looking at the three Roma groups together, we can observe the same ( $\text{Exp}(B) = .82, p = .008$ ). Among the Romungro, for those who would like to move, the lower level of their mental wellbeing ( $\text{Exp}(B) = .71, p = .019$ ) and the higher number of their confidant relatives ( $\text{Exp}(B) = .37, p = .017$ ) has proven significant. Finally, in the case of the Vlachs, the number of acquaintances with people pursuing medium-prestige professions significantly determines ( $\text{Exp}(B) = .22, p = .031$ ) whether they would like to move or not. Investigating the three Roma groups together, regarding a future intention to move, all the variables appearing in the analysis had a significant effect (SES –  $\text{Exp}(B) = .22, p = .008$ ; WHO-5 –  $\text{Exp}(B) = .81, p = .007$ ; number of confidant relatives –  $\text{Exp}(B) = .17, p = .028$ ; presence of high weak-tie acquaintance –  $\text{Exp}(B) = .74, p = .033$ ; number of medium weak ties –  $\text{Exp}(B) = .16, p = .010$ ).

## Discussion

We developed a SEM to analyze the difference between previous movers and non-movers in wellbeing, socioeconomic status, the number of confidant relatives, the presence of high prestige weak ties and the number of medium prestige weak ties. We also investigated the effect of the variables above on the intention to move. Our analysis was carried out for all three Roma groups separately as well as for the whole sample.

Regarding the population investigated in our research, most of them typically live in poor conditions, struggling with financial difficulties. The biggest part of those desiring to move would do so mostly in the hope of better housing circumstances. They probably failed to adapt, proving unable to satisfy their housing-related needs and settle into the given conditions. In our model based on past moves, among the variables compared, we found significant differences only in the number of confidant relatives and in the presence of high prestige acquaintances. For both Vlachs and the total sample, there was a trend for those who had moved in the past to have fewer kin confidants and be less likely to know someone with a high prestige acquaintance. Consistent with the literature, this reflects the fact that family ties, and with them peer support, are often lost during the move, increasing the risk of isolation (Hautzinger et al., 2014; Dávid et al., 2020).

Well-being has a significant negative-, and socio-economic status has a significant positive effect on the intention to move; we find this true for the whole sample and in one variable for the Romungros (well-being) and the Boyash (socio-economic status). Socioeconomic status and mental health are also linked in literature: poverty remains the strongest predictor of poor physical and mental health (Zeman et al., 2003; Gordon, 2003; Parliament Office, 2022). Fully 75% of Roma people suffer from some form of depression (Szabóné, 2018). Depression is more common in women living in deprived housing, and antisocial behavior and drug use in men (Drukker et al., 2007). However, people who want to move, who are disadvantaged, have low educational attainment, financial difficulties, and are unemployed, such as the Roma, are the least likely to realize their intention

to move (Csizmady et al., 2020) – many prefer to remain in poorer housing conditions due to job insecurity (Babusik, 2007).

The other three variables, on the other hand, reinforce the intention to move for the whole sample: the more confidant relatives, the more medium prestige weak ties, or presence of a high prestige weak tie, the more likely someone is to plan to move. Among the Roma groups, the same positive effect was experienced among the Romungros in the case of confidant relatives and regarding the Vlachs in the case of medium prestige weak ties. Respondents in our research all identified themselves as Roma, and – according to the relevant literature – those who identify themselves as members of a Roma group have more supportive relationships, but their network of relationships is more closed and mostly composed of people of the same ethnicity (Messing & Molnár, 2011). These are bonding-type, cohesive, solidarity networks that often ensure survival (Messing & Molnár, 2011) and also provide security for those within them (Wacquant, 2012), for whom family and kinship support is thus also considered a “place-specific capital” (Kleinhans, 2009). However, Roma living in extreme poverty are characterized by relational poverty – for them, kinship and community ties are a substitute for institutional and other social ties (Messing & Molnár, 2011). The more isolated they live in an area, the more closed their network of contacts, the worse their mental health and the less connected they are to representatives and institutions of mainstream society. People living there can almost only rely on each other for financial, instrumental and emotional support (Huszti & Ember, 2019).

According to our first hypothesis, we can state the most significant difference between those who have already moved geographically and those who have not yet moved is the social network: those who have moved possess fewer confidants and weak ties. Among the three researched Roma groups, the Vlachs are the only one where a link can be detected between the number of confidants and high-prestige weak ties: those who have moved possess fewer confidant relatives and high-prestige weak ties. This may be because they live in more closed communities with a particular culture and are less open to heterophilic relationships (Elekes, 2017). Mental health and economic situation indicate no difference between the two groups (those who have moved and those who have not).

Regarding the second hypothesis, we can state that besides the contact system, factors such as mental health and economic situation also influence the intention to move. The individual factors influence the different Roma groups’ moving intentions in varying ways.

