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ORIGINAL RESEARCH

Residential Mobility in Childhood and Union Dissolution Later in Life

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Abstract

The limited existing literature studying the effects of childhood residential mobility suggests that it influences a range of life outcomes, at least in young adulthood. Little is known about how the frequency of moving in childhood is related to later-life demographic behaviour in Europe. Drawing on residential and partnership histories from the Survey of Health, Ageing and Retirement in Europe (SHARE), this paper examines whether moving in childhood relates to union dissolution in adulthood. It empirically addresses two theoretical explanations underlying the potential association: First, according to the confounding hypothesis, effects of childhood residential mobility differ by family background and resources. Second, the family stress model suggests that the accumulated stress and conflicts associated with frequent residential mobility disrupt the family and child's social ties, resulting in worse relationship skills in later life (mediation hypothesis). Applying discrete-time event history analysis to individuals born between 1945 and 1965 in Sweden, Denmark, and Finland, we find a significant association between childhood moves (prior to age 17) and adult union dissolution. The effect's strength varies based on the number of childhood moves, demonstrating a clear gradient. Notably, adults with three or more childhood moves exhibit a 55% higher likelihood of union dissolution compared to non-movers. These associations persist even after accounting for childhood background factors, while family stress mediates the link partially. Our findings shed light on the role of spatial mobility in shaping demographic outcomes and underscore its potential contribution to the accumulation and reproduction of life disadvantages.

Keywords Residential mobility · Childhood · Union dissolution · Divorce · Family stress · Life course

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1 Introduction

Residential moves are common life events, with childhood relocations being a prevalent experience throughout Europe (Bernard & Vidal, 2020; Pertzikovitz et al., 2024). Among other adjustments early in life, residential change can be a stressful experience. Not only adapting to a new environment is challenging, but relocating can also restrict contact with ties in previous locations, consequently affecting social relationships. However, moving home per se may not be detrimental, and its effects on children can vary based on factors like the nature of the move or parental resources (e.g. Simsek et al., 2021). Previous work suggests that those children whose families move repeatedly are particularly vulnerable. Moving early in life, in particular multiple times, was found to have long-term negative consequences for socio-economic (Tønnessen et al., 2016), health (see Simsek et al., 2021) or behavioural (Webb et al., 2016) outcomes. Frequent moving may be stressful for children who go through critical developmental stages, especially in adolescence, and for parents whom children rely on to cope with stressful situations. As a result, the literature has suggested that stress fuels family conflicts and deteriorates family bonds, ultimately affecting children's interpersonal behaviour and ability to form and maintain close relationships (Johnson et al., 2002; Riggio, 2004; Wilson et al., 2006). Thus, moving in early childhood and adolescence can be a fundamental experience that may impact future relationships. It is plausible, then, that union dissolution, which symbolizes the loss of the most prominent social relationship formed in adulthood, might be the product of accumulated adverse experiences from childhood, such as moving time and again, ultimately shaping individuals' relational patterns and behaviours.

Since residential mobility may increase family strains and is considered a reason for children's behavioural change and interpersonal struggles, it is important to study whether and how adults who moved in childhood are also at greater risk of relationship dissolution in their adult lives. Such an inquiry is of significance, as existing research has demonstrated that individuals who fail to sustain a committed intimate relationship tend to have poorer health and well-being. This outcome can be attributed to factors like the sense of bereavement, the lack of emotional support, and the economic hardship underlying union instability (Amato, 2010; Biotteau et al., 2019; Metsä-Simola & Martikainen, 2013; Sbarra, 2015).

So far, to the best of our knowledge, the literature has not empirically assessed the disruptive effects of moving on later-life outcomes, including demographic family behaviour. This study aims to fill this gap and has two overarching objectives: first, to describe childhood mobility and its association with union dissolution in adulthood, and second, to test the theoretically derived hypotheses on the mitigating role of family background and of family stress that may accumulate with each subsequent move. Previous research has demonstrated that pre-existing differences between mobile and non-mobile children—e.g. in socio-economic and family backgrounds—condition the effect of moving on different life outcomes (e.g. Porter & Vogel, 2014). Therefore, the present study recognizes the social selection underlying childhood residential mobility and empirically addresses

how it affects the study association. By achieving these aims, this study contributes to the literature on the accumulation and reproduction of disadvantage over the life course, shedding light on the role of spatial mobility and related mechanisms.

This paper uses retrospective residential and partnership histories for individuals born between 1945 and 1965 from the Survey of Health, Ageing and Retirement in Europe (SHARE). This unique data source allows following different birth cohorts into later life. We focus here on the Nordic countries: Sweden, Denmark, and Finland. These countries have a relatively mobile population compared to other European countries (Sánchez & Andrews, 2011), with similar family orientations (Reher, 1998), common elements of the welfare system (Esping-Andersen, 1990), and being frontrunners in rates of union dissolution (Sandström & Garðarsdóttir, 2018).

2 Theoretical Background and Hypotheses

This study builds on the life course approach, which acknowledges processes of continuity and change in human lives, acknowledging the relation to interpersonal, social, and historical forces (Elder et al., 2003). A key life course principle posits that individuals' earlier experiences (and attached meanings) shape their future outcomes. Along these lines, we could expect an individual's family attitudes and behaviours to relate to their previous exposures to family relationships and events. Research has only started to examine the associations between moving in early life and outcomes at a later age. Some studies suggested that residential mobility increases children's independence and self-reliance, positively impacting educational outcomes (Hango, 2006). Other studies found substantive associations between moving in childhood and a variety of adverse behaviours in adolescence (Webb et al., 2016), including drug use (DeWit, 1998), violence (Haynie & South, 2005) and early sexual activity (South et al., 2005). Other literature has argued that moving can harm children by triggering externalizing or internalizing behaviour disorders, leading to worse mental health in later life (see Simsek et al., 2021).

Previous research furthermore suggests that it is mainly the frequency of moving that matters and is associated with adverse outcomes, such as delinquent and addictive behaviours (DeWit, 1998; Qin et al., 2009) or mental and other health issues (Busacker & Kasehagen, 2012; Qin et al., 2009). When contrasted against broader measures of childhood mobility or alternate dimensions like the timing of a single residential change, the recurring pattern of residential mobility emerges as a more potent factor, significantly impacting outcomes in both childhood and adulthood (e.g. Busacker & DeWit, 1998; Kasehagen, 2012; Myers, 2000a; Qin et al., 2009; Tseliou et al., 2016). Nonetheless, other facets of childhood mobility, such as age or negative motivations, may also coalesce with frequency as correlating factors. However, existing studies could not distinguish adequately due to insufficient data.

In the limited available studies, the focus is often on educational or health outcomes, and it remains underexplored whether moving in childhood relates to family outcomes in adulthood. Myers (2000a) has shown that in the USA, moving multiple times in childhood is associated with early partnership formation, and a higher

likelihood of cohabitating instead of marrying. Crowder and Teachman (2004) have also found that moving in childhood is associated with pre-marital teenage pregnancy. More recently, Tønnessen et al. (2016) have demonstrated that in Norway, young adults who moved in childhood were more likely to become parents before age 20. Their study further concluded that stronger associations emerged when residential transitions exceeded three instances during childhood.

