

Moving out and moving on: The impact of mobility in a context of union dissolution on antidepressant intake in Belgium

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Abstract

Introduction: Union dissolution is a major life course transition with well-documented links to poor mental health, yet the role of post-separation residential mobility remains underexplored.

Methods: This study uses linked administrative data from the Belgian Socialist Health Insurance Fund and the National Register to analyse 68,048 individuals aged 20–64 in opposite-sex partnerships in 2008 who separated between 2009 and 2018. Antidepressant use (≥ 90 defined daily doses/year) served as an objective indicator of treated depression.

Results: Random-effects logistic regression models showed that changing municipality during or shortly after separation was not, on average, associated with higher antidepressant use than staying in the shared location. However, anticipatory effects emerged for women: those who moved during separation had higher antidepressant use before the event, suggesting pre-existing distress. Repartnering was associated with lower antidepressant use among women, particularly when combined with moving. By framing mobility as a socially embedded process shaped by gendered economic inequalities, housing market pressures, and life course dynamics, this study advances understanding of the social determinants of mental health.

Discussion: Findings highlight the need for housing, welfare, and gender equity policies to support individuals during and after separation, with lessons relevant to diverse welfare state contexts.

Take-home message: Union dissolution impacts mental health through intertwined social and economic pathways. Residential mobility is a common yet understudied element of the separation experience. Mobility shows no overall effect on antidepressant use but has anticipatory effects for women. Repartnering reduces antidepressant use, especially for women who moved after separation. Findings stress housing, welfare, and gender equity policies to reduce mental health risks.

Keywords: union dissolution, residential mobility, antidepressants, gender differences, Belgium.

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INTRODUCTION

Recent health statistics show that mental health remains a pressing concern across Europe. In 2019, 7% of individuals in the EU-27 reported suffering from chronic depression [1]. In Belgium, this figure was slightly higher, with around 8% of the population reporting depressive symptoms in 2018 [2].

A complex interplay of social, economic, and relational factors shapes mental health. Life course transitions, such as the formation or dissolution of intimate partnerships, are critical turning points that can have lasting effects on well-being [3,4]. Union dissolution is a particularly disruptive event, often accompanied by declines in household income, changes in housing and neighbourhood conditions, and losses in social support networks. Divorce rates have increased over recent decades [5] and so has the demand for affordable housing. These consequences are not equally distributed: gendered patterns in caregiving, employment, and financial resources influence both the experience of separation and its impact on mental health.

Residential mobility is a frequent and consequential aspect of separation. When a relationship ends, at least one partner typically leaves the shared home [6], often under financial or time pressure [7,8]. Mobility can disrupt established routines and social ties, but it can also offer opportunities for recovery and a fresh start. Despite its relevance, the intersection of post-separation mobility, gender, and mental health remains underexplored in public health research. Most existing research treats mobility as a background characteristic, overlooking its potential role as both a stressor, through housing instability, economic strain, and loss of social support, and a coping mechanism that may facilitate recovery.

This study advances literature in three ways. First, we conceptualise residential mobility not as a background variable, but as an integral part of the separation process with potential health consequences. Second, we examine anticipatory effects, showing how mental health trajectories may change before the separation and relocation occur. Third, we adopt a gender-sensitive perspective, situating these dynamics within broader social determinants such as economic inequalities and housing market constraints. Using large-scale linked administrative data from Belgium, we provide robust evidence with relevance to diverse welfare state contexts.

Background

Residential mobility: a double-edged factor for mental health

Residential mobility can impact mental health in both positive and negative ways, depending on the context and motivations behind a move [9,10]. On the one hand, mobility may offer new opportunities, such as improved job prospects (especially for men, [11]), a wider social network, and psychological closure from past trauma [12]. On the other hand, according to the familiarity-liking theory, relocating can disrupt social ties, reduce neighbourhood attachment, and induce stress from environmental changes [13,14]. These effects tend to be buffered by higher income, strong social capital, or prior mobility experience [15-17].

