Hagge, Kyra; Schacht, Diana

Variations in Access to Social Support: the Effects of Residential Mobility and Spatial Proximity to Kin and Family

Social Indicators Research

Provided in Cooperation with:
Springer Nature

Suggested Citation: Hagge, Kyra; Schacht, Diana (2024) : Variations in Access to Social Support: the Effects of Residential Mobility and Spatial Proximity to Kin and Family, Social Indicators Research, ISSN 1573-0921, Springer Netherlands, Dordrecht, Vol. 172, Iss. 1, pp. 99-120, https://doi.org/10.1007/s11205-023-03280-w

Social Indicators Research (2024) 172:99–120
https://doi.org/10.1007/s11205-023-03280-w

ORIGINAL RESEARCH

Variations in Access to Social Support: the Effects of Residential Mobility and Spatial Proximity to Kin and Family

Kyra Hagge[1] · **Diana Schacht**[2]

Accepted: 12 December 2024 / Published online: 31 January 2024

Abstract
Increasing residential mobility is said to challenge existing social support systems as mobility raises geographic distances between family members. Since family social support is essential for health and well-being, this study investigates whether residential mobility affects familial social support following changes in proximity to family and kin. By applying a stepwise linear regression on data from the German Socio-Economic Panel study, this paper is looking at variations between different residential mobility trajectories regarding social support provision and spatial proximity to family members in Germany over a 10-year period. Our findings show that people who are moving within Germany are receiving significantly more social support from their family and kin, while internationally mobile respondents receive less compared to non-mobile people. Mediation analyses show that proximity to family and kin are accounting for the negative effect of international mobility on social support but cannot explain the positive effect of internal migration.

Keywords Residential mobility · Residential proximity · Social support · Family ties

1 Introduction

Being a phenomenon inherently tied to the human race, residential mobility is steadily increasing globally in the current day and age. With more and more people leaving their place of origin to look for better opportunities elsewhere, physical distances between mobile individuals and their original core networks are growing. Even though individuals can have diverse social networks consisting of people with different roles, from friends, to co-workers and neighbors, family networks are still considered the primary source of social

✉ Kyra Hagge
haggek19@students.ecu.edu

Diana Schacht
dschacht@dji.de

[1] Faculty of Economics and Business Science, Justus-Liebig University Giessen, Licher Strasse 64, 35394 Giessen, Germany

[2] Deutsches Jugendinstitut, Nockherstr. 2, 81541 Munich, Germany

support (Magdol & Bessel, 2003; Yilmaz et al., 2022). As familial networks are central in the provision of care, they are most beneficial in a local setting (Spring et al., 2017). Residential mobility[1] consequently changes the core social networks of individuals in terms of geographical proximity to kin, spatial spread, and fragmentation (Koelet et al., 2017; Litwak, 1960), thereby decreasing the frequency of contact between family members. Thus, individuals' mobility trajectories are potentially affecting the access to important social support resources and inhibiting mobile individuals' life satisfaction, health, or status attainment (Arpino & de Valk, 2018; Hendriks & Burger, 2021; Lin, 1999; Thoits, 2011).

Numerous studies show empirical evidence for the disruptive effect of residential mobility on individuals' social embeddedness and access to social support (Axhausen & Frei, 2007; Simoni & Bauldry, 2020; see reviews in: Coleman, 1990; Hagan et al., 1996; Wellman et al., 2001). Following this argument, residential mobility may be one of the core causes for variations in access to family social support (Magdol & Bessel, 2003). As long distance ties between immigrants and their extended families serve as major support providers (Hagan et al., 1996), residential mobility may even predict variations in social support between individuals with different mobility trajectories[2] (Ermisch & Mulder, 2019; Thoits, 2011). In contrast, some empirical studies show that access to support between long-distance (domestically) mobile and non-mobile people does not vary (Viry, 2012), that provision of support does not seem to be affected by proximity (Mok et al., 2007), and that access to social support does not vary by ethnicity and race (Feld et al., 2006), which are often associated with previous experiences of international migration. Following these empirical observations, there is no consensus in the literature about the impact of spatial proximity to family and kin on family social support, and the role residential mobility plays in this relationship.

Using the data from the German Socio-Economic Panel (SOEP) study, a large-scale, long-term, national panel dataset (Goebel et al., 2018 can be accessed at: https://doi.org/https://doi.org/10.5684/soep.v33), we are able to shed more light onto the following research questions: (1) Does individuals' proximity to family and kin vary between non-mobiles, internal and international migrants? (2) And if so, are these variations in social support by kin and family an effect of residential proximity? Thus, we are interested in the effect of a certain mobility trajectory on the access to social support and the mediating effect of proximity to family members and kin.

This study contributes to the literature in at least three different ways.

First, even though a considerable body of literature is examining the impact of geographical distance on intergenerational ties (usually between parents and children, Ermisch & Mulder, 2019; Wing Chan & Ermisch, 2015), many scholars are calling to take also the larger family into consideration, as mobility decisions pertain to all kinship ties available (Mulder et al., 2018). In our paper, we are comparing and contrasting descriptive summary statistics on distances between individuals belonging to different mobility groups and their close and extended family members with an extensive survey dataset featuring a large

[1] We are defining residential mobility as the change of ones' physical location as a result of a move, encompassing both, long and short distance moves.

[2] These different mobility trajectories are hereafter called "mobility groups". We distinguish between internally mobile people, or people who relocated within the same country, internationally mobile people, or people who relocated from abroad, and non-mobile people, referring to people who have not changed their residential location.

number of observations. By using SOEP data for 2006, 2011, and 2016 (Goebel et al., 2018), we are able to paint a broad picture of:

- People's proximity to family and kin and
- Their access to social support across three points in time.

Second, we are not only looking at distance between the individual and their family members, but also at differences in social support between the mobility groups. Even though these analyses do not allow for a causal interpretation, potential differences between the mobility groups point towards significant disruptions of ties and social support to be connected to the mobility trajectory. In an era marked by increasing migration and residential relocation, the corresponding findings of this study are of particular relevance for future research and policies on the impact of geographic distance and mobility on the well-being of individuals. Additionally, comparisons between non-mobile, internally mobile, and internationally mobile people are rarely being done (see for a critical review of this divide King & Skeldon, 2010) and our study is therefore contributing to address this gap.

Third, after the United States, Germany reports the third highest proportion of immigrants internationally (OECD, 2021). The German government considers approximately 24.1 percent of Germany's 82 million residents to have a migration background (Federal Statistical Office of Germany (Destatis), 2019). In addition, approximately three percent of the German population is moving within Germany each year (Rees et al., 2017). Furthermore, social support is particularly important in Germany, e.g. for status attainment (see for a comparison with the US: Wöhler & Hinz, 2007).

1.1 Why Proximity and Mobility Groups Correlate

Residential mobility increases the spatial proximity to family and kin by moving the respective family members apart (Rogerson et al., 1993). The residential relocation over various distances is connected to a set of decisions to be made by the individual, which have been studied intensively in the migration literature. This body of work has identified several factors that encourage mobility, which differ in extent with regards to whether the individual decides to leave or stay and the distance between their origin and destination. Residential mobility has been attributed to be mostly concerned with economic factors such as wage differences or improved job opportunities but also non-monetary factors like a more attractive physical, social, or cultural environment (Massey et al., 1993; Nowok et al., 2013).

Even though we are not looking at the cause for migration, we are interested in looking at the effects, especially concerning the resulting spatial proximity of the family members (Hank, 2007) and their exchange of social support.

Every mobility decision is tied to a set of costs and benefits and the individual is believed to choose migration only if the net benefits outweigh the net costs (Nivalainen, 2004). Therefore, individuals also consider close and extended family when making the decision to move or stay (Ermisch & Mulder, 2019; Mulder et al., 2018). Similarly, Clark et al. (2017) find that stronger connections to friends and relatives are inhibiting the likelihood to move. Especially low-income families (Dawkins, 2006) and people with health issues or elderly individuals (Artamonova et al., 2020) rely on a densely knit family network for care. We hypothesize that factors such as these lead to non-mobile people having

their family members living mostly close by, within their household or house or at least in the immediate vicinity such as their neighborhood.