Different mechanisms can explain why childhood residential mobility might affect union stability in adulthood. In this study, we address two main mechanisms. First, we study the confounding role of childhood family background characteristics, which commonly affect both childhood mobility and union instability, thereby rendering the relationship between them spurious. Second, in line with the family stress model (see Masarik & Conger, 2017), family stress that accumulates with each residential change during early life emerges as a significant factor influencing the stability of relationships in later stages of life.

By dissecting these mechanisms, we aimed to understand the role of families in key developmental stages, either by means of social inheritance or relational dynamics, in explaining the association between childhood moves and union dissolution in adulthood. We acknowledge, however, that this association can be explained by alternative mechanisms not directly involving families. For instance, moving away may affect the social integration of children, resulting from the dissolution of meaningful friendships, and disrupt children's learning processes, ultimately affecting the development of cognitive abilities and social skills (Coleman, 1988; Myers, 1999).

Irrespective of the suggested underlying mechanisms, we hypothesize the following: *The greater the number of residential changes experienced in childhood, the higher the likelihood of union dissolution in adulthood (hypothesis 1).*

In the following, we further elaborate on the mechanisms that we empirically assess in this study.

2.1 The Confounding Role of Childhood Family Background

Residential mobility, and especially frequent relocations, is socially stratified. A range of characteristics from the family of origin, such as socio-economic status, family living arrangements, or religious affiliation, were found to co-determine children's future outcomes as well as the likelihood of moving in childhood (Myers, 2000b). When accounting for differences between mobile and non-mobile children on these background conditions, some studies have found that the effect of childhood residential mobility on life outcomes is substantially reduced or disappears. It was shown that family context and environment were more important in determining academic achievements than moving during childhood per se (Vidal & Baxter, 2018). Residing with both biological parents, for example, was found to be a protective factor for children's school performance in case of moving (Tucker et al., 1998). For some health and well-being outcomes, the effect of moving was confounded by the parental socio-economic situation, parental status, or concurrent adversities (see Simsek et al., 2021). Other studies have shown that adolescents from a context

where delinquent behaviour is common are more likely to move (Gasper et al., 2010; Porter & Vogel, 2014).

Evidence from previous research also suggests that the family of origin matters for the stability of one's union. First, individuals from higher socio-economic backgrounds tend to have greater relationship stability due to the economic security that enables consistent and supportive parenting. This nurturing environment, in turn, fosters healthy emotional development and social competence in their children (Conger et al., 2010). Second, those who were raised in intact families are less prone to experiencing relationship instability themselves. This is often attributed to their upbringing within a context of stable relationships and a reduced inclination to partner with individuals whose parents went through a divorce (Lyngstad & Jalovaara, 2010; Wolfinger, 2003). Finally, adults who grew up in religious families are more likely to hold conservative family values, which may prevent them from dissolving their unions (see Lyngstad & Jalovaara, 2010).

All in all, the likelihood of one's union instability increases when growing up in lower socio-economic status families, non-intact family structures, and less religious family contexts. At the same time, moving in childhood is more common under such childhood circumstances (Feijten & van Ham, 2007; Kuyvenhoven et al., 2022; Mikolai & Kulu, 2018; Myers, 2000b). Given this, an association between childhood residential mobility and own union instability remains likely, although it might not necessarily indicate a causal relationship. Since it can be expected that (at least part of) the study association is spurious due to confounding, we hypothesize the following: *The association between residential mobility in childhood and union dissolution in adulthood is confounded by childhood social and family background (hypothesis 2).*

2.2 The Mediating role of Family Stress and Conflicts

Change of residence can be stressful for both parents and children. Moving to a different location can induce anxiety stemming from various factors such as loneliness, fear of the unfamiliar, and uncertainties about what lies ahead (Oishi & Talhelm, 2012). These stressors accumulate with each additional move, particularly when moving is unpredictable or associated with economic hardship (Fitchen, 1994). Following the life stress perspective (Amato, 1993), children who experience multiple moving instances throughout childhood are repeatedly subjected to periods of personal challenges for both themselves and their family members. Therefore, the cumulative burden of stress within highly mobile families can gradually deteriorate familial relationships.

The impact of moving on family dynamics can be observed along two main pathways, the first being its effect on parental relationships. Relocations that primarily benefit one partner's career, often the male (Magdol, 2002; Makowsky et al., 1988), can strain the relationship between spouses, particularly when the accompanying partner faces stressors like lack of self-fulfilment and loneliness (Brown, 2008). Moreover, parents of children exhibiting disruptive post-relocation behaviours encounter additional stressors, such as managing potential academic setbacks, and

coping with the emotional toll of their child's adjustment period. These challenges heighten family tensions, with repeated moves further exacerbating the strain and increasing the risk of conflict and separation for couples (Boyle et al., 2008).

The second pathway through which residential mobility impacts family dynamics involves parent–child relationships and intrafamilial dynamics, including interactions among siblings. Changes in parental behaviours, such as monitoring levels, may arise from adjustments made in new circumstances (Gillespie, 2015). While certain effects of such changes might be transient and positive, the repetition of relocations could ultimately result in shifts in parenting styles that introduce confusion or ambiguity regarding expectations and responses between children and their parents. Consequently, this could lead to weakened emotional bonds and a greater potential for conflicts, as evidenced by previous research linking housing instability to decreased familial warmth, harmony, and quality of relationships (Stoneman et al., 1999).

The repercussions of both these mechanisms can endure over time for children and may extend to future romantic relationships. Consistent exposure to household conflicts or parental separation may lead children to develop anxiety about their future relationships (Riggio, 2004) and adopt dysfunctional behavioural strategies that hinder their ability to sustain intimate relations (Amato, 1996, 2000). Moreover, research indicates that negative family dynamics and ineffective parenting practices are linked to challenges in forming relationships (Johnson et al., 2002), resulting in fewer close friendships and experiencing emotional isolation (Wilson et al., 2006).

We thus hypothesize that *The association between residential mobility in childhood and union dissolution in adulthood is mediated by family stress and conflict (hypothesis 3a).* We further expect that *family stress and conflicts mediates more of the effect of frequent moves than of infrequent moves (hypothesis 3b).*

3 Study Context

To empirically examine our hypotheses, we require longitudinal data encompassing all the aspects expounded upon in the theoretical section. While obtaining such data proves challenging, the SHARE survey comprehensively captures these elements (detailed in the subsequent section). We focus on the samples from Denmark, Finland, and Sweden. These are three closely aligned Nordic countries whose combined sample is large enough to empirically address the study associations without the need to make a strong emphasis on cross-national differences, as we subsequently comment on.

Firstly, these countries stand as frontrunners in changes in demographic family behaviour (e.g. Sobotka & Toulemon, 2008). The studied Nordic countries have been at the forefront of altering gender role dynamics, weakening traditional family norms (Goldscheider et al., 2015). Thanks to related legislation, which eventually allowed couples to divorce without a mutual agreement, this region has led in divorce rates until the late twentieth century (Andersson, 2003; Sandström & Garðarsdóttir, 2018). Consequently, divorce might be more prevalent even among older cohorts. In many other European countries, the surge in divorces is a more

recent phenomenon, rendering them less suitable for studying the long-term effects of childhood mobility for the stability of marital unions.