Empirical studies linking internal migration to poor physical health [18,19] also suggest potential mental health risks, especially in cases of involuntary or financially constrained moves [20,21]. Migrants may face weaker social integration, lower well-being, and increased psychological distress [22,23], yet research on these links, especially within post-separation contexts, remains limited. Some qualitative studies could put forward the negative association between internal migration and wellbeing, but to our knowledge, their definition of wellbeing was mainly self-reported and based on an appreciation of happiness and life satisfaction. To our knowledge, studies using mental healthcare are rare.

Union dissolution and mental health

Residential mobility is closely related to partnership changes, and particularly the physical separation of a couple. After separation, in most cases, at least one of the two ex-partners will quickly move out of the family home. Being separated or divorced is associated with an increased risk of residential mobility, compared to married or single individuals, for both men and women [24]: this higher risk peaks at exact moment of separation, and decreases over time. In some countries, such as Belgium, the probability of a move remains higher for separated individuals for a longer time – more than a year – after the union dissolution (24).

Separation and divorce are consistently associated with increased mental health problems, including depressive symptoms and psychotropic medication use [3,25]. This deterioration often begins before the actual separation – reflecting anticipatory stress [26-28] – and may persist for years afterward, particularly among women [29,30]. A union dissolution can rather be considered as a process than as an event: separation can take several months or even years and is preceded and followed by negotiations and legal aspects [31].

Men tend to suffer short-term losses in social support, while women face longer-term economic hardship and single parenthood risks, which can lead to persistent mental health challenges [32,33].

Belgium presents higher divorce rates than the EU average since the early 1980s. For the year 2019, the country counted 50.7 divorces per 100 marriages [5]. But contrary to other European countries, the number of divorces tended to decrease in Belgium over the last decades [5]. This also reflects a higher selectivity of marital unions, that is accompanied by an increase in non-marital cohabitation and age at first marriage [34]. The dissolution of non-marital cohabitations is not registered in official statistics, but survey data suggests that cohabitation is less stable than marriages [35].

Mobility after union dissolution: amplifying or buffering distress?

Union dissolution is a particularly disruptive event, often triggering changes in living arrangements, household income, and social networks. These shifts are not evenly distributed: women and men experience and respond to separation differently, reflecting persistent gender inequalities in resources, caregiving roles, and social expectations. Such disparities align with the broader literature on social determinants of health, which shows that economic insecurity, housing instability, and reduced social support are key pathways linking relationship breakdowns to poorer mental health outcomes. Residential mobility, a frequent consequence of separation, can both exacerbate and mitigate these pathways – by destabilising social ties or offering opportunities for renewal. Yet, despite its relevance, the intersection of mobility, separation, and mental health remains understudied, particularly from a gendered perspective.

Moving after separation is common but often occurs under financial strain and time pressure [6]. These relocations may reduce housing quality [36], disrupt access to children [33], and weaken social support networks [37]. However, they can also mark the beginning of a new chapter—particularly for those who initiate the separation or enter a new relationship [38,39].

In Belgium, the legal framework does not encourage any party to leave or stay in the shared place. The decision of who stays in the shared residence is shaped by both economic resources and separation dynamics. The decision of who moves and who stays in the previously shared place can sometimes mask the decision process of separation itself. Even though there are no inflexible rules, we can assume that the person who decides to break up is likely to be the person who moves out of the shared place, because they are more ready to leave the relationship or because they plan to join a new partner [38,40].

Women are more likely to move, especially when economically disadvantaged or if they initiated the breakup [41,42]. In such cases, mobility may reflect agency, distress, or both.

Research questions and hypotheses

While the mental health consequences of union dissolution are well-documented, little is known about how residential mobility interacts with this process. Most existing studies treat separation and mobility as separate stressors, overlooking their frequent co-occurrence and potential combined effects on mental health. Evidence on this interplay – especially from large, population-based longitudinal data – is scarce, and even more so for gender-specific patterns. Understanding these dynamics is essential for designing housing and mental health policies that target individuals during this period of heightened vulnerability.