People who migrate within the borders of their country of residence, called internal migrants in our study, are oftentimes looking to improve their job outcomes by either moving related to a career or for education (Bimonte et al., 2020; Dreby & Stutz, 2012). However, the cost associated with moving are of social nature, potentially disconnecting network ties (Hendriks et al., 2016; Kratz, 2020). Assuming that the core family network is not moving with the individual or only to a very limited extent, we hypothesize that the net direction of mobility regarding internal migration is away from family and kin and therefore internal migrants live further away from their kin, but still in the same country.

For transnational families, the decision to migrate is frequently made with the intention of improving children's lives (Abrego, 2009; Dreby & Stutz, 2012), and thus, is a consequence of a strong emotional bond to the origin household (Nobles, 2011). International migrants are not only dealing with assimilation and integration but also with cultural differences in the place of destination. To buffer some of the stress experienced in the new location, they are trying to uphold ties to family in their country of origin (Carella et al., 2022; Nee & Sanders, 2001), hence we are expecting their networks to have a bigger share of people living abroad. However, some of the mobility could also be motivated by kin who has already settled in the country of destination before the move takes place (Boujija et al., 2022; Ortensi & Barbiano di Belgiojoso, 2021; Pacheco et al., 2013), which acts as a pull factor. International migrants could either move towards those family members, or migrate with their respective family, we are therefore expecting them to have a proportion of their ties living close by also in the destination country.

Drevon et al. (2021) find that the composition or ratio between friends and family in social networks does not vary between mobile and non-mobile people. The social network composition does not change because familial ties are considered to be stronger than ties to friends or co-workers and are not subjected to erosion of trust if the individuals are not collocated, they are more often upheld even over larger distances (Wellman, 1992; White & Riedmann, 1992). Scholars have pointed out that family ties, in particular between parents and children, are more likely to overcome spatial dispersion than weaker relationships, such as those between with friends and other acquaintances (Viry, 2012; Viry et al., 2017). This finding can be explained by normative expectations concerning relatives and the density of connection of kinship systems (Wellman & Wortley, 1990). Following this argumentation, the only difference between the mobility groups is the spatial proximity to family and kin.

1.2 Why Residential Mobility may Affect Social Support

The decision to relocate or remain at a certain place is not only a product of the economic opportunities and cultural and place-based resources, but also closely related to interpersonal relations and especially social support (Mulder et al., 2018; Niedomysl & Clark, 2014). Several mechanisms affect the availability of individuals' social support. For example, Wellman and Wortley (1990) argue that residential proximity fosters densely knit connections, mutual awareness of problems, and easy delivery of aid. The authors' rationale stems from the fact that residential mobility affects the proximity to family and kin and thereby the magnitude of interaction (Shi et al., 2016; Wellman & Wortley, 1990; White & Riedmann, 1992). Indeed, co-residence and levels of geographical mobility help to explain the frequency of kinship interactions, and even cross-countries variations thereof (Höllinger & Haller, 1990). As distance increases more than

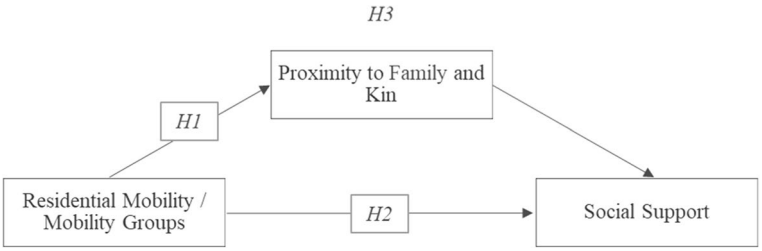

Fig. 1 Theoretical model

5 miles, the frequency of face-to-face and telephone contact decreases steadily, as demonstrated in a study by Mok et al., (2007). Some studies show that social support, to a certain degree, requires face-to-face interactions (White & Riedmann, 1992). International residential relocation, specifically, is often associated with a decrease in the frequency of contact with social networks in the home country (Lubbers et al., 2010). In Germany, residential proximity seems to be related to contact frequency, so that the closer (geographically) parents and children reside, the more frequent they contact one another (Axhausen & Frei, 2007; Ermisch & Mulder, 2019; Steinbach, 2013).

Additionally, the strength of social ties between individuals and their family as well as kin may subside with decreasing residential proximity, which weakens the mutual inclination to support (Shi et al., 2016; Wellman & Wortley, 1990). Long periods of separation, often extending for several years, are associated with weakening relationships, union dissolution, and the formation of new sexual partnerships (Dreby & Adkins, 2010; Lubbers et al., 2010; Magdol, 2000). This occurs mainly because maintaining relations requires time, an active effort, and meeting opportunities (Mollenhorst et al., 2014). Migration duration, for instance, seems to play a prominent role in the disruption of ties with family and kin in the home country (Morosanu, 2013). Furthermore, migration duration can cause the substitution of these ties with ethnic networks in the host country (Nee & Sanders, 2001), while also influencing processes related to family reunification or building in the host country (Boyd, 1989).

Embeddedness, standing for the social relationships increasing integration in a particular local surrounding, is relevant to the mobility decision of non-movers and internal movers (Korinek et al., 2005). Family already living at a distance increases the likelihood to move to the location where family members have settled already (Mulder et al., 2018; Pacheco et al., 2013) and social support in the destination country reduces the desire for returning back to the country of origin (Ortensi & Barbiano di Belgiojoso, 2021; Yahirun, 2014). Embeddedness thus contributes to the effect of proximity, as it is tied to the locally available social support.

To test the hypothesis, we employed a simple mediation model by Hayes (2022). Figure 1 presents the theoretical model of the study. Following previous work, we thus hypothesize that.

1. Proximity systematically varies between groups – the further the residential mobility goes the more dispersed is the family and kin social support network (Hypothesis 1, H1).
2. Residential mobility contributes to variations in individuals' exchange of social support with family and kin (Hypothesis 2, H2).

3. Proximity to family and kin should mediate the variations between mobile and non-mobile individuals in their access to social support (Hypothesis 3, H3).

2 Data

In an optimal dataset to address our research questions, we would be able to draw on data describing the mobility trajectories of all mobility groups assessed before and after their decision to become residentially mobile, which would allow us to conduct a pre-post migration analysis. However, large-scale national panel data with this level of granularity does not exist to our knowledge. Nevertheless, the analysis of the available data contributes to increase the understanding of the impact of residential mobility on social support until better suited data is attainable.

The analytical part of the paper is based on data from the "Socio-Economic Panel (SOEP)". It is a wide-ranging, nationally representative, longitudinal study of private households across Germany that was launched in 1984. Every year, nearly 15,000 households and more than 25,000 individuals are surveyed for the main sample of the SOEP (SOEP Core) study. Data for this investigation come from the SOEP Core and the additional IAB-SOEP Migration samples where the migrant population is targeted (M1-3). The analytical sample contains around 14,000 individuals, who have partaken in at least one of the survey years, when our outcome variable was collected (2006, 2011, and 2016). To arrive at this sample size, we dropped individuals over the age of 65 (4080 observations), as they were filtered over one of the questions that makes up our dependent variable, social support. To achieve comparability with the general population in Germany, we use the person-based weights provided by the SOEP. Using this dataset, we are not able to control for potential selection effects. In other words: if people who relocate select themselves into a distinct group because of observable and unobservable characteristics, we will not be able to account for this potential selection, as the survey questions have not been posed to international migrants before their arrival to Germany. The same is true for internal migrants, as we only have values for when they are part of the survey population.

3 Variables and Method

3.1 Residential Mobility

According to our hypotheses, we define individuals as movers (internal or international) if they relocated at least once before the respective survey interview. For example, if they changed residential location between 2006 and 2011, their migration experience was recorded in 2011. Internal movers are people who changed their place of residence while being part of the SOEP population, or people who indicated that they now live in a federal state that differs from their birthplace. Since individuals may have moved within a federal state, which would not be reflected in the data, we argue that our measure is conservative for internal movers. We define international movers as individuals born outside of Germany or who provided a year of immigration to Germany in the interview. In cases where the person had an international migration experience and

moved within Germany, they were counted as international movers, as their international relocation arguably evoked stronger ruptures in their access to social support than the relocation between different Federal States (Viry et al., 2017).