Among the three Roma groups, significant motivational differences manifest in terms of the intention to move: while the Boyash would like to move in case of an improved financial situation, hoping to improve their finances, for the Romungro, a lower level of mental wellbeing is necessary to do this, as well as having the relatives’ social support; finally, for the Vlachs, the number of medium-prestige weak ties determines this decision. These results adequately reflect the three examined Roma groups’ cultural past and present. The Boyash and Vlach groups inherited an authentic way of life from their ancestors – out of these two, the Vlachs live in a more closed and rigid structure of traditions; they mainly base their moving intentions on their weak-tie acquaintances pursuing medium-prestige professions. The Boyash, who for a long time – until the end of World War II – had lived and sustained themselves close to nature, drawing from its resources (being woodworkers and shepherds) (Kahl & Nechiti, 2019; Kemény, 2000), lived, similarly to the Vlachs, off trading with the members of the majority society. The representatives of the Romungro, the group that has assimilated to and is endeavoring to fit in with majority values and lifestyle the most, and who have been living among Hungarian people for the longest time but still constitute the most “wavering” group, have different motivations for moving. They live “between two worlds” – on the verge of majority and minority existence – since besides social discrimination, the Vlachs also bear an aversion towards them (Chaudhuri-Brill, 2012). Romungros are the most likely to try to adapt and integrate into society (Kemény, 2000) and to break with their old traditions and way of life – but this effort is often associated with depression, neurosis and other psychiatric illnesses, as well as low levels of social support (Szabóné, 2008). For this reason, among them, weak mental health, the deficit of “I feel well” constitutes a real risk due to social exclusion, the lack of inclusion and acceptance (which might even motivate them to move); at the same time, a suitably strong contact network of confidant relatives constitutes a power resource for them to venture into a move that entails a lot of difficulties and expenses. An emphatic explanation could be that Roma people with a Hungarian mother tongue are the most likely to live in colonies (Cserti Csapó, 2003), as well as at settlements separated, segregated from society; thus, it is particularly important for them to possess a well-functioning, supportive contact network, and within that, a bonding-type, coherent, solidarity-filled social network, which may frequently guarantee their survival (Messing & Molnár, 2011).

## Strengths and Limitations

Regarding the number of the examined population, we do not possess accurate data. Even in the national population census database, Roma identification is registered on a self-report basis. Thus, a representative sample collection remains impossible. Even social science surveys usually handle ethnic Roma groups as a homogeneous group, even though they manifest differently in numerous character traits. Our large-sample database grants the opportunity for the first time to examine and compare the three subgroups of the Roma population, progressing along the given questions, arguing that the individual subgroups differ in certain aspects.

## Conclusion, Implications, and Future Directions

We examined a special sample, the Roma people, their moving intention and the benefits of moving realized. Studies and researches dealing with the Roma population's situation, including their health state, generally describe the Roma population as one large ethnic group; so, via separately examining the three subgroups, our study contributes to enhancing knowledge on Roma ethnicity.

With the Romungro respondents, a lower level of mental wellbeing, that is: the lack of a “feeling well” state proved to be a push factor regarding the move, and another such factor appeared to be the social support provided by the relatives, in order to complete the move. As opposed to this, no connection exists between their past moving and present wellbeing. The desire to move stands highest among the Romungro respondents, which might reflect the fact that among the Roma groups, they consist of the people who have been living in Hungary for the longest time and have been endeavoring the most to integrate into the majority society. Members of the majority society, however, frequently refuse these endeavors – mainly due to their negative experiences – so these people continuously seek their place in the spatial dimension, as well. The presence of strong support from relatives enhances their desire to move, since it ensures support for them even outside their residence. This is all the more important as these people may lose their social support in the course of the move, and they may end up isolated, which might negatively impact their mental health.

In the case of the Vlachs respondents, we can say that the more embedded they are, the more medium-prestige weak ties they possess – which guarantee the macro-social contacts – the more they would like to move away from their current residence. Out of these, those who had moved in the past typically possessed fewer high-prestige acquaintances. Unlike the Romungros, the Vlachs respondents – who are the most eager to preserve their Roma character traits and distance themselves culturally (using the Gypsy language, their own laws, attire, tradition-preserving habits and hedonistic lifestyle) not only from the Hungarians but other Roma groups, as well – appeared to be much less willing to move. This is primarily because among them, a stronger coherence remains more likely (as a result of the interdependence established during their centuries-long peregrination); thus, they could count more on each other's support, further enhanced by living spatially close to one another. Their separation endeavors are quite apparent from distancing themselves within the same settlement – spatially as much as regarding their communication and their peculiar community life – not only from those who represent the majority society but also from other Roma groups, which constitutes a source of the frequent conflicts among the groups. Since in their case, social embeddedness increases the desire to move, the lack thereof further enhances their separation.

Finally, we can state that among the Boyash respondents, more favorable economic situation urges them the most to move. Among the Boyash respondents, a similarly lower desire to move appears compared to the Romungro, probably rooted in the fact that they have settled down, having lived along the Southern border for centuries, successfully integrated into society and during this time, being able to count on each other's support, even from beyond the border – possessing well-extended and well-functioning social networks, even on an international level.