This study addresses this gap by examining antidepressant use before, during, and after union dissolution in a large Belgian cohort, with a focus on whether residential mobility at the time of separation modifies these patterns, and whether these associations differ for men and women. We address three key research hypotheses:

H1: Individuals who move to a different municipality during the year of separation are more likely to consume antidepressants than those who remain in the shared residence.

H2: The effects are gendered and anticipatory. Women who move are more likely to exhibit higher antidepressant use before separation, suggesting anticipatory effects. For men, moving is expected to be associated with higher antidepressant use after separation, due to potential social isolation. Among women, differences in antidepressant use between movers and stayers are expected to be smaller, given their greater post-separation economic strain.

H3: Repartnering after separation is associated with lower antidepressant use among movers, especially for women, by potentially buffering economic and emotional stress.

Data and methods

Data

This study draws on longitudinal administrative data from Belgium, combining two high-quality sources: a) the Socialist Health Insurance Fund (SHIF), that provides yearly individual-level data on antidepressant prescriptions, income status, employment, disability, and healthcare use; and b) the National Register, which contains demographic and household information, enabling identification of union dissolutions and residential moves. These datasets are linked at the individual level and provide annual observations from 2009 to 2018.

We selected opposite-sex couples who were cohabiting (married or non-married) on January 1st, 2009, both affiliated to the SHIF throughout 2009–2018, and who experienced a union dissolution (i.e., no longer sharing a household ID) between 2009 and 2018. To ensure balanced follow-up, we excluded couples where one partner died, moved abroad, or changed insurance during the period. We restricted the sample to individuals aged 20–54 in 2009, resulting in a final sample of 33,101 men and 34,947 women. Indeed, the intake of antidepressants among younger or older people is particularly influenced by specific factors. For instance, the use of antidepressants among children and teenagers is controversial in psychiatric studies and practice, as the determinants of mental health for young people are even more diverse than for adults [43,44]. Antidepressants are often prescribed to elderly individuals as well, especially in case of mobility loss or cognitive diseases [45,46].

Using civil status information and household configuration from the National Register, we can directly identify marital couples. For non-marital couples, we relied on several assumptions, such as having only two opposite-sex adults aged 16 and above living in the same household, with an age difference lower than 15 years between them. These assumptions exclude same-sex couples and couples with a large age gap, but their consistency is supported by external validation: the applied definition captures more than 90% of the non-married partnerships that were self-declared in the Generations and Gender survey conducted in 2009 in Belgium [47].

The dataset used in this study is well-suited to research objectives, as it provides annual information on antidepressant use, partnership status, and intermunicipal relocations before, during, and after union dissolution. However, several limitations must be acknowledged. First, the data is available only every year, which prevents precise tracking of multiple events (e.g., moves, separations, or repartnering) within a single year. Still, brief unions or very rapid transitions are expected to be rare and unlikely to bias results substantially. Second, intramunicipal relocations are not captured, only moves between municipalities. This implies that we do not capture all moves, particularly the very short-distance ones, that are particularly common for parents sharing custody [48]. Nonetheless, Belgium's small and numerous municipalities (around 600, averaging 50 km²) make intermunicipal moves a meaningful proxy for environmental change. Third, the dataset is not fully representative of the Belgian population, as it includes only members of the Socialist Health Insurance Fund (SHIF), which covers roughly 28% of residents. SHIF members are more concentrated in Wallonia and may differ socioeconomically and demographically from the broader population due to Belgium's historically pillarized insurance system. Historical, socioeconomic and cultural factors led to the creation of several social movements, such as trade union, youth movements or religious communities. Health insurances are the continuity of these different movements and are divided in three large pillars: Christian, socialist and liberal health insurances [49]. The SHIF covers less than a third of the Belgian population (about 3 200 000 members in 2018, i.e. 28% of the population), with a large representation of the Walloon population, living in the southern French-speaking region of the country (1 300 000

Walloon members in 2018, i.e. 38% of the Walloon population). Despite these limitations, the dataset remains highly valuable for studying residential mobility and mental health during union dissolution.