3.2 Proximity to Family and Kin

We include a measure of proximity to family and kin, constructed similarly to the approach used by Popielarz and Cserpes (2018), as we argue that residential mobility influences the spatial spread of the kin support network.

In the SOEP, respondents are being asked "(1) which of the following family members do you have? For each, indicate how many such relatives you have, (2) whether they live in your household, and if not, how far away they reside. If you have more than one relative in a category, please give only the location of the nearest-residing relative."(Goebel et al., 2018). The proximity item ranges from 0 (in the same household), 1 (in the same house) 2 (in the same neighborhood) 3 (in the same town) 4 (in a different town, less than 1 h by car) 5 (further away, but still in Germany) to 6 (abroad). To construct continuous variables, we assigned relative measures for the seven proximity categories by dividing the number of people reported by the total amount of kin reported to live within a certain proximity. For example, the variable "% in the same household" is calculated by dividing the number of people that live in the same household (e.g. 3) as the respondent by the number of people they reported who could provide social support (e.g. 15), which would yield 0.2. For better interpretability in the analysis, we have scaled the proximity categories by factor 10.

3.3 Social Support

Social support is considered to be a multi-dimensional phenomenon. House (1981), for example, differentiates between emotional, instrumental, informational and appraisal support.[3] In accordance, our outcome variable, based on the SOEP questionnaire, is considering multiple dimensions of social support and constructed according to previous work by Viry (2012). The variable is continuous, ranging from 0 (no support on any dimension) to 12 (support from three individuals in each dimension). It quantifies the number of individuals who are important to the respondents, and who would assist them in the following scenarios, with each scenario corresponding to a particular dimension of social support mentioned in brackets after each sub-question: (a) With whom do you talk about personal thoughts and feelings, or about things you wouldn't tell just anyone? (emotional support) (b) Who supports your advancements in your career or educational training and fosters your progress? (informational support) (c) Now a hypothetical question: If you were to need long-term care (for example, in the case of a bad accident), who would you ask for help? (Instrumental support) and (d) Who can you tell the truth, even when it is unpleasant? (appraisal support) (Goebel et al., 2018).

In the questionnaire, respondents could name immediate family members, extended kin, friends, and co-workers. Since our analysis focusses on the support provided by close and extended family members, our dependent variable captures social support if it was provided by these family members. Furthermore, we have estimated all models using only

[3] While social support is considered to be relationship-based, it is however, distinct from its relational preconditions, such as the availability of ties and social capital (for an introduction see Song et al., 2011).

the first three familial support providers of a possible five. This choice was made because scores exceeding 12 generated issues related to model fit (refer to Sect. 4.3 for robustness checks). The Cronbach's alpha for the adjusted outcome variable is 0.63, 0.62 and 0.65 for 2006, 2011 and 2016 respectively.

The additive index is particularly appropriate for our study because it captures perceived availability of social support, in contrast to the social support actually received. While both constructs are positively correlated (Meadows, 2009), perceived social support is measuring long-term benefits of social support, as well as being neutral as to whether people actually need or use this support (Mazelis & Mykyta, 2011), therefore encompassing a wider range of potential support relationships. In addition, this measure may count a recorded individual multiple times, as the respondent perceives this person to be helping them in various situations. Thus, it captures the quality and accessibility of social support relevant for our analysis and not the quantity of social support providers.

3.4 Controls

Research evidence suggests that the availability of social support is not evenly distributed in the population, but instead, varies according to marital status, age and other social factors (Penning & Wu, 2013; Wellman & Wortley, 1990). Therefore, we control for the gender *(female)* and the marital status *(*dummy variable *married (living together), marrieds (living separately), divorced, widowed,* and *single).* The *age* of an individual is an important demographic covariate as well, and since social support provision and reception changes with age, we also control for a non-linear relationship using the squared value of age, *age2*. Parents of younger children are more likely to be living closer to their family members (Nivalainen, 2004) and therefore rely more on familial social support. Hence, we control for the number of household members below the age of 14 *minorchild*. Other socio-economic factors such as *income* also have an impact on the available social support, as does the level of *education* (dummy variable differentiating between general, middle vocational, vocational and Abitur, higher vocational, and higher education) and whether the person is *employed* or not (Viry et al., 2017). Living in an *urban* area can also have an impact on how much social support an individual can access (Korinek et al., 2005). People who are of ill *health* (approximated by a grip strength test) rely more on their family and kin and are less able to provide social support to their family members, therefore health is also a determining factor when it comes to social support (Hank, 2007). A description of the control variables according to the mobility groups can be found in Table 3.

3.5 Estimation Approach

To answer the first research question, which concerns proximity and mobility and is of a descriptive nature, we were looking at residential proximity distinguished by the mobility trajectory over the study period. Given that we were furthermore interested in the effect of a certain mobility decision on social support and the mediating effect of proximity to family members and kin, we then ran two separate regression models in a stepwise fashion to answer research questions 2 and 3. Model 1 controls for the different mobility groups, testing in a first step for systematic variations in social support between the three groups and thereby indicating whether hypothesis 2, that residential mobility contributes to variations in social support, can be upheld.

Model 2 additionally controls for the proximity to close and extended family, testing for hypothesis 3. The underlying idea behind Model 2 was to account for the potential mediation effect of proximity to family and kin as source of social support. We hypothesize that controlling for proximity to family members diminishes the effect of residential mobility on available social support (more information on the methodological approach of mediation can be found in Hayes, 2022).

The regression analysis is done cross-sectionally, because we would need values for our variables pre-migration, which we only have for people who have stayed or migrated domestically within the study period. Since we therefore lack important information on a third of our sample, we can only draw point-based conclusions.

We ran two robustness checks: First, we ran each of the models for each of the mobility groups separately. Second, we conducted the analysis not only on the composite index (dependent variable) but also on its four individual support dimensions (emotional, instrumental, informational, and appraisal support), each ranging from 0 (no support) to 3 close and extended family members mentioned. The results will be discussed in the following section and detailed tables can be obtained upon request.

4 Results

4.1 Descriptive Results

As an answer to the first research question, we find that internal and international movers differ from the group of non-movers regarding the proximity to family and kin. As depicted in Fig. 2, respondents who had never moved had on average a higher share of family and kin living close by, in the same household, house, in the neighborhood, or in the same town (49–50% of non-movers' family and kin are residing within this distance, the reported range indicating the three different survey years). For international movers, the share of family living in very close proximity is 39–44%, meaning about 40% of their family and kin is living not further than in the same town. Internal movers mentioned a higher share of family members and kin living at a further residential proximity than non-movers. A high share (47–49%) of internal movers' family and kin lived further away but still in Germany.

Another striking difference between the mobility groups is the share of family members living furthest away from the respondent: 32–35% of international migrants' family and kin are residing abroad, however it is not clear from the data whether those people live in their country of origin or other places abroad. Descriptively, we find no variations for the three mobility groups across survey years, thus the, location of where the support providers live remains constant over the study period.