In the future, the research direction that has thus begun will be worth continuing; we should examine the Hungarian Roma groups separately, getting to know their characteristics, their similarities as well as their differences alike – after all, this effort might prove a very useful tool when elaborating and implementing effective social political directives and intervention methods that serve a successful social integration.

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## Author contribution

Zsolt EMBER: conceptualization, design, methodology, funding acquisition, project administration, formal analysis, interpretation, supervision, writing original draft, writing review and editing.

Éva HUSZTI: conceptualization, design, methodology, project administration, data management, formal analysis, interpretation, writing original draft, writing review and editing.

Imre LÉNÁRT: methodology, project administration, data management, formal analysis, interpretation.

## Declaration of interest statement

The authors declare no conflict of interest.

## Ethical statement

The studies involving human participants were reviewed and approved by by Semmelweis University Regional, Institutional Scientific and Research Ethics Committee, grant number: SE RKEB number: 201/2018.

All participants engaged in the research voluntarily and anonymously.

The participants provided their written informed consent to participate in this study.

Their data are stored in coded materials and databases without personal data.

## Data Availability Statement

The data supporting this study's findings are available to the public.

We have policies in place to manage and keep data secure.

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# Appendix

**Appendix 1:** Possible answers: *very bad; bad; satisfactory; good; very good*

**Appendix 2:** The WHO-5 questionnaire's items are: *Over the past two weeks... 1. I have felt cheerful and in good spirits; 2. I have felt calm and relaxed; 3. I have felt active and vigorous; 4. I woke up feeling fresh and rested; 5. My daily life has been filled with things that interest me.* The possible answers were: *All of the time; Most of the time; More than half the time; Less than half the time; Some of the time; At no time.* (Topp et al., 2015)

**Appendix 3:** Questions of the resilience questionnaire *1. Able to adapt to change; 2. Close and secure relationships; 3 Sometimes fate or God can help; 4 Can deal with whatever comes; 5 Past success gives confidence for new challenge; 6 See the humorous side of things; 7 Coping with stress strengthens; 8 Tend to bounce back after illness or hardship; 9 Things happen for a reason; 10 Best effort no matter what; 11 You can achieve your goals; 12 When things look hopeless, I don't give up; 13 Know where to turn for help; 14 Under pressure, focus and think clearly; 15 Prefer to take the lead in problem solving; 16 Not easily discouraged by failure; 17 Think of self as strong person; 18 Make unpopular or difficult decisions; 19 Can handle unpleasant feelings; 20 Have to act on a hunch; 21 Strong sense of purpose; 22 In control of your life; 23 I like challenges; 24 You work to attain your goals; 25 Pride in your achievements.* The possible answers were: *Not true at all; Rarely true; Sometimes true; Often true; True nearly all of the time.* (Connor & Davidson, 2003)

**Appendix 4:** The questions asked in the questionnaire PHQ-9: *Over the last 2 weeks, how often have you been bothered by any of the following problems? 1. Little interest or pleasure in doing things; 2. Feeling down, depressed, or hopeless; 3. Trouble falling or staying asleep, or sleeping too much; 4. Feeling tired or having little energy; 5. Poor appetite or overeating; 6. Feeling bad about yourself— or that you are a failure or have let yourself or your family down; 7. Trouble concentrating on things, such as reading the newspaper or watching television; 8. Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual; 9. Thoughts that you would be better off dead or of hurting yourself in some way.* The possible answers were: *At no time; For a few days; More than 7 days; Almost every day.* (Kroenke et al., 2001)

**Appendix 5:** Questions of SES variable: *In the last one year... have you experienced not having had enough money: for food?; ...utilities? (heating, lighting, water etc.); ...could he/she afford to heat up his/her apartment satisfactorily?; ...was his/her household capable of paying for an unexpected higher amount of expense out of his/her own pocket?* Possible answers were: *yes; no.*

**Appendix 6:** The possible answers: *spouse/partner, child, grandchild, mother-in law/father-in-law, own or spouse's siblings, other kin, friend, acquaintance colleague, neighbor, other non-kin.*

**Appendix 7:** *I will read aloud a few professions; please tell about each one whether you personally know people pursuing these professions: teacher (secondary); driver; computer technician; accountant; mayor, clerical officer in local government; water and gas plumber; car mechanic; solicitor; waiter; engineer; entrepreneur, chief executive; lawyer; sales/shop assistant; journalist; actor/actress, musician; surgeon; administrator; nurse; scientist; unskilled worker; farmworker; security guard.*

High-prestige professions: mayor, clerical officer in local government, lawyer; engineer; chief executive; journalist; surgeon; scientist

Medium-prestige professions: teacher (secondary); driver; computer technician; accountant; actor/actress, musician; nurse; farmworker

Low-prestige professions: water and gas plumber; waiter; sales/shop assistant; car mechanic; administrator; unskilled worker; security guard