Secondly, the Nordic countries share a historical context of relatively high levels of spatial mobility (Bernard & Kolk, 2020; Sánchez & Andrews, 2011). Favourable factors such as affordable real estate, widespread access to credit, robust property rights protection, and efficient land administration have facilitated frequent relocations (Inchauste et al., 2018; Sánchez & Andrews, 2011). A pronounced increase in internal migration followed World War II, sustaining elevated mobility rates for subsequent decades (Shuttleworth et al., 2017). Recent cross-national comparisons of eleven European countries have revealed a similar pattern in childhood mobility (Bernard & Vidal, 2020; Pertzikovitz et al., 2024).

Thirdly, the Scandinavian welfare regime emerged post-World War II in an arguably uniform manner across the three nations (Esping-Andersen, 2016). Historically, the comprehensive welfare provisions inherent in this regime suggest lower economic and social inequalities than other European countries. Consequently, the potential impact of childhood mobility on these dimensions might be somewhat constrained within this context. However, any effects discerned within these countries will likely provide valuable insights with broader applicability to other countries.

In spite of these commonalties, a few country specifications that are relevant to the study associations must be mentioned. For one, Finland is considered the Nordic conservative laggard in terms of divorce legislation (Sandström & Garðarsdóttir, 2018). Whereas in Sweden unilateral no-fault divorce as an individual right was introduced in 1974, in Finland it was recognized only in 1988, possibly affecting the prevalence of union dissolution in our Finnish sample. Nevertheless, Finland and, to a lower extent, Denmark exhibited a sharp increase in union dissolution rates immediately after World War II, attributed to various factors related to the strains placed on couples during the war (Malinen, 2018). This might have exposed children in these socio-historical contexts to family stress, domestic violence, and housing instability compared to Swedish children or individuals born in more recent years.

4 Methodology

4.1 Data

We use data from release 7.1.1 of the Survey of Health, Ageing and Retirement in Europe (SHARE) (Börsch-Supan, 2020). SHARE is an ongoing, cross-national longitudinal survey providing information on individuals aged 50 + and their partners since 2004. The study has been conducted in 28 European countries and Israel, but in our analysis, we select the data collected in Sweden, Denmark, and Finland, as explained above. Information on partnership and housing histories and other childhood background information used in our analyses were collected in 2017 as part of wave 7 (SHARELIFE) of the survey (Bergmann et al., 2019; Börsch-Supan, 2020). Biographical data were gathered utilizing an ‘event history calendar’, which assists individuals in recalling events in juxtaposition to other key life experiences. This method ensures enhanced accuracy in pinpointing the dates of pivotal life events and

reduces potential measurement errors stemming from recall biases (Havari & Mazzonna, 2015). Given that sample inclusion is conditional on participation in wave 7, panel attrition, if not random, might affect the sample composition and cause bias. For Sweden and Denmark, respondents of SHARELIFE were from the refreshment samples drawn between waves 4 (2010) and wave 7 (2017). The retention rates for these two countries between these waves were notably high (Bergmann et al., 2022), effectively reducing the potential attrition bias. For the Finnish sample, panel attrition is not a problem since the country's first participation in the SHARE was in wave 7.

4.2 Sample

The starting sample included 6,094 respondents from the study countries. Due to national border changes around World War II,[1] we restricted the sample to individuals born between 1945 and 1965 in the study countries, thus excluding all individuals who were born before this period ($n = 1{,}906$) or were born in another country ($n = 136$). Next, respondents who reported leaving the parental home and establishing their own residence before age 16 ($n = 174$) were also excluded. This age threshold was set to capture childhood residential mobilities in a comparable period by considering it as the age at which the transition period to adulthood starts. Next, we excluded all individuals who entered a cohabiting union before turning 18 ($n = 130$) or have not partnered by age 52 ($n = 143$). Finally, individuals with missing values on at least one of the analysis covariates were deleted ($n = 320$).[2] The final dataset consists of 3,285 individuals.

4.3 Measures

4.3.1 Dependent Variable and Event History Framework

As part of the collection of biographical information, SHARE respondents were asked to report on any partnership they ever had, including living arrangements, cohabitation, marriage, separation, divorce, and death of partners. A union is defined here as the first coresidential relationship, either marriage or cohabitation. In our sample, 81 percent were in a married union. The dependent variable *union*

[1] For instance, the loss of the former Finnish territory of Karelia during the Second World War resulted in the displacement of 12 percent of the Finnish population.

[2] As a robustness check, we replicated some of the key analyses with imputed missing information of model covariates, applying multiple imputations for chained equations (MICE) and using information of all model covariates for the imputations, to create 20 imputed datasets using the mi command in Stata 17.0 (Royston & White, 2011). The imputation procedure resulted in successful imputations for all cases with missing values ($n = 3{,}562$, person-years = 80,033). One noticeable difference in results between the listwise deletion and the imputation procedures was observed in the coefficient and statistical significance of the association between moving *twice* and union dissolution; however, analysis conclusions remained the same (available upon request). We eventually selected the listwise deletion approach to accommodate the user written mediation method, which is not available for imputed datasets.

dissolution indicates whether this first relationship has ended before the age of 52 or was still intact at that age. Union dissolution is defined as the end of co-residence due to separation, independently of whether divorce was eventually filed among the married. It excludes dissolution due to widowhood.

To accommodate event history analysis, we constructed a longitudinal person-year file. For each person, the observation period started with union formation (the year the person moved in with his/her partner) and ended with the event of union dissolution, or by censoring in the case of widowhood (less than 2 percent of our sample), or at the age of 52 if relationship remained intact.[3] This procedure resulted in a dataset covering 74,148 individual union-year records.

4.3.2 Independent Variables

Residential histories in SHARE include information on each dwelling respondents reported to have lived in for at least one year since birth. For each residence episode, additional information was collected on the place of residence (country and region), household members, and house tenure. Our measurement of residential mobility in childhood considers changes of residence, while the respondent is in the parental home and before the age of 18. The central independent variable, *childhood residential mobility*, distinguishes between four categories: no moves, one move, two moves, and three or more moves. Given the small share of higher-order moves, we captured this in one category, notwithstanding the fact that this last category may be diverse and require further attention in future studies.