Regarding the second research question, we show in Fig. 3 the differences in the mean of social support between the different mobility groups. Descriptively, social support from family and kin is lower for international movers and higher for internal movers for each group compared to non-movers. On average, international movers perceive the availability of 0.60–1.00 support providers less than non-movers, whereas internal movers have access to 0.08 to 0.24 more support providers than non-movers depending on the survey year (significant to the 5% level). Social support varies across the survey years, respondents in all mobility categories are mentioning a higher number of support providers on average in 2016 than in 2011 (we cannot compare the numbers for 2006, as the question design

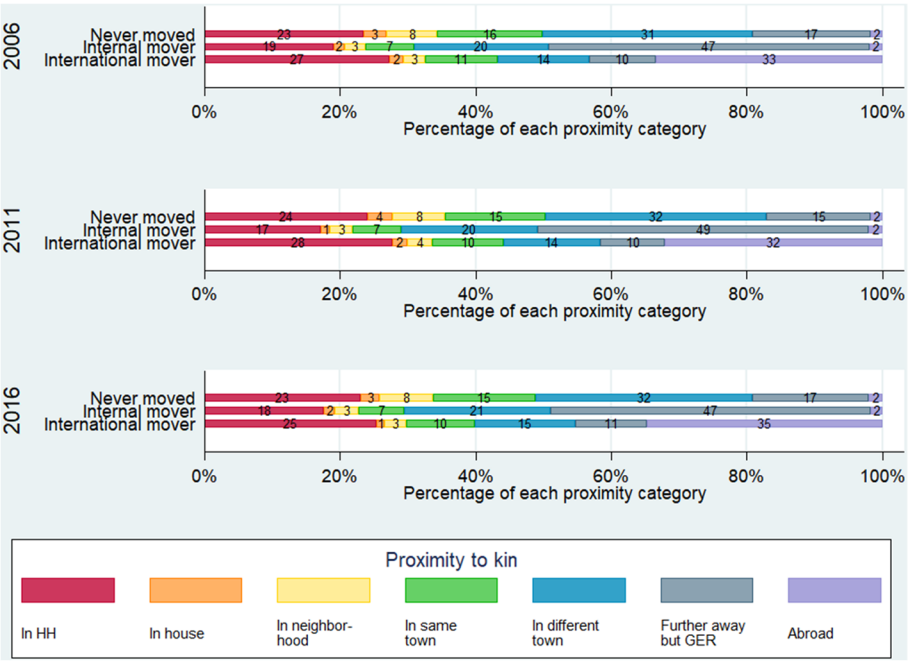

Fig. 2 Percentage of family and kin living at a certain proximity by mobility group and survey year (N = 15,714 (2006), 15,211 (2011), 17,373 (2016)). *Notes*: Percentage of family and kin living within a certain proximity based on the sample of Socio-Economic Panel Study (SOEP) respondents with non-missing information on the dependent and independent variables as well as the covariates in later models. "In HH" = living in the same household, "in house" = living in the same house, but not household, "in neighborhood" = living in the vicinity but not the same building, "in same town" = living in same town, but more than 15 min away by foot, "in different town" = living in another town but within one hour drive, "farther away but GER" = living in Germany, but further away than within 1h drive, "abroad" = living outside of Germany

changed). Furthermore, since we are looking at cross-sectional analyses and the study population between the years are not the same, we can only interpret these differences on a surficial level. Except for international movers, the descriptive summary statistics for social support indicate a slight increase across time. Mean social support for non-movers increased from 6.90 in 2011 to 7.04 in 2016. In 2016, internal movers had on average access to 0.21 support providers more than in 2011 (average increase from 7.07 to 7.28).

Further descriptive statistics on the analyzed sample can be found in the appendix (Table 3).

4.2 Multivariate Results

Figure 4 and Table 1 show the results of the linear regressions. All predictors described in the controls section are included in Model 1 (M1), as well as our independent variable, mobility group. Model 2 (M2) further includes the mediator variable "proximity to family and kin".

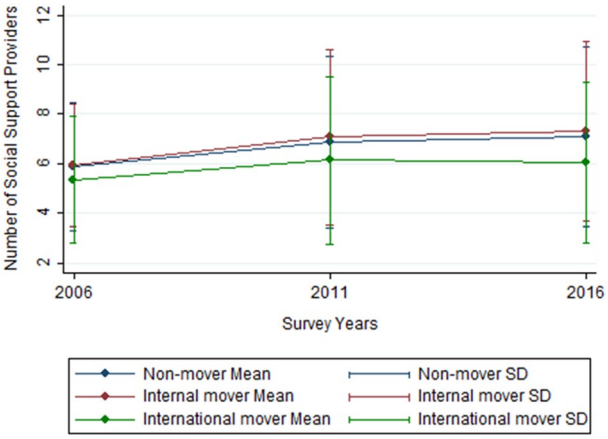

Fig. 3 Mean and standard deviation (SD) of social support providers according to mobility group and survey year N = 15,714 (2006), 15,211 (2011), 17,373 (2016). From top to bottom: Internal mover, non-mover, international mover. *Notes*: The number of support providers is based on the sample of Socio-Economic Panel Study (SOEP) respondents for 2006, 2011, and 2016. Social support is the average number of family members who are important to the respondent and would assist in different scenarios (range 0–20). "International movers" include people who were born outside of Germany, or who provided a year of immigration to Germany in the interview. "Internal movers" are people who changed their place of residence while being part of the SOEP population, or people who indicated that they now live in a federal state that differs from their birthplace

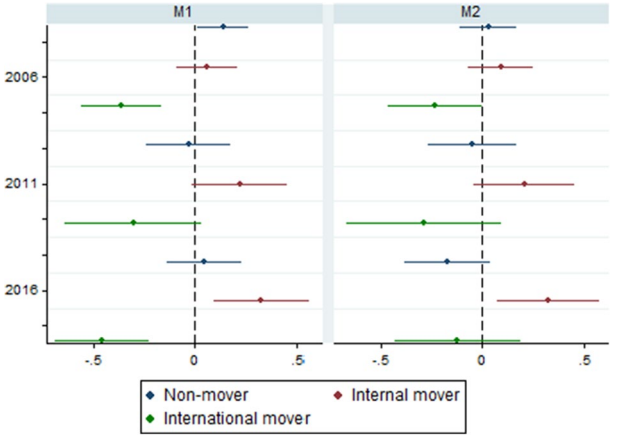

Fig. 4 Effect of mediator "proximity to family and kin" on social support, showing the coefficient for residential mobility (Internal vs. International) for each of the survey years. Non-Mover: First Horizontal Line, Internal Movers: Second Horizontal Line, International Mover: Third Horizontal Line from the top of each survey year. *Notes:* Reference: Non-movers. Results that are significant to the 1% level ($p < 0.01$) are indicated by confidence intervals not touching the dashed line at the bottom. For more details see Table 1

The results suggest that social support differs between mobility groups (hypothesis 2). Internal movers had a higher amount of social support available to them than their non-mobile counterparts. However, the results are only statistically significant in 2016, where internal movers report 0.24 more support providers than non-movers (Fig. 4 and Table 1).

The picture is reversed for internationally mobile respondents: they perceive significantly less available support from family and kin than non-mobile individuals. This result is supporting the descriptive findings presented in Table 2 and Fig. 2, demonstrating

Table 1 Multivariate results estimating the effect of residential mobility and the mediating effect of spatial proximity to family and kin (m1 vs.m2)

	2006				2011				2016			
	M1		M2		M1		M2		M1		M2	
Variable	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE
Internal movers	0.01	(0.08)	0.07	(0.08)	0.19	(0.12)	0.18	(0.13)	0.24**	(0.12)	0.32**	(0.13)
International movers	−0.36***	(0.10)	−0.22*	(0.12)	−0.26	(0.17)	−0.25	(0.19)	−0.40***	(0.12)	−0.06	(0.16)
Reference: non-movers												
% Rel. in house			0.06	(0.04)			−0.02	(0.04)			0.10*	(0.05)
% Rel. in neighborhood			0.02	(0.03)			0.16***	(0.04)			0.08**	(0.04)
% Rel. same town			−0.01	(0.02)			0.08***	(0.03)			0.04	(0.03)
% Rel. different town			−0.03	(0.02)			0.07**	(0.03)			0.05*	(0.03)
% Rel. further away			−0.03*	(0.02)			0.07**	(0.03)			0.01	(0.03)
% Rel. abroad			−0.06**	(0.03)			0.07	(0.05)			−0.06**	(0.03)
Reference: % Rel. in hh												
Constant	4.38***	(0.25)	4.50***	(0.27)	4.83***	(0.41)	4.33***	(0.44)	4.97***	(0.32)	4.67***	(0.37)
N	15,714		15,714		15,211		15,211		17,373		17,373	
Adjusted R2	0.12		0.12		0.15		0.15		0.15		0.15	
F-statistic	44.92		37.39		43.65		36.35		50.14		41.42	
p > F	0.00		0.00		0.00		0.00		0.00		0.00	

The coefficients are based on a sample of Socio-Economic Panel Study (SOEP) respondents for 2006, 2011, and 2016 respectively using listwise deletion in the estimation. Reference category are non-movers. Standard errors (SE) in parentheses. The proximity categories were transformed using factor 10 for better interpretation

international movers having access to a fewer number of familial support providers (the difference is − 0.36, − 0.26, and − 0.40 in 2006, 2011, and 2016 respectively).