Outcome: mental health

Our outcome is a binary indicator of antidepressant consumption ≥ 90 DDD per year, considered a threshold for effective treatment of diagnosed depression (Hirschfeld, 2001; Moustgaard et al., 2014). This excludes short-term prescriptions and provides a conservative proxy for treated depressive episodes. In Belgium, antidepressants can be prescribed mainly by general practitioners, psychiatrists, or any other specialised doctor. Our outcome variable is thus dichotomous, distinguishing yearly consumption of 0-89 DDD and 90 DDD and more. In robustness checks, we also tested the variation of the antidepressant consumption in DDD, without any threshold (Appendix, Figure A1-2).

Using prescription data allows us to avoid the subjectivity of self-reported measures. However, this approach has limitations. Not all individuals experiencing depression receive treatment, and treatment adherence varies [50,51]. Antidepressants may also be prescribed for other conditions such as anxiety, migraines, or chronic pain [52], and usage may differ by gender, income, or cultural attitudes toward mental health [53,54]. Therefore, while antidepressant intake likely underestimates the true prevalence of depression, it remains a conservative and robust indicator of diagnosed and treated depression, especially in a healthcare system with broad access and reimbursement like Belgium's.

Main predictor: union dissolution

Separation is identified by a change in household ID between years t and $t+1$. We assume that if the two partners still have the same household identifier, nothing changes in the relationship. On the contrary, if at least one of the partners changes household identifiers and if the two partners have different household identifiers, this means the couple does not share the same accommodation any longer, which defines a union dissolution. We define five temporal categories: 1) two years and more before the separation; 2) the year before the separation; 3) the year of the separation; 4) the year following the separation year; and 5) two years and more after the separation. Only the first observed separation is considered. About 24.6% of men and 22.3% of women from our sample will repartner before the end of our observation period.

The moderating effect of mobility

Mobility is defined as a change of municipality between t and $t+1$. In the Belgian administrative context, a municipality ("commune" in French; "gemeente" in Dutch) is the smallest local government unit with full administrative responsibilities, such as civil registration, local services, and schooling. Belgium has 581 municipalities, with an average area of about 50 km² and a median population of roughly 12,000 residents. A change of municipality therefore typically represents a move that goes beyond a short-distance relocation and often involves a change in local services, community networks, and daily routines. Moves within the same municipality (intramunicipal moves) are not captured in our dataset, which means short-distance residential changes remain unobserved.

A binary variable indicates whether the individual moved during the separation year. We use both: a time-varying approach (individual becomes "mover" only from year t onward), and a time-constant anticipatory approach (individual is flagged as a future mover throughout the complete observation window). In this second approach, we question the possibility that a future (and anticipated) mobility could increase antidepressants before separation.

We investigate the role of repartnership in the relation. Using household composition after separation, we classify individuals as having repartnered or remained single. This allows for stratified analysis of mobility's effect in different partnership trajectories. This allows to know more about the context of the move and study the moves that can be attributed to possible new union formations.

Control covariates

The database includes a range of characteristics for each individual, gathered on January 1st of each year. All controls are time-varying unless otherwise noted. First, we distinguish men and women, as mental health problems, medication consumption and effects of separation on (mental) health differ by gender [54,55]. We treat age as a continuous variable. We also include geographic information in terms of region of residence: Flanders, Brussels-Capital Region and Wallonia. The regions differ in terms of

mental health policies, with regional budgets and authorities managing mental healthcare. Then, the household type variable is based on the composition of the household [56] and allows to estimate the marital and parental status of the individual, which matter for mental health [27,57].

We estimate socioeconomic precariousness, which is associated with mental healthcare use [58,59], with two variables. First, the increased reimbursement status that is provided when the household's income is low enough or based on social benefits. Then, as it is known that unemployment is closely related to mental health [60], we also used information on the number of days worked over the year as a proxy for employment status. One is considered unemployed if the number of days worked is below 150 days per year (less than 6 months), including when it overlaps two years.