A range of socio-economic and other family characteristics in childhood are included in the models to assess confounding associations. Each indicator was measured at one specific point (age) in childhood. The variable *both biological parents* was constructed based on the information from a series of dichotomous variables, indicating with whom the respondent lived until age 10. Respondents who grew up with both biological parents were coded (1), and any other parental combination, including single, adoptive, or stepparents, is the reference group (0). Although an indicator of parental union dissolution might have captured a more explicit intergenerational transmission effect of union dissolution, for the cohorts in our sample, parental divorce is still very rare. We, therefore, combine diverse forms of non-traditional family structures, as these have been linked to variations in demographic behaviour of the child (Högnäs & Thomas, 2016; van den Berg et al., 2018; van den Berg et al., 2021; Wolfinger, 2001). *Unusual living arrangement* indicates whether, during childhood, the respondent experienced one of the following: living in a children's home or with a foster family, war-related evacuation or imprisonment, mental hospitalization, or homelessness. Individuals who have experienced such events are inevitably exposed to more unstable housing, family arrangements in childhood, and potentially accumulated stress. *Religion*

[3] At the time of the survey, all respondents in the sample were between 52 and 72 years old. Thus, to obtain life courses of comparable length the analysis is restricted to union dissolutions that occurred prior to age 52. Overall, only 3% of our sample have separated after that threshold.

importance indicates whether the respondents grew up (up to age 17) in a family context that deemed religion an important aspect of life. From a scale of 1–4, the dichotomous measure of religion importance was constructed, distinguishing between individuals who claimed that religion was either very, somewhat, or not very important (1) and not at all important (0) at home. Families' economic situation when growing up (up to age 16) is measured by the indicator *financial hardship*, which reflects the relative financial situation of the family. From a scale of 1–3 respondents were divided into two groups, growing up in a 'poor family' (1) or in a 'financially average' or 'pretty well off' financially family (0).

Family stress and conflicts are captured by the nature of the individual's relationship with each of their parents (or the person who raised them) at age 17. From a relationship quality scale ranging from 1 (excellent) to 5 (bad), dichotomous variables were constructed to capture whether the respondent had a good relationship with their mother/father (or not). Good relationship (1) included those scoring excellent, very good, and good, while the reference category (0) included fair and bad.

Models further control for *gender* (female (1) or male (0)), *country of birth* (Sweden, Denmark, or Finland), *birth cohort* containing five-year birth intervals—dividing the sample into four cohorts from 1945 to 1965, *marital status* (married (1) or not (0)), and *union duration* in years.

Apart from marital status and union duration, which can vary over time, all other independent variables, capturing demographic or childhood characteristics determined before union formation, are considered time-invariant and do not change during the observation period. A full description of all model variables is portrayed in Table 1. Altogether, 33 percent of the respondents experienced the dissolution of their first meaningful union. While 48 percent of our sample respondents did not change their residence during childhood, 26 percent have moved once, 14 percent have moved twice, and 11 percent have moved three times or more. The distribution of each demographic indicator across our sample is equal, where each country represents about one-third of the sample, there are 52 percent females, and each of the four birth cohorts represents 25 percent. The average duration of unions was 22 years, with marriages accounting for 81 percent of union-years. Most of the sample respondents, 93 percent, have lived with both biological parents. Furthermore, religion was important in 76 percent of the families where our respondents grew up. One out of seven respondents recalled having a background of financial hardship, while experiencing an unusual living arrangement (5 percent) was less common. Having a good relationship with one's mother (89 percent) was slightly more common than having a good relationship with one's father (84 percent). Descriptive findings for all covariates are largely consistent among the three countries, with two exceptions in the Finnish sample: higher percentages of individuals grew up in a religious context (86 percent vs. 74 percent and 68 percent) and experienced financial hardship (26 percent vs. 9 percent and 9 percent) compared to the Danish and Swedish samples, respectively (see Table 6 of the Appendix). Additional country differences regarding childhood residential mobility and union dissolution will be further discussed in the results section.

Table 1 Descriptive statistics

Variable	Mean (%)	Std. Dev	Min	Max
Union dissolution	0.33	0.47	0	1
Residential mobility				
0	0.48	0.5	0	1
1	0.26	0.44	0	1
2	0.15	0.35	0	1
3 +	0.11	0.32	0	1
Female	0.52	0.5	0	1
Birth cohort				
1945–1949	0.25	0.43	0	1
1950–1954	0.25	0.43	0	1
1955–1959	0.25	0.43	0	1
1960–1965	0.26	0.44	0	1
Country				
Sweden	0.29	0.45	0	1
Denmark	0.37	0.48	0	1
Finland	0.35	0.48	0	1
Union duration	22.58	10.62	1	35
Married	0.81	0.39	0	1
Unusual living arrangement	0.05	0.21	0	1
Both biological parents	0.93	0.26	0	1
Financial hardship	0.15	0.35	0	1
Religion importance	0.76	0.43	0	1
Good relationship with mother	0.89	0.31	0	1
Good relationship with father	0.84	0.36	0	1

Percentages may not add up exactly to 100 due to rounding

4.4 Analytical Strategy

Our empirical strategy follows several steps. First, we compute bivariate associations between our key study variables, childhood residential moves and the dissolution of the first union by midlife, and separately asses the relationship of each key indicator with the potential confounding and mediating variables. Second, we establish multivariate associations by deploying logit regression with standard errors clustered at the individual level in a discrete-time event history framework (Alisson, 1984). This framework is adequate to study events such as union dissolution, as it acknowledges that the risk of an event occurrence changing over time since union formation, and that we cannot observe the dissolution of the union for all our sample respondents because of study design (i.e. observation is censored at age 52 or due to widowhood). To empirically assess our hypotheses, a stepwise model specification strategy was carried out in the following manner: in Model 1, we adjust for the childhood residential mobility indicators and the above-mentioned control variables. A substantive and statistically significant coefficient of childhood mobility

will be used as evidence supporting our Hypothesis 1. In Model 2, we additionally adjust for childhood background characteristics to assess confounding. If the coefficient of childhood mobility turns insignificant in substantive and statistical terms, we will have evidence for Hypothesis 2. In Model 3, we additionally adjusted for the family stress and conflict proxies to assess mediation as proposed in our hypotheses 3a and 3b. However, conclusions about mediation are problematic when comparing results across nonlinear probability models. The addition of potential mediators inevitably reduces the unexplained portion of the variance in logit regression models and affects the model's scale (Mood, 2010). Thus, to assess the mediation effect of family stress and conflicts, we deploy the mediation analysis approach proposed by Karlson et al. (2012). By addressing the rescaling bias, the KHB method allows a comparison of estimates across nested models in a nonlinear setting, resulting in a more reliable and accurate decomposition of the exposure variable into direct and indirect effects.

5 Results

5.1 Bivariate Associations

We begin by examining the bivariate relationship between the key variables of interest. Figure 1 displays the proportions of respondents who underwent union dissolution based on their childhood mobility, both for the overall dataset and segmented by country. A similar pattern is evident across countries. Among respondents who did not move as children, 29 percent encountered a union dissolution by midlife. For those who experienced one or two childhood moves, the rate increased to 36 percent. Notably, a substantial rise in the proportion of union dissolution is observed for individuals who were frequently mobile as children (three times or more), reaching 45 percent. This positive gradient is observed prominently in the Danish subgroup, where overall union dissolution rates are notably higher. The contrast in union dissolution rates among Finnish respondents between those with no childhood mobility and those who were frequently mobile is even more pronounced—as many as 44 percent of frequent movers experienced union dissolution by midlife, whereas the rates were 28 percent for infrequent movers (1–2 moves) and 25 percent for those with no childhood mobility. While less pronounced, a similar gradient is discernible in the Swedish sample, where those who experienced childhood mobility (1, 2, or 3 + moves) had higher levels of union dissolution (35, 37, and 44 percent, respectively) compared to those who did not have any childhood mobility (27 percent).