The proximity to family and kin is mostly statistically significant, except for family members living in closer proximity in 2006. Including the proximity to family and kin (M2) did not change the significance of the coefficient for internal movers, they still accessed 0.32 more social support providers of their family and kin than their non-mobile counterparts in 2016. Because we do not find statistically significant results for 2006 and 2011, hypothesis 2 is only weakly supported for the internally mobile population. Once controlled for spatial proximity to their family and kin, the significant negative effect for internationally mobile people diminishes (in 2006) or vanishes completely (in 2016), which confirms hypothesis 3. Since the proportion of support providers located within a certain proximity does not change significantly between the survey years and internationally mobile people exhibit the highest share of kin and family abroad (see Fig. 2), we can infer about the importance of residential mobility vs. spatial proximity to family and kin.

Even though the R-squared only marginally increases between the Models 1 and 2, additional Wald-tests indicate that the proximity to family and kin is still an important and significant predictor in explaining the observed variance in social support.

Having family and kin in close proximity is more important than further away, as depicted by the coefficients of the proximity categories. In 2011 for example, having a high share of relatives in the same neighborhood increased social support by 0.16, while having family located further away only led to an increase of 0.07. Compared to relatives in the same household, having familial support providers abroad even diminishes social support by 0.06 in 2006 and 2016. The coefficient for the share of relatives living abroad in 2011 is not statistically significant. In other regressions run as robustness checks described in the next sub-chapter, having relatives abroad was not statistically significant the groups of non-movers and internal movers, but still significant for international movers.

In agreement with the literature, we saw a positive effect of education on social support, with a higher degree of education corresponding to more social support. Older people have less access to social support, but at a decreasing rate (significantly positive coefficient of *age squared*). Women have more access to social support than men. However, if the respondents still had to care for minor children, social support diminished. Having a stable relationship with a partner and cohabitating increased social support. Union dissolution or the death of the partner do not have a significant effect on social support in our sample. As the nuclear family is very important for support provision, especially parent-children ties, having parents (mother and father) who are still alive significantly increases social support. People living in urban areas perceive less support from family and kin in our sample. Respondents of Christian faith have more support available compared to respondents who indicated no connection to religion (*undenominational*), while Muslims indicated less available family support. (The results are available upon request).

4.3 Robustness Checks

To confirm our results, we ran several models to check the robustness of our models. To scrutinize our dependent variable, we ran both Models (M1 and M2) for each of the four social support dimensions (emotional, informational, instrumental, and appraisal support). People who moved within Germany have access to significantly more emotional support as compared to non-mobile individuals (in 2006 and 2011). They furthermore had slightly more appraisal support (in 2016) than non-mobile individuals. International movers have

significantly less access to social support in the dimension of appraisal support (in 2006, 2011 and 2016) compared to non-movers. Even though the coefficients for the other support dimensions do not yield statistically significant results, it has to be noted that the sign of the coefficients points towards less social support for internationally mobile people, and more support for individuals who have moved within Germany. Proximity to family and kin members mediates the impact of mobility group on all dimensions of social support, leading to a decrease in the effect size of the mobility group. Additionally, we have run the models for each of the mobility groups separately, where we have found similar relationships between social support, residential mobility, and spatial proximity of family and kin (results available upon request). Thus, both test confirm the robustness of our results.

5 Discussion

Residential mobility is an important driver of change in social support networks and continues to gain importance as societies become more mobile and more people relocate internally and internationally. Families, who are the main provider of social support, are challenged by fragmentation, spatial spread, and changes in residential proximity to family and kin (Hagan et al., 1996; Koelet et al., 2017; Litwak, 1960). Based on the literature, this study set out to provide a clearer understanding of the connections between access to social support and residential mobility in Germany. In hypothesis 1, we have assessed the proximity to family and kin according to the residential mobility trajectory of the respondent. As we observed stark differences in the proximity to family and kin between the mobility groups (Fig. 2), we were furthermore interested in whether those differences would be reflected in the access of social support within the family network. Hypothesis 2 therefore was tailored to examine if residential mobility caused variations in access to social support. Because those variations could originate from the disrupting effect of distance in social networks, we hypothesized that proximity to family and kin should mediate the variations between mobile and non-mobile individuals in their access to social support (hypothesis 3).

All hypotheses were supported by the data to a large extent, with a few differences between the survey years. Non-mobile individuals have most of their family living nearby. People who change residential location within Germany are most likely to live further apart from their family, but their kin and family members will still live within the national borders. In contrast, international movers have most of their family network at a larger distance (abroad).

For internal movers, the data showed that their amount of accessible social support systematically and significantly varies compared to non-movers (hypothesis 2). This positive effect remained significant even after controlling for proximity to family and kin (hypothesis 3), which points towards the general ability of internally mobile people to maintain social support over a larger distance. International movers have less access to social support compared to non-movers (hypothesis 2), which in this case can be accounted for by the distance to the respondents' family and friends (hypothesis 3). In other words, once controlled for the proximity to their family and kin, international migration does not significantly affect social support anymore. In other words, international movers have less social support provided by family and kin, because their family and kin are living further away from them. Even though there are ways in which distance can be overcome, for example

by using modern forms of communication, some social support relies on face-to-face interaction. Hence, our study proposes that distance is still going to play an important role in modern social networks.

These findings furthermore support the claim of residential mobility being a core cause of variations in access to family social support and international mobility disrupting social ties (Magdol & Bessel, 2003) and contrasts other studies which did not find significant differences in access to social support after internal residential mobility (Viry, 2012). We therefore add to the literature in confirming a formative impact of residential mobility on the access to social support, which we additionally differentiate according to whether the relocation occurred within Germany (internally) or by people immigrating to Germany (internationally). By distinguishing between these mobility groups, we found differences in social support between internal movers and non-movers and international movers and non-movers, respectively, which previous studies have seldom investigated.

At the core of our study was the observation that residential proximity to family and kin varied between mobility groups and thereby their access to social support would be different, hypotheses 1 and 2. We have found variations in the spatial proximity to family and kin that are characteristic for the respective mobility group. Connected to this initial descriptive investigation, access to social support increases the most when a higher share of family and kin lives in the same neighborhood. Having kin and family at a larger residential distance, however, also affects access to social support positively, albeit a little less than having family and kin living close by. With increasing availability of different modes of transportation, individuals are able to overcome larger distances to keep up personal contacts in distant residential locations (Drevon et al., 2021; Viry et al., 2017). But our results suggest that even with these tools for communication and transportation in hand, it remains more complicated to access social support from family and kin living outside of Germany. Having family and kin abroad was not important for the access to social support for internal movers or non-mobile people. Conversely, familial ties abroad still provided access to social support to international movers, even though to a smaller extent. Because internationally mobile people are actively maintaining their networks at a distance, they still obtain value from these distant relationships. In contrast, non-mobile people might not rely on their few distant social ties, as those relatives were the ones who decided to move away and they therefore do not play an important role as providers of social support.