General health status is measured by counting the number of days that an employee receives sickness or invalidity benefit. We consider individuals in a disability state if their number of days with sickness or invalidity benefit exceed 150 working days a year. We also account for the antidepressant consumption of the (ex-)partner, as it can influence one's openness to mental health medication and adherence to the treatment (Dupre and Meadows, 2007). We include changes in main antidepressants prescriber between two consecutive years, as it can create potential diagnosis shifts. Finally, the distance of the move was added to the models, through a categorical variable, distinguishing whether the distance between the centroids of departure and arrival municipalities centres were located 16 km away for each other at the most, or above this threshold. In Belgium, we can consider than 16 km is the threshold to define long-distance moves, as 16 km is the radius of the largest agglomeration in terms of area (Tournai).

METHODS

We use random-effects logistic regression to estimate the probability of high antidepressant use (≥ 90 DDD/year). This model accounts for both observed and unobserved individual heterogeneity, while retaining time-invariant variables (18,62):

$$\ln \frac{P([AD \geq 90DDD]_{it} = 1)}{P([AD \geq 90DDD]_{it} = 0)} = \alpha_i + \beta X_{it} + u_{it}$$

Where i is each individual, t is time in years, α_i is the individual specific effect, β is a vector of parameters to be estimated, X_{it} is a vector of explanatory variables (including union dissolution, residential mobility and the interaction of both), and u_{it} is the disturbance/error term following a normal distribution. This approach allows us to account for repeated measures and both between- and within-individual variation, while retaining time-invariant covariates such as gender and (often) region. We chose random effects over fixed effects because our primary interest was not solely in within-person change but also in the influence of stable characteristics and interactions with time-varying factors. However, this choice implies the assumption that unobserved individual effects are uncorrelated with the explanatory variables – an assumption that may not fully hold in this context. In particular, unmeasured time-varying factors, such as the quality of the relationship before separation or the availability of informal support, could affect both the likelihood of moving and mental health outcomes, introducing residual confounding. Furthermore, our measure of mental health, antidepressant use, captures treated depression but does not reflect untreated or undiagnosed cases, and may be influenced by gendered patterns in healthcare seeking. As a result, the findings should be interpreted as associations rather than causal effects.

Results are presented using predicted probability and incidence rate ratios to ease interpretation:

$$P_{[AD \geq 90DDD]} = \frac{e^{\alpha_i + \beta X_{it}}}{1 + e^{\alpha_i + \beta X_{it}}}$$