We continue by exploring bivariate relationships between our main variables and potential confounding and mediating factors. Table 2 presents the share of individuals by number of moves in childhood, and the share of individuals who experiences the dissolution of their first union across four childhood background characteristics that act as potential confounders. Our findings indicate that stable living arrangements, being raised by both biological parents, or in households where religion played a significant role displayed lower childhood mobility frequencies. In these contexts, the rate of immobility hovered around 50 percent, whereas among their

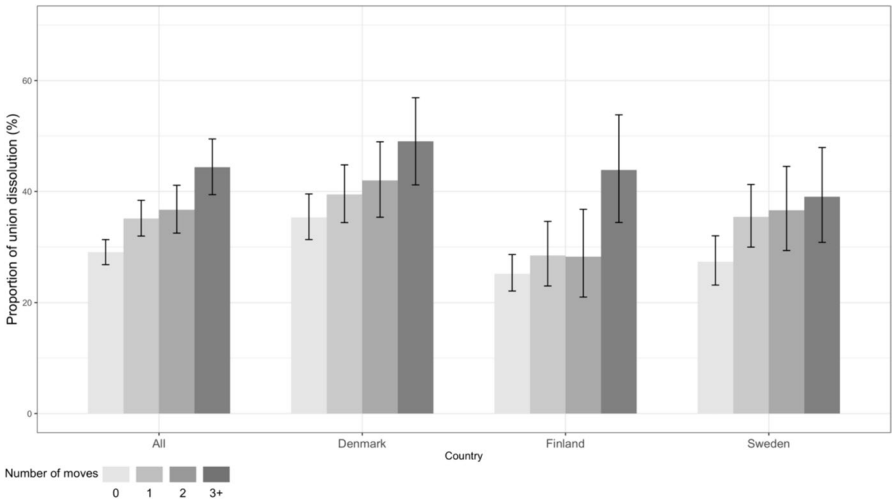

Fig. 1 Bivariate association: childhood residential mobility and union dissolution. *Notes:* Error bars: 95% confidence intervals

counterparts, it was less than 40 percent. The contrast was most stark for three or more moves for experience of unusual living arrangements and growing up with both biological parents. Conversely, the distinction was noticeable primarily at one move for the importance of religion. The table further shows that union dissolution was more prevalent with the experience of unusual living arrangements, growing up with both biological parents, or if religion was not important. In contrast, differences in the frequency of moves or union dissolution rates were small for financial difficulties during childhood.

In terms of relationship quality, Table 2 highlights that individuals who had closer ties with either their father or mother had lower rates of residential mobility

Table 2 Prevalence of childhood residential mobility and union dissolution by background characteristic and relationship quality with parents

	Unusual living arrangement		Both biological parents		Financial hardship		Religion importance		Good relationship with mother		Good relationship with father	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Number of childhood moves												
0	0.49	0.37	0.31	0.50	0.48	0.52	0.38	0.52	0.42	0.49	0.42	0.50
1	0.26	0.25	0.27	0.26	0.26	0.25	0.33	0.23	0.23	0.26	0.24	0.26
2	0.14	0.16	0.20	0.14	0.15	0.11	0.16	0.14	0.21	0.14	0.17	0.14
3+	0.11	0.22	0.22	0.11	0.11	0.12	0.13	0.11	0.15	0.11	0.17	0.10
Union dissolution	0.33	0.53	0.44	0.33	0.33	0.35	0.42	0.31	0.43	0.32	0.47	0.31

Percentages may not add up exactly to 100 due to rounding

and union dissolution. Children reporting strong bonds with their parents were more inclined to remain in one place or relocate only once, whereas those with strained relationships tended to experience multiple moves. Notably, among individuals with solid relationships with both parents, the rates of union dissolution were 32 percent and 31 percent, respectively. In contrast, those with poorer relationships with either parent saw higher rates, with 43 percent for mothers and 47 percent for fathers.

5.2 Discrete-Time Event History Analysis

Results from discrete-time event history models are presented in Table 3. In Model 1, the union dissolution estimates by childhood moves are adjusted by a set of socio-demographic variables that correct for compositional differences of the country-specific samples. Results from Model 1 reveal that with each additional childhood residential move, the odds of union dissolution increase. Specifically, adults who moved once, twice, or three or more times in childhood had about 1.2-, 1.3-, and 1.5-times higher likelihood of union dissolution than adults who did not move in childhood.

In Table 3, Model 2 adds a range of childhood background characteristics. These results show that childhood background characteristics cannot entirely explain the found association. After adjusting for differences in childhood backgrounds across individuals who were more and less mobile, the associations between childhood residential mobility and union dissolution in adulthood remain robust. The size of the coefficients decreases slightly across all categories of childhood mobility, and significance levels are lowered for individuals who moved once in childhood. In line with prior research, early life conditions and background indicators are having the expected effects: The risk of union dissolution decreases with non-secular and intact family backgrounds in childhood. On the other hand, the risk increases with the experience of unusual living arrangements. Although a background of financial hardship is related to a higher likelihood of union dissolution as expected, it does not reach statistical significance.

Model 3 in Table 3 adds to Model 2 the family stress proxies. The association between childhood residential mobility (moving twice or three or more times) and union dissolution is weaker than in previous models but remains. Adults who had a good relationship with their father in childhood had a 33 percent (0.67 OR) lower risk of union dissolution. Although having a good relationship with one's mother has the same expected values (lower than 1), the association with union dissolution is not statistically significant.

To thoroughly assess mediation effects, we apply the mediation analysis using the KHB method. Table 4 presents the model decomposition summary of the mediation analysis using the KHB method. The total effect describes the impact of childhood residential mobility on union dissolution when all confounders are adjusted for, and the direct effect shows this association after accounting for the potential mediators. The decomposition summary is presented in logit coefficients but has been converted to odds ratios for readability reasons. The table shows that while including family stress and conflict measures in the model did not affect the odds of union dissolution for infrequent movers (moves of first and second order), it reduces