The findings of this study have four limitations that warrant further research. First, this study has explored the relationship between residential mobility and social support, by considering the role of proximity to family and kin as a mediating factor. Future research should delve deeper into other mediating factors of importance for the relationship between kin members, such as the magnitude of interactions and tie strength (for a discussion on how distance impacts parent–child relationships, see Schafer & Sun, 2021). Second, this study highlights the importance of distinguishing between internal and international movers, as these constitute entirely different migration experiences, and are especially decisive for network composition (Magdol & Bessel, 2003). A more nuanced pattern might emerge if we could further differentiate between the motives for migration, such as housing, employment and family-related considerations (Thomas et al., 2019). Third, proximity to family and kin accounts for variations in social support between international movers and non-movers, however, not for internal movers. Further investigations should be carried out

to unveil other causes for these social support variations. Fourth, it is important to observe the long-term temporal variations of social support in connection with residential proximity, as they are both influenced by technological progress in communication and transportation but in different ways and residential mobility is projected to increase even more in the future. We have used three different points in time and have observed two distinct trends: the average social support from family and kin is steadily increasing from 2006 to 2016 (Table 2 in the appendix) while the distance to family and kin is remaining stable (Fig. 2). Future research should uncover how social support dynamics change over extended periods, which would require panel data analysis.

This study provided empirical evidence for the relevance of residential mobility for variations in social support. Spatial proximity is important for support provision within the family network, especially for internationally mobile populations. Moving within Germany does not have a negative effect on the available social support provided by family and kin, which could be attributed to the technological advancements available to families in Germany (better telecommunication, a reliable and fast public transportation system) or the personality of the respondents, who might be better at maintaining support networks over larger distances than people who have never left the place where they grew up. Future research may be directed at uncovering whether and how far these different motivations behind residential mobility are consequential for social support. In order to accurately reflect inequalities in social support between mobility groups, the impact of proximity to family and kin must be compared for populations with differing motivations to migrate. Improving the controls for selection is also important, however, the data availability to conduct analysis testing for selection effects is very limited to this day. Once we overcome the data-gap in the future, we will be able to draw a more detailed picture of who is migrating and why, to further understand how to design optimal policies to support integration and well-being in mobile populations.

Appendix

See Tables 2, 3

Table 2 Mean and median in social support for mobility groups, By survey years

	2006			2011			2016		
	M	Mdn	N	M	Mdn	N	M	Mdn	N
Non-mover	5.88	6	11,417	6.90	6	11,176	7.04	7	10,856
Internal mover	5.96	6	2576	7.07	7	2454	7.28	7	2502
International mover	5.28	5	1721	6.13	5	1581	6.04	5	4015
Total	5.83	6	15,714	6.84	6	15,211	6.85	6	17,373

The number of support providers is based on the sample of Socio-Economic Panel Study (SOEP) respondents for 2006, 2011, and 2016. Social support is the average number of family members who are important to the respondent and would assist in different scenarios (range 0–20). "International movers" include people who were born outside of Germany, or who provided a year of immigration to Germany in the interview. "Internal movers" are people who changed their place of residence while being part of the SOEP population, or people who indicated that they now live in a federal state that differs from their birthplace

Table 3 Descriptive statistics for control variables according to mobility group and survey year

	2006						2011						2016					
	Never moved N = 11,417		Internal mover N = 2576		International mover N = 1721		Never moved N = 11,176		Internal mover N = 2454		International mover N = 1581		Never moved N = 10,856		Internal mover N = 2502		International mover N = 4015	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Gender[a]	0.51	0.50	0.55	0.50	0.53	0.50	0.54	0.50	0.56	0.50	0.57	0.50	0.55	0.50	0.56	0.50	0.56	0.50
Age	43.03	12.81	44.06	12.15	43.71	11.99	42.49	11.74	44.92	12.30	42.23	11.06	44.16	12.25	45.14	12.67	41.42	10.69
Age squared	2015.49	1094.05	2089.11	1061.89	2054.60	1053.18	1943.13	1001.09	2169.09	1077.29	1905.59	978.29	2100.14	1048.37	2197.80	1121.07	1829.63	919.55
Ln of HH income adjusted with modified OECD equivalence scale	9.89	0.54	9.96	0.58	9.64	0.53	9.90	0.52	10.04	0.60	9.68	0.53	9.98	0.54	10.08	0.61	9.72	0.51
Inadequately educated	0.01	0.10	0.00	0.05	0.08	0.26	0.01	0.11	0.00	0.05	0.05	0.23	0.01	0.11	0.01	0.08	0.05	0.22
General elementary	0.10	0.30	0.06	0.24	0.24	0.43	0.08	0.27	0.05	0.22	0.20	0.40	0.08	0.28	0.05	0.22	0.16	0.37
Middle vocational	0.55	0.50	0.43	0.49	0.37	0.48	0.53	0.50	0.42	0.49	0.37	0.48	0.52	0.50	0.40	0.49	0.34	0.47
Vocational + Abitur	0.06	0.23	0.07	0.26	0.09	0.29	0.08	0.27	0.08	0.27	0.12	0.32	0.09	0.28	0.08	0.28	0.16	0.37
Higher vocational	0.08	0.27	0.08	0.27	0.06	0.24	0.08	0.26	0.07	0.26	0.04	0.20	0.07	0.26	0.07	0.25	0.02	0.13
Higher education	0.20	0.40	0.36	0.48	0.16	0.36	0.22	0.41	0.37	0.48	0.22	0.41	0.23	0.42	0.39	0.49	0.27	0.44
Single	0.28	0.45	0.25	0.43	0.12	0.33	0.25	0.44	0.26	0.44	0.11	0.31	0.27	0.45	0.28	0.45	0.18	0.38
Married living together	0.61	0.49	0.62	0.49	0.76	0.43	0.62	0.49	0.58	0.49	0.78	0.41	0.58	0.49	0.57	0.50	0.72	0.45
Married living separately	0.02	0.14	0.03	0.17	0.04	0.21	0.02	0.15	0.03	0.17	0.03	0.17	0.03	0.16	0.03	0.16	0.03	0.16
Divorced	0.08	0.27	0.09	0.29	0.06	0.24	0.09	0.29	0.11	0.31	0.07	0.25	0.11	0.31	0.11	0.32	0.07	0.25

Table 3 (continued)

	2006						2011						2016					
	Never moved N = 11,417		Internal mover N = 2576		International mover N = 1721		Never moved N = 11,176		Internal mover N = 2454		International mover N = 1581		Never moved N = 10,856		Internal mover N = 2502		International mover N = 4015	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Widowed	0.02	0.14	0.02	0.14	0.02	0.13	0.02	0.13	0.02	0.14	0.01	0.12	0.02	0.13	0.02	0.15	0.01	0.11
Employed	0.71	0.45	0.73	0.44	0.64	0.48	0.76	0.43	0.77	0.42	0.64	0.48	0.80	0.40	0.79	0.40	0.72	0.45
Urban	0.63	0.48	0.68	0.47	0.84	0.36	0.62	0.49	0.67	0.47	0.78	0.42	0.62	0.48	0.68	0.47	0.75	0.43
Christian	0.66	0.47	0.54	0.50	0.62	0.49	0.65	0.48	0.52	0.50	0.60	0.49	0.62	0.49	0.49	0.50	0.31	0.46
Muslim	0.00	0.03	0.00	0.00	0.02	0.14	0.01	0.11	0.00	0.06	0.21	0.40	0.02	0.14	0.02	0.13	0.17	0.38
Other religion[b]	0.01	0.11	0.01	0.09	0.24	0.43	0.00	0.04	0.00	0.05	0.02	0.13	0.00	0.05	0.00	0.03	0.03	0.17
Undenominational	0.33	0.47	0.46	0.50	0.13	0.33	0.33	0.47	0.48	0.50	0.18	0.39	0.34	0.47	0.47	0.50	0.24	0.43
Health[c]	50.96	7.55	51.37	7.36	49.92	7.78	51.36	7.53	52.14	6.95	50.42	7.82	51.67	7.61	52.45	7.33	51.37	8.76
Minor children[d]	0.41	0.77	0.42	0.79	0.65	0.97	0.83	1.09	0.39	0.77	1.13	1.20	0.69	1.01	0.47	0.83	0.93	1.07
Mother alive	0.72	0.45	0.74	0.44	0.67	0.47	0.77	0.42	0.74	0.44	0.73	0.44	0.74	0.44	0.74	0.44	0.74	0.44
Father alive	0.54	0.50	0.55	0.50	0.50	0.50	0.59	0.49	0.55	0.50	0.57	0.50	0.56	0.50	0.56	0.50	0.55	0.50

[a]Gender: 0 = male, 1 = female. [b]Other religion: 1 = Jewish, Buddhist, Hindu, and any other religion which is not accounted for as Christian or Muslim. [c]Health: Measured with a grip strength test. [d]Minor children: 0 = no children below the age of 14 living in the household, 1 = at least one child below the age of 14 living in the household

Funding Open Access funding enabled and organized by Projekt DEAL. This work was supported by the German Federal Ministry of Education and Research (BMBF) (Grant number: REDMIG2).