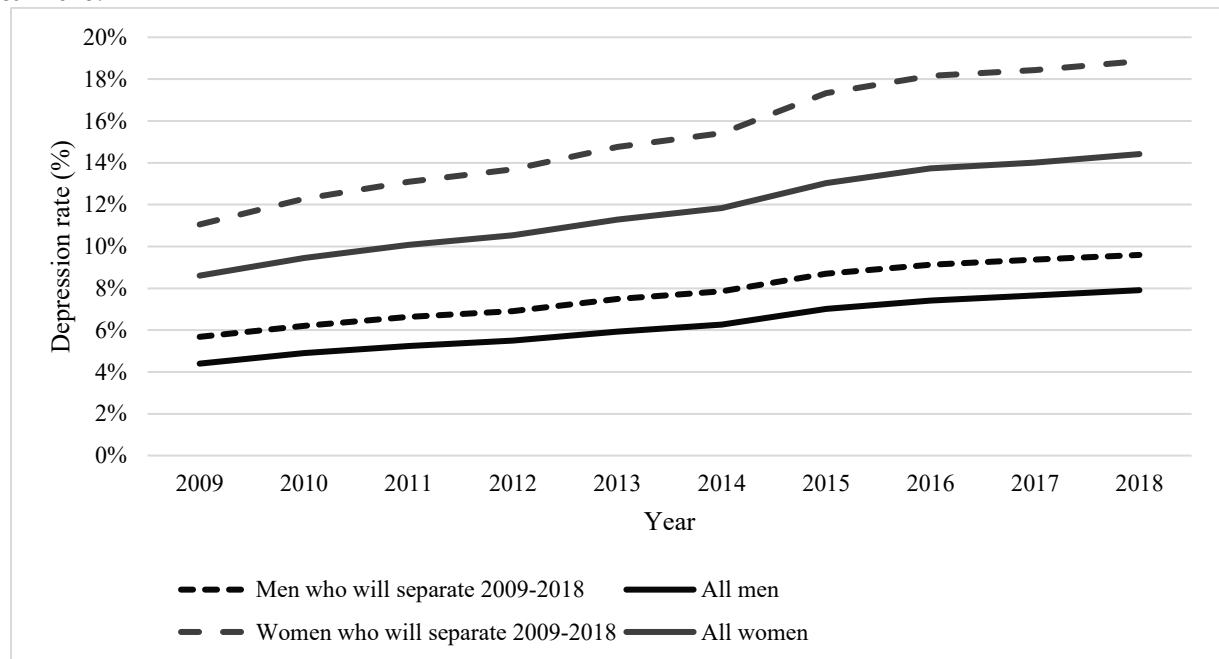
We also perform interactions between mobility and repartnering status, and robustness checks, such as Ordinary Least Squares (OLS) and Poisson models (Figures A1-2 and A3-4) using raw DDD counts or rare-event models and models restricted to individuals with no antidepressant use at baseline (Figure A5, on a subsample of 38,199 men and 40,161 women, i.e. 76% of the analytical sample).

Analysis

Descriptive part

In 2009, 12% of individuals affiliated with the Socialist Health Insurance Fund consumed at least one Defined Daily Dose (DDD) of antidepressants, and 7% exceeded the 90 DDD threshold (Figure 1). Over the 2009-2018 period, antidepressant use increased, reaching 14% for women and 8% for men by 2018. Gender disparities are particularly pronounced among separated individuals: in 2018, nearly 19% of separated women consumed 90 DDD or more, compared to less than 10% of separated men.

Figure 1. Rate of men and women whose antidepressants intake is at least 90DDD per year, year 2009 to year 2018.



Source: Belgian socialist health insurance fund.

N= 246,255 men aged 20-64 in a relationship in 2009, including 33,101 men who will separate between 2009 and 2018; 273,561 women aged 20-64 in a relationship in 2009, including 34,947 women who will separate between 2009 and 2018.

Our analytical sample includes 33,101 men and 34,947 women who experienced a union dissolution between 2009 and 2018, resulting in 612,432 person-years of observation. Most were in marital unions prior to separation and lived with resident children (Table 1). The sample is regionally skewed, with a large proportion residing in Wallonia. At baseline (2009), approximately 12–14% were unemployed, and 10% had access to increased reimbursement—a proxy for low income. A very small share was on long-term work incapacity. Initial characteristics show minimal differences between individuals who moved during the separation year and those who stayed in the same municipality.

Table 1. Sample characteristics of the analytical sample (intact heterosexual couples in 2009 who will separate in 2009-2018, formed by two members of the SHIF), at the beginning of the observation period (01/01/2009) and according to mobility status during the separation year, in numbers and percentage.

a/ MEN			
	a) TOTAL	b) <i>Moved at t</i>	c) <i>No move at t</i>
	33,101	9,345	23,756
Total		28.23%	71.77%
Living in a marital union	16,745	4,699	12,046
	50.59%	50.28%	50.71%