Table 3 Event history models of union dissolution

	Model 1		Model 2		Model 3	
	Odds ratio	*(se)*	Odds ratio	*(se)*	Odds ratio	*(se)*
Residential mobility (0 moves ref.)	1.00		1.00		1.00	
1	1.19*	(0.09)	1.14†	(0.09)	1.14†	(0.09)
2	1.27*	(0.12)	1.23*	(0.11)	1.20*	(0.11)
3 +	1.55***	(0.14)	1.47***	(0.14)	1.42***	(0.13)
Female	1.00	(0.06)	1.02	(0.06)	1.02	(0.06)
Birth cohort (1945–49 ref.)	1.00		1.00		1.00	
1950–1954	1.25*	(0.12)	1.25*	(0.12)	1.26*	(0.12)
1955–1959	1.30**	(0.12)	1.31**	(0.12)	1.31**	(0.12)
1960–1965	1.39***	(0.13)	1.38***	(0.13)	1.40***	(0.13)
Country (Sweden ref.)	1.00		1.00		1.00	
Denmark	1.20*	(0.09)	1.21*	(0.10)	1.19*	(0.09)
Finland	0.93	(0.08)	0.96	(0.08)	0.93	(0.08)
Union duration	0.97***	(0.01)	0.97***	(0.01)	0.97***	(0.01)
Married	0.42***	(0.03)	0.43***	(0.03)	0.43***	(0.03)
Unusual living arrangement			1.51**	(0.19)	1.42**	(0.19)
Both biological parents			0.86	(0.10)	0.94	(0.11)
Financial hardship			1.12	(0.10)	1.04	(0.09)
Religion importance			0.77***	(0.05)	0.81**	(0.06)
Good relationship with mother					0.90	(0.09)
Good relationship with father					0.67***	(0.06)
Constant	0.026***	(0.01)	0.034***	(0.01)	0.047***	(0.01)
Pseudo R-squared	0.038		0.0041		0.043	
AIC	11,028.45		11,001.52		10,977.91	
BIC	11,139.01		11,148.94		11,143.76	
N (person-years)	74,148		74,148		74,148	

Exponential coefficients; *SE*: standard error; † < 0.1 * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

the positive association between frequent childhood residential mobility and union dissolution. That is, the odds ratio for childhood frequent mobility decreases from 1.46 ($e^{0.38}$) to 1.42 ($e^{0.35}$), and the difference is significant according to conventional statistical levels.

Table 5 complements the mediation analysis results by providing the relative contribution of each variable to the indirect (mediation) effect. The moderate reduction of 8.2 percent of the association between frequent residential mobility and union dissolution is largely explained by the potential mediators considered. The degree of mediation is much more pronounced for relationship quality with one's father than for relationship quality with one's mother. The variable that indicates a solid

Table 4 Mediation analysis (KHB) of childhood residential mobility on union dissolution. model decomposition summary

	Model 2 (reduced)		Model 3 (full)		Difference	
	Coef. *(se)*		Coef. *(se)*		Coef. *(se)*	
Childhood residential mobility (0 ref.)	0.00	(.)	0.00	(.)	0.00	(0.02)
1	0.13†	(0.08)	0.13†	(0.08)	0.00	(0.02)
2	0.20*	(0.09)	0.19*	(0.09)	0.01	(0.02)
3 +	0.38***	(0.10)	0.35***	(0.10)	0.03†	(0.02)

SE: standard error; † < 0.1 * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

father–child relationship during childhood explained most of the indirect effect, significantly mediating 90 percent of it. The relationship with one's mother explained 10 percent but was not statistically significant. Interestingly, across moves of all orders, the role of the father–child relationship explained most of the association change across the two models.

5.3 Robustness Checks

We performed several supplementary analyses to further test the robustness of our findings. The first analysis concerns the timing (age) of moving. Since moving multiple times throughout childhood often coincides with moving at an older age, when social ties are more established and harder to rebuild, the association between (frequent) residential mobility and union dissolution can be attributed to the timing of moving. We, therefore, repeated the main analysis, accounting for whether any of the documented childhood moves occurred between the ages of 12 and 17 (Table 7 of the Appendix). The findings support the idea that relocating during adolescence might have more enduring negative consequences for children compared to moving earlier in childhood. Additionally, it reduces the effect of the number of moves experienced. Nevertheless, the results underscore that the effect of frequent relocations remains robust, regardless of the age at which moving took place.

The second analysis concerns the distance of moving. Moving across greater distances may have a more pronounced impact on children, as it involves a substantial change in their social environment and daily life activities (Mulder & Hooimeijer, 1999). To test the role of distance, we replicated the analysis introducing a measure of whether any of the moves experienced was an inter-regional migration (Table 8 of the Appendix). Interestingly, inter-regional migration during childhood did not show any association with union dissolution. This suggests that potential positive factors, such as improvements in the family's living situation associated with long-distance moves, may offset the negative effects on children. Moreover, the inclusion of the inter-regional migration measure did not alter the significance of the frequency of moves, overall confirming the validity of our findings.

Table 5 Mediation analysis (KHB) of childhood residential mobility on union dissolution. Mediators' relative and overall contribution

	Only controls	Full model	Overall contribution
	Percentage reduced	Percentage reduced	Percentage
Childhood residential mobility (0 ref.)			
1			
Good relationship with mother	− 1.26	− 0.59	20.82
Good relationship with father	− 2.41	− 2.24	79.18
Overall	–	− 2.83	100
2			
Good relationship with mother	4.26	1.97	28.20
Good relationship with father	5.30	5.01	71.80
Overall	–	6.98	100
3 +			
Good relationship with mother	1.84	0.83	10.20
Good relationship with father	7.81†	7.33†	89.80
Overall	–	8.16†	100

The effect in the model with *only controls* is the separate indirect effect when only this variable and the control variables were included. The effect in the *full model* is the disentangled effect when all variables were included. *Overall contribution* is the respective contribution of each variable in the full model out of the total mediation effect; † < 0.1 * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

6 Conclusion and Discussion

The overarching objective of this study was to understand if and how residential mobility in childhood affects demographic behaviour in later life by focusing on the number of moves experienced in childhood and adolescence and its association with union dissolution in adulthood. This study contributes to the ongoing scientific debate of whether the association between childhood residential mobility and different life outcomes is spurious due to underlying social selection processes. It does so by acknowledging and addressing the potential confounding role of family background. Moreover, this study aimed to provide new insights by proposing and analysing family stress as an important mechanism underlying the studied association. The experience of residential mobility, particularly when encountered repeatedly, can induce distress within families and disrupt the developmental processes of children's socialization. Subsequently, these disruptions could manifest as compromised relationship skills in later life, potentially culminating in a history of more unstable relationships with more partner breakups, separation, or divorce.

For our study countries, in support of Hypothesis 1, we found a significant positive relationship between the number of residential moves early in life and union dissolution in adulthood. This association is especially pronounced with each additional move. Concerning Hypothesis 2, where we proposed that

an individual's social and family background in childhood confound the association between childhood residential mobility and union dissolution in adulthood, we did not find full support. The studied association was robust even after adjusting for key confounders, such as exposure to alternative family structure or economic hardship in childhood, among others. Results show that the risk of union dissolution is 14 to 23 percent higher for individuals who experienced infrequent (one or two moves) and 47 percent higher for individuals who experienced frequent (three or more moves) residential mobility in childhood compared to those who did not move at all, once controlling for the potential confounders. Regarding Hypothesis 3a, where we hypothesized that union dissolution among adults who moved in childhood is mediated by family stress and conflict, the results provided only partial support as the studied association was not fully explained by measures that proxy family stress and conflict. Finally, in line with Hypothesis 3b, we have found that while the risk difference of union dissolution for individuals who moved once or twice in childhood was not mediated by family stress proxies, for those who moved frequently these account for about 8 percent of the unconfounded association. Overall, these findings support the notion that family stress accumulates with each additional move, and that associations between childhood residential mobility and long-term outcomes are conditioned on the number of moves experienced. These findings also suggest that in egalitarian societies like the Nordic countries—beyond the Anglo-Saxon countries commonly studied in prior research—frequent residential mobility in childhood is linked to adverse outcomes later in life. Similar associations have been observed for socio-economic and other family outcomes as demonstrated by, for example, Tønnessen et al. (2016) in Norway. However, to understand the extent to which the welfare state and institutions moderate these associations, cross-national comparative analyses are needed.