Declarations

Conflict of interest The authors have no competing interests to declare that are relevant to the content of this article.

References

Abrego, L. (2009). Economic well-being in salvadoran transnational families: how gender affects remittance practices. *Journal of Marriage and Family, 71*(4), 1070–1085. https://doi.org/10.1111/j.1741-3737.2009.00653.x

Arpino, B., & de Valk, H. (2018). Comparing life satisfaction of immigrants and natives across Europe: The role of social contacts. *Social Indicators Research, 137*(3), 1163–1184. https://doi.org/10.1007/s11205-017-1629-x

Artamonova, A., Gillespie, B. J., & Brandén, M. (2020). Geographic mobility among older people and their adult children: The role of parents' health issues and family ties. *Population, Space and Place, 26*(8), e2371. https://doi.org/10.1002/psp.2371

Axhausen, K. W., & Frei, A. (2007). Contacts in a shrunken world. *Arbeitsberichte Verkehrs-Und Raumplanung*, *440*.

Bimonte, S., Bosco, L., & Stabile, A. (2020). Integration and subjective well-being among off-site university students. *Social Indicators Research, 147*(3), 947–969. https://doi.org/10.1007/S11205-019-02182-0/TABLES/6

Boujija, Y., Bignami, S., Delaunay, V., & Sandberg, J. (2022). Who matters most? migrant networks, tie strength, and first rural-urban migration to dakar. *Demography, 59*(5), 1683–1711. https://doi.org/10.1215/00703370-10191592

Boyd, M. (1989). Family and personal networks in international migration: Recent developments and new agendas. *International Migration Review, 23*(3), 638–670. https://doi.org/10.1177/019791838902300313

Carella, M., García-Pereiro, T., & Pace, R. (2022). Subjective well-being, transnational families and social integration of married immigrants in Italy. *Social Indicators Research, 161*(2–3), 785–816. https://doi.org/10.1007/s11205-020-02402-y

Clark, W. A. V., Duque-Calvache, R., & Palomares-Linares, I. (2017). Place attachment and the decision to stay in the neighbourhood. *Population, Space and Place, 23*(2), e2001. https://doi.org/10.1002/psp.2001

Coleman, J. (1990). *Foundations of social theory*. Harvard University Press.

Dawkins, C. J. (2006). Are social networks the ties that bind families to neighborhoods? *Housing Studies, 21*(6), 867–881. https://doi.org/10.1080/02673030600917776

Dreby, J., & Adkins, T. (2010). Inequalities in transnational families. *Sociology Compass, 4*(8), 673–689. https://doi.org/10.1111/j.1751-9020.2010.00297.x

Dreby, J., & Stutz, L. (2012). Making something of the sacrifice: Gender, migration and Mexican children's educational aspirations. *Global Networks, 12*(1), 71–90. https://doi.org/10.1111/j.1471-0374.2011.00337.x

Drevon, G., Viry, G., Kaufmann, V., Widmer, E. D., Gauthier, J., & Ganjour, O. (2021). Analysing the effects of residential mobility behaviours on the composition of personal network in Switzerland. *Population, Space and Place,*. https://doi.org/10.1002/psp.2472

Ermisch, J., & Mulder, C. H. (2019). Migration versus immobility, and ties to parents. *European Journal of Population, 35*(3), 587–608. https://doi.org/10.1007/s10680-018-9494-0

Feld, S., Dunkle, R. E., Schroepfer, T., & Shen, H.-W. (2006). Expansion of Elderly couples' iadl caregiver networks beyond the marital dyad. *The International Journal of Aging and Human Development, 63*(2), 95–113. https://doi.org/10.2190/CW8G-PB6B-NCGH-HT1M

Goebel, J., Grabka, M. M., Liebig, S., Kroh, M., Richter, D., Schröder, C., & Schupp, J. (2018). The German Socio-Economic Panel (SOEP). *Jahrbücher Für Nationalökonomie Und Statistik*. https://doi.org/10.1515/jbnst-2018-0022

Hagan, J., MacMillan, R., & Wheaton, B. (1996). New kid in town: Social capital and the life course effects of family migration on children. *American Sociological Review, 61*(3), 368–385. https://doi.org/10.2307/2096354

Hank, K. (2007). Proximity and contacts between older parents and their children: A European comparison. *Journal of Marriage and Family, 69*(1), 157–173. https://doi.org/10.1111/J.1741-3737.2006.00351.X

Hayes, A. F. (2022). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (Third edition). The Guilford Press.

Hendriks, M., Ludwigs, K., & Veenhoven, R. (2016). Why are locals happier than internal migrants? The role of daily life. *Social Indicators Research, 125*, 481–508. https://doi.org/10.1007/s11205-014-0856-7

Hendriks, M., & Burger, M. J. (2021). Happiness and Migration. In K. F. Zimmermann (Ed.), *Handbook of Labor, Human Resources and Population Economics* (pp. 1–23). Springer International Publishing. https://doi.org/10.1007/978-3-319-57365-6_178-1

Höllinger, F., & Haller, M. (1990). Kinship and social networks in modern societies: A cross-cultural comparison among seven nations. *European Sociological Review, 6*(2), 103–124. https://doi.org/10.1093/oxfordjournals.esr.a036553

House, J. S. (1981). *Work Stress and Social Support* (2nd ed., Vol. 4). Addison-Wesley.

King, R., & Skeldon, R. (2010). 'Mind the gap!' integrating approaches to internal and international migration. *Journal of Ethnic and Migration Studies, 36*(10), 1619–1646. https://doi.org/10.1080/1369183X.2010.489380

Koelet, S., Van Mol, C., & De Valk, H. A. G. (2017). Social embeddedness in a harmonized Europe: The social networks of European migrants with a native partner in Belgium and the Netherlands. *Global Networks, 17*(3), 441–459. https://doi.org/10.1111/glob.12123

Korinek, K., Entwisle, B., & Jampaklay, A. (2005). Through thick and thin: Layers of social ties and urban settlement among Thai migrants. *American Sociological Review, 70*(5), 779–800. https://doi.org/10.1177/000312240507000503

Kratz, F. (2020). On the way from misery to happiness? A longitudinal perspective on economic migration and well-being. *Migration Studies, 8*(3), 307–355. https://doi.org/10.1093/migration/mny040

Lin, N. (1999). Social networks and status attainment. *Annual Review of Sociology, 25*(1), 467–487. https://doi.org/10.1146/annurev.soc.25.1.467

Litwak, E. (1960). Geographic mobility and extended family cohesion. *American Sociological Review, 25*(3), 385. https://doi.org/10.2307/2092085

Lubbers, M. J., Molina, J. L., Lerner, J., Brandes, U., Ávila, J., & McCarty, C. (2010). Longitudinal analysis of personal networks. The case of Argentinean migrants in Spain. *Social Networks, 32*(1), 91–104. https://doi.org/10.1016/j.socnet.2009.05.001

Magdol, L. (2000). The people you know: the impact of residential mobility on mothers' social network ties. *Journal of Social and Personal Relationships, 17*(2), 183–204. https://doi.org/10.1177/0265407500172002

Magdol, L., & Bessel, D. R. (2003). Social capital, social currency, and portable assets: The impact of residential mobility on exchanges of social support. *Personal Relationships, 10*(2), 149–170. https://doi.org/10.1111/1475-6811.00043

Massey, D. S., Arango, J., Hugo, G., Kouaoci, A., Pelegrino, A., & Taylor, J. E. (1993). Theories of international migration: A review and appraisal. *Population and Development Review, 19*(3), 431–466. https://doi.org/10.2307/2938462

Mazelis, J. M., & Mykyta, L. (2011). Relationship status and activated kin support: The role of need and norms. *Journal of Marriage and Family, 73*(2), 430–445. https://doi.org/10.1111/j.1741-3737.2010.00816.x

Meadows, S. O. (2009). Is it there when you need it? *Journal of Family Issues, 30*(8), 1070–1097. https://doi.org/10.1177/0192513X09333759

Mok, D., Wellman, B., & Basu, R. (2007). Did distance matter before the Internet? *Social Networks, 29*(3), 430–461. https://doi.org/10.1016/j.socnet.2007.01.009

Mollenhorst, G., Volker, B., & Flap, H. (2014). Changes in personal relationships: How social contexts affect the emergence and discontinuation of relationships. *Social Networks, 37*(1), 65–80. https://doi.org/10.1016/j.socnet.2013.12.003

Morosanu, L. (2013). Between fragmented ties and 'soul friendships': The cross-border social connections of young Romanians in London. *Journal of Ethnic and Migration Studies, 39*(3), 353–372. https://doi.org/10.1080/1369183X.2013.733858

Mulder, C. H., Vidal, S., & Huinink, J. (2018). Putting family centre stage: Ties to nonresident family, internal migration, and immobility. *Demographic Research, 39*, 1151–1180. https://doi.org/10.4054/DemRes.2018.39.43

Nee, V., & Sanders, J. (2001). Understanding the diversity of immigrant incorporation: A forms-of-capital model. *Ethnic and Racial Studies, 24*(3), 386–411. https://doi.org/10.1080/01419870020036710

Niedomysl, T., & Clark, W. A. V. (2014). What matters for internal migration, jobs or amenities? *Migration Letters, 11*(3), 377–386. https://doi.org/10.33182/ml.v11i3.231

Nivalainen, S. (2004). Determinants of family migration: Short moves vs. Long moves. *Journal of Population Economics, 17*, 157–175. https://doi.org/10.1007/s00148-003-0131-8

Nobles, J. (2011). Parenting from abroad: migration, nonresident father involvement, and children's education in Mexico. *Journal of Marriage and Family, 73*(4), 729–746. https://doi.org/10.1111/j.1741-3737.2011.00842.x

Nowok, B., Van Ham, M., Findlay, A. M., & Gayle, V. (2013). Does migration make you happy? A longitudinal study of internal migration and subjective well-being. *Environment and Planning a: Economy and Space, 45*(4), 986–1002. https://doi.org/10.1068/a45287

Federal Statistical Office of Germany (Destatis). (2019). *Statistisches Jahrbuch 2019*. Statistisches Bundesamt (Destatis). www.destatis.de

Ortensi, L. E., & Barbiano di Belgiojoso, E. (2021). Welfare and social protection: What is the link with secondary migration? Evidence from the 2014-crisis hit Italian region of Lombardy. *Population, Space and Place, 28*(2), e2469. https://doi.org/10.1002/psp.2469

Pacheco, G. A., Rossouw, S., & Lewer, J. (2013). Do non-economic quality of life factors drive immigration? *Social Indicators Research, 110*, 1–15. https://doi.org/10.1007/s11205-011-9924-4

Penning, M., & Wu, Z. (2013). Intermarriage and social support among Canadians in middle and later life. *Journal of Marriage and Family, 75*(4), 1044–1064. https://doi.org/10.1111/jomf.12050

Rees, P., Bell, M., Kupiszewski, M., Kupiszewska, D., Ueffing, P., Bernard, A., Charles-Edwards, E., & Stillwell, J. (2017). The impact of internal migration on population redistribution: An international comparison. *Population, Space and Place, 23*(6), e2036. https://doi.org/10.1002/psp.2036

Rogerson, P. A., Weng, R. H., & Lin, G. (1993). The spatial separation of parents and their adult children. *Annals of the Association of American Geographers, 83*(4), 656–671. https://doi.org/10.1111/j.1467-8306.1993.tb01959.x

Schafer, M. H., & Sun, H. (2021). There at any distance? Geographic proximity and the presence of adult children in older Europeans' core discussion networks. *Social Science Research*. https://doi.org/10.1016/J.SSRESEARCH.2021.102643

Shi, L., Wu, L., Chi, G., & Liu, Y. (2016). Geographical impacts on social networks from perspectives of space and place: An empirical study using mobile phone data. *Journal of Geographical Systems, 18*(4), 359–376. https://doi.org/10.1007/s10109-016-0236-8

Simoni, Z. R., & Bauldry, S. (2020). Moving during adolescence and depressive symptoms: The role of social support. *Youth & Society, 52*(4), 639–660. https://doi.org/10.1177/0044118X18757149

Song, L., Son, J., & Lin, N. (2011). Social support. In *The SAGE handbook of social network analysis* (Vol. 9, pp. 116–128). SAGE Publications.

Spring, A., Ackert, E., Crowder, K., & South, S. J. (2017). Influence of proximity to kin on residential mobility and destination choice: examining local movers in metropolitan areas. *Demography, 54*(4), 1277. https://doi.org/10.1007/S13524-017-0587-X

Steinbach, A. (2013). Family structure and parent-child contact: A comparison of native and migrant families: Contact in native and migrant families in Germany. *Journal of Marriage and Family, 75*(5), 1114–1129. https://doi.org/10.1111/jomf.12060

Thoits, P. A. (2011). Mechanisms linking social ties and support to physical and mental health. *Journal of Health and Social Behavior, 52*(2), 145–161. https://doi.org/10.1177/0022146510395592

Thomas, M., Gillespie, B., & Lomax, N. (2019). Variations in migration motives over distance. *Demographic Research, 40*, 1097–1110. https://doi.org/10.4054/DemRes.2019.40.38

Viry, G. (2012). Residential mobility and the spatial dispersion of personal networks: Effects on social support. *Social Networks, 34*(1), 59–72. https://doi.org/10.1016/J.SOCNET.2011.07.003

Viry, G., Ganjour, O., Gauthier, J. A., Ravalet, E., & Widmer, E. D. (2017). Analysing the role of social visits on migrants' social capital: A personal network approach. *Social Inclusion, 5*(4), 209–225. https://doi.org/10.17645/si.v5i4.1164

Wellman, B. (1992). Which types of ties and networks provide what kinds of social support. *Advances in Group Processes, 9*(1992), 207–235.

Wellman, B., & Wortley, S. (1990). Different strokes from different folks: Community ties and social support. *American Journal of Sociology, 96*(3), 558–588. https://doi.org/10.1086/229572

Wellman, B., Haase, A. Q., Witte, J., & Hampton, K. (2001). Does the internet increase, decrease, or supplement social capital? *American Behavioral Scientist, 45*(3), 436–455. https://doi.org/10.1177/00027640121957286

White, L. K., & Riedmann, A. (1992). Ties among adult siblings. *Social Forces, 71*(1), 85–102. https://doi.org/10.1093/sf/71.1.85

Wing Chan, T., & Ermisch, J. (2015). Residential proximity of parents and their adult offspring in the United Kingdom, 2009–10. *Population Studies, 69*(3), 355–372. https://doi.org/10.1080/00324728.2015.1107126

Wöhler, T., & Hinz, T. (2007). Egozentrierte Diskussionsnetzwerke in den USA und Deutschland. *Kölner Zeitschrift Für Soziologie Und Sozialpsychologie, Sonderheft, 47*, 91–112.

Yahirun, J. J. (2014). Take Me "Home": Return migration among Germany's older immigrants. *International Migration, 52*(4), 231–254. https://doi.org/10.1111/imig.12009

Yilmaz, C., Selcuk, E., Gunaydin, G., Cingöz-Ulu, B., Filiztekin, A., & Kent, O. (2022). You mean the world to me: The role of residential mobility in centrality of romantic relationships. *Social Psychological and Personality Science, 13*(7), 1151–1162. https://doi.org/10.1177/19485506211061017