Even when taking into account the family and individual characteristics, adults who moved frequently in childhood were still 1.4 times more likely to dissolve their union than their non-mobile counterparts. The remaining residual association may be attributed to the erosion of social capital resulting from recurrent changes of residence. Particularly, children who relocate frequently are more prone to move during school years, which can disrupt their social milieu, potentially hindering the development of skills needed for maintaining enduring relationships. Although additional analysis showed that the studied association remained robust even after accounting for moving in adolescence ages, further inquiry using measures that capture social ties disruption is needed. An alternative explanation for the remaining association among frequent movers is that they might depart from their parental home earlier and initiate romantic relationships at a younger age (Myers, 2000a; van den Berg et al., 2018). Such relationships are recognized for comparatively lower stability and are more likely to end in separation or divorce (Lyngstad & Jalovaara, 2010). Frequent residential mobility may also harm children's educational development and could lead individuals to

encounter precarious labour market situations (Tønnessen et al., 2016) which are associated with higher risks of relationship breakups (e.g. Anderson et al., 2021; Graaf & Kalmijn, 2006). Further analysis that considered these life domains (see Tables 9 and 10 of the Appendix), adding information on age at leaving the parental home, age at union formation, highest level of education, and whether the respondent encountered prolonged periods of unemployment, contributed to the overall mediation; however, the residual association remained robust. Moreover, the mediating role of relationship quality with father was reduced by less than one percentage point, supporting the idea that children that are constantly exposed to family stress may carry dysfunctional behaviours into their future relationships.

Importantly, our analyses reveal a nonlinear effect of residential moves despite a discernible gradient. Adults who underwent one or two relocations during childhood exhibited a progressively heightened risk of union dissolution compared to those who remained in place. This pattern suggests that the motivation behind a single or infrequent move—such as enhancing family finances, securing better living conditions, or enhancing social circumstances—might counterbalance the adverse effects of relocating. In contrast, it may not sufficiently offset the accumulated strain associated with frequent mobility. Furthermore, the capacity for resilience may not necessarily develop with each additional move for children who experience frequent relocations, as evidenced by a more pronounced study association with higher-order moves. Therefore, the findings indicate that managing the stress and challenges inherent in changing residences may not necessarily become more manageable for children accustomed to fluctuations in their social and geographic environment.

While our longitudinal analysis innovatively contributes to the existing literature by offering insights into the enduring ramifications of childhood residential mobility within a cross-national comparative context, it is important to recognize several limitations.

First, due to data constraints, we could not ascertain whether lower-quality relationships preceded frequent relocations. Consequently, our mediating factors, which serve as proxies for family stress, may encompass measurement inaccuracies. While establishing a definitive empirical causal relationship between relationship quality and residential moves remains challenging, we posited that by accounting for the occurrence of alternative childhood family arrangements (or shifts in arrangement type)—factors often linked to changes in residence—it is more plausible that family mobility influences levels of family conflict and stress, rather than the reverse. However, we concede that, to some extent, the quality of family relationships might influence relocation decisions, whereby families characterized by higher relationship quality might opt for moves that enhance their well-being, subsequently upholding or even enhancing family relationship quality. Nonetheless, our research underscores the significance of intra-family relationship quality during childhood, regardless of whether it operates as a mediating factor or a confounding variable.

Second, our analysis exclusively incorporated observable personal and family confounders. By not accounting for unobservable family attributes, such as parental

personalities or attitudes, our results could potentially suffer from omitted variable bias (Tønnessen et al., 2016).

Third, one might question the accuracy of retrospective information on moving at young ages. Recent findings, which compare retrospective and longitudinal data sources, indicate that individuals tend to recall significant events from their childhood (Smith, 2009). Nevertheless, our documentation of childhood residential mobility might still be underestimated.

Taking all these points into consideration, the empirically established association indicates that moving frequently in childhood can impact opportunities, behaviours, and decisions made later in life. Through that, this study has demonstrated how geographical mobility should also be considered as a mechanism for the reproduction of disadvantage over the life course, and particularly for family instability and the dissolution of the first most prominent relationship formed in adulthood.

The impact of childhood mobility was measured in specific social contexts, which may have implications for other societies. Sweden, Denmark, and Finland are characterized by lower reproduction of disadvantage and are considered less socially unequal than other parts of Europe. The welfare support directed to families and children in need may help reduce adverse experiences' impact. Moreover, regional differences are low, and the quality of schools is relatively equal within each country. Therefore, the results of this study suggest that similar conclusions, if not even more pronounced, could be drawn from research focusing on a less socially equal context. Future research should also address current temporal social aspects that lead specific individuals to experience greater spatial mobility, such as children of immigrant families (Kuyvenhoven et al., 2022), and explore research avenues for minimizing the long-term negative effect of childhood adverse experiences.

Appendix

See Tables 6, 7, 8, 9 and 10.

Table 6 Descriptive statistics by country

	Sweden		Denmark		Finland	
Variable	Mean (%)	Std. Dev	Mean (%)	Std. Dev	Mean (%)	Std. Dev
Union dissolution	0.33	0.47	0.39	0.49	0.28	0.45
Residential mobility						
0	0.42	0.49	0.43	0.5	0.6	0.49
1	0.29	0.45	0.28	0.45	0.2	0.4
2	0.16	0.37	0.17	0.37	0.11	0.31
3 +	0.13	0.34	0.13	0.33	0.09	0.28
Female	0.51	0.5	0.52	0.5	0.53	0.5
Birth cohort						
1945–1949	0.35	0.48	0.17	0.38	0.25	0.43
1950–1954	0.34	0.47	0.18	0.39	0.24	0.43
1955–1959	0.19	0.39	0.30	0.46	0.24	0.42
1960–1965	0.12	0.32	0.35	0.48	0.28	0.45
Union duration	22.7	10.4	21.5	11.5	23.7	9.6
Married	0.77	0.42	0.77	0.42	0.86	0.33
Unusual living arrangement	0.05	0.22	0.06	0.24	0.03	0.17
Both biological parents	0.93	0.26	0.92	0.28	0.94	0.24
Financial hardship	0.09	0.29	0.09	0.28	0.26	0.44
Religion importance	0.68	0.47	0.74	0.44	0.86	0.35
Good relationship with mother	0.89	0.30	0.88	0.32	0.89	0.31
Good relationship with father	0.86	0.35	0.86	0.35	0.82	0.39
N individuals	941		1208		1136	

Percentages may not add up exactly to 100 due to rounding

Table 7 Event history models of union dissolution—accounting for moving in adolescence

	Model 1		Model 2		Model 3	
	Odds ratio	*(se)*	Odds ratio	*(se)*	Odds ratio	*(se)*
Residential mobility (0 moves ref.)	1		1		1	
1	1.16†	(0.09)	1.12	(0.09)	1.12	(0.09)
2	1.22*	(0.11)	1.19†	(0.11)	1.16	(0.11)
3 +	1.42***	(0.15)	1.36**	(0.14)	1.31**	(0.14)
Moving in adolescence (12–17)	1.16*	(0.09)	1.14†	(0.09)	1.14†	(0.09)
Female	0.99	(0.06)	1.02	(0.06)	1.02	(0.06)
Birth cohort (1945–49 ref.)	1		1		1	
1950–1954	1.25*	(0.12)	1.24*	(0.12)	1.25*	(0.12)
1955–1959	1.30**	(0.12)	1.30**	(0.12)	1.31**	(0.12)
1960–1965	1.39***	(0.13)	1.38***	(0.13)	1.40***	(0.13)
Country (Sweden ref.)	1		1		1	
Denmark	1.20*	(0.09)	1.21*	(0.10)	1.19*	(0.09)
Finland	0.94	(0.08)	0.96	(0.08)	0.93	(0.08)
Union duration	0.97***	(0.01)	0.97***	(0.01)	0.97***	(0.01)
Married	0.41***	(0.03)	0.43***	(0.03)	0.43***	(0.03)
Unusual living arrangement			1.50**	(0.19)	1.41**	(0.18)
Both biological parents			0.86	(0.10)	0.94	(0.11)
Financial hardship			1.11	(0.10)	1.03	(0.09)
Religion importance			0.77***	(0.05)	0.81**	(0.06)
Good relationship with mother					0.91	(0.09)
Good relationship with father					0.67***	(0.06)
Constant	0.026***	(0.01)	0.034***	(0.01)	0.047***	(0.01)
Pseudo R-squared	0.038		0.041		0.044	
AIC	11,026.46		11,000.52		10,976.84	
BIC	11,146.23		11,157.15		11,151.91	
N (person-years)	74,148		74,148		74,148	

Exponential coefficients; *SE*: standard error; † < 0.1 * $p < 0.05$; ** $p < 0.01$; and *** $p < 0.001$

Table 8 Event history models of union dissolution—accounting for internal migration

	Model 1		Model 2		Model 3	
	Odds ratio	*(se)*	Odds ratio	*(se)*	Odds ratio	*(se)*
Residential mobility (0 moves ref.)	1		1		1	
1	1.19*	(0.09)	1.15†	(0.09)	1.15†	(0.09)
2	1.27*	(0.12)	1.24*	(0.12)	1.22*	(0.12)
3 +	1.55***	(0.17)	1.49***	(0.16)	1.45***	(0.16)
Inter-regional migration	1	(0.10)	0.98	(0.10)	0.95	(0.10)
Female	1	(0.06)	1.02	(0.06)	1.02	(0.06)
Birth cohort (1945–49 ref.)	1		1		1	
1950–1954	1.25*	(0.12)	1.25*	(0.12)	1.26*	(0.12)
1955–1959	1.30**	(0.12)	1.31**	(0.12)	1.31**	(0.12)
1960–1965	1.39***	(0.13)	1.38***	(0.13)	1.40***	(0.13)
Country (Sweden ref.)	1		1		1	
Denmark	1.20*	(0.09)	1.21*	(0.10)	1.19*	(0.09)
Finland	0.93	(0.08)	0.96	(0.08)	0.93	(0.08)
Union duration	0.97***	(0.01)	0.97***	(0.01)	0.97***	(0.01)
Married	0.42***	(0.03)	0.43***	(0.03)	0.43***	(0.03)
Unusual living arrangement			1.51**	(0.20)	1.42**	(0.19)
Both biological parents			0.86	(0.10)	0.94	(0.11)
Financial hardship			1.12	(0.10)	1.04	(0.10)
Religion importance			0.77***	(0.05)	0.81**	(0.06)
Good relationship with mother					0.9	(0.09)
Good relationship with father					0.67***	(0.06)
Constant	0.026***	(0.01)	0.035***	(0.01)	0.048***	(0.01)
Pseudo R-squared	0.038		0.041		0.043	
AIC	11,030.44		11,003.48		10,979.66	
BIC	11,150.22		11,160.12		11,154.73	
N (person-years)	74,148		74,148		74,148	

Exponential coefficients; *SE*: standard error; † < 0.1 * $p < 0.05$; ** $p < 0.01$; and *** $p < 0.001$

Table 9 Mediation analysis (KHB) of childhood residential mobility on union dissolution—including different life domains in adulthood. Model decomposition summary

	Model 2 (reduced)		Model 3 (full)		Difference	
	Coef. *(se)*		Coef. *(se)*		Coef. *(se)*	
Childhood residential mobility (0 ref.)	0.00	(.)	0.00	(.)	0.00	(0.02)
1	0.13†	(0.08)	0.13†	(0.08)	0.00	(0.02)
2	0.20*	(0.09)	0.18*	(0.09)	0.03	(0.02)
3+	0.38***	(0.10)	0.32***	(0.10)	0.06*	(0.02)

SE: standard error. Models exclude observations with missing values on at least one of the additional covariates which were deleted ($n=181$): $N=73{,}967$; † <0.1 * $p<0.05$; ** $p<0.01$; and *** $p<0.001$

Table 10 Mediation analysis (KHB) of childhood residential mobility on union dissolution—including different life domains in adulthood. Mediators' relative and overall contribution

	Only controls	Full model	Overall contribution
	Percentage reduced	Percentage reduced	Percentage
Childhood residential mobility (0 ref.)			
1			
Good relationship with mother	− 1.25	− 0.56	− 105.68
Good relationship with father	− 2.32	− 2.09	− 397.07
Age at union formation	5.07	4.09	776.38
Age left the parental home	− 7.93	− 5.42	− 1028.97
Level of education (ISCED)	3.44	4.73	898.03
Prolonged unemployment (6 + months)	− 0.13	− 0.22	− 42.68
Overall	–	0.53	100
2			
Good relationship with mother	4.11	1.73	14.39
Good relationship with father	5.17	4.53	37.7
Age at union formation	5.82	4.69	39.07
Age left the parental home	− 3.16	− 2.13	− 17.76
Level of education (ISCED)	2.36	3.14	26.16
Prolonged unemployment (6 + months)	0.03	0.05	0.44
Overall	–	12.01	100
3+			
Good relationship with mother	1.83	0.77	5.06
Good relationship with father	7.57†	6.73†	44.37
Age at union formation	2.48	1.95	12.82
Age left the parental home	4.29	2.84	18.72
Level of education (ISCED)	2.16	2.85	18.8
Prolonged unemployment (6 + months)	0.02	0.04	0.24
Overall	–	15.18	100

The effect in the model with *only controls* is the separate indirect effect when only this variable and the control variables were included. The effect in the *full model* is the disentangled effect when all variables were included. *Overall contribution* is the respective contribution of each variable in the full model out of the total mediation effect. Models exclude observations with missing values on at least one of the additional covariates which were deleted ($n=181$): $N=73{,}967$; † <0.1 * $p<0.05$; ** $p<0.01$; *** $p<0.001$

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Declarations

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

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