Living in a non-marital union	13,473 40.70%	3,815 40.82%	2,658 80.18%
Living with children	7,725 23.34%	2,193 23.47%	5,532 23.29%
Childless or not living with children	22,493 67.95%	6,321 67.64%	16,172 68.08%
Flanders	14,890 44.98%	3,953 42.30%	10,937 43.20%
Wallonia	14,956 45.18%	4,100 43.87%	10,856 47.90%
Brussels	3,255 9.83%	1,292 13.83%	1,963 8.26%
Unemployment	4,135 12.49%	1,148 12.28%	2,987 12.57%
Incapacity	379 1.14%	88 0.94%	291 1.22%
Increased reimbursement	3,085 9.32%	883 9.45%	2,202 9.27%

b/ WOMEN

	(a) TOTAL	(b) Moved at <i>t</i>	© No move at <i>t</i>
Total	34,947	9,991 28.59%	24,956 71.41%
Living in a marital union	18,186 52.04%	4,728 47.32%	13,458 53.93%
Living in a non-marital union	13,776 39.42%	4,362 43.66%	9,414 37.72%
Living with children	7,991 22.87%	2,783 27.86%	5,208 20.87%
Childless or not living with children	23,971 68.59%	6,307 63.13%	17,664 70.78%
Flanders	15,805 45.23%	4,430 44.34%	11,375 45.58%
Wallonia	15,692 44.90%	4,549 45.53%	11,143 44.65%
Brussels	3,450 9.87%	1,012 10.13%	2,438 9.77%
Unemployment	4,911 14.05%	1,312 13.13%	3,599 14.42%
Incapacity	528 1.51%	156 1.56%	372 1.49%
Increased reimbursement	3,779 10.81%	859 8.60%	2,920 11.70%

Source: Belgian socialist health insurance fund.

To capture contextual changes, we include time-varying covariates such as change of antidepressant prescriber and distance of residential moves. In both 2010 and 2015, around 32% of intermunicipal moves were longer than 16 km, a threshold used to distinguish long-distance relocations. Prescriber change occurred in 5% of men and 9.1% of women who moved in 2009. These contextual variables help assess whether mobility entails changes in healthcare routines or living environments that may affect antidepressant use.

Analytical part

Analyses were conducted on our main sample of individuals aged 20–54 in 2009 who were part of intact heterosexual couples and experienced a separation between 2009 and 2018, with both partners affiliated to the Socialist Health Insurance Fund (SHIF).

Table 2 presents the results of random-effects logistic regression models predicting the probability of consuming at least 90 Defined Daily Doses (DDD) of antidepressants per year. Model 1 includes separation timing, showing an apparent anticipatory increase in antidepressant use starting one year before the separation for both men and women. Consumption peaks in the year of separation and then declines, returning to baseline levels for men but remaining elevated for women even two years after the separation. Model 2 adds mobility status during the separation year and shows that residential moves are not significantly associated with higher antidepressant use for either gender. While some odds ratios are statistically significant, the magnitude of effects is small, particularly for the mobility variable (e.g., OR $\approx$ 1.01–1.02). These small effect sizes suggest that, even when differences are statistically detectable, their practical or clinical significance is limited. This highlights the importance of interpreting results not only through p-values but also in terms of substantive impact.

Table 2. Random-effect logistic regression on the risk of having a antidepressants intake over 90 DDD (0/1) for men and women, expressed in odds ratio.

	Men		Women	
	Model 1	Model 2	Model 1	Model 2
N	49,930	49,930	52,786	52,786
Separation period				
2 years and more before separation	1.00	1.00	1.00	1.00
1 year before separation (t-1)	1.63 [1.52-1.75]	1.63 [1.52-1.75]	1.58 [1.51-1.68]	1.58 [1.51-1.68]
Year of separation (t)	1.80 [1.67-1.95]	1.80 [1.65-1.95]	1.84 [1.73-1.95]	1.82 [1.71-1.93]
1 year after separation (t+1)	1.13 [1.04-1.22]	1.13 [1.03-1.22]	1.46 [1.38-1.55]	1.45 [1.37-1.54]
2 years and more after separation	0.99 [0.92-1.06]	0.99 [0.93-1.76]	1.22 [1.16-1.30]	1.21 [1.14-1.29]
Residential move at t		1.01 [0.94-1.08]		1.02 [0.98-1.08]

Control for age, region of residence, increased reimbursement (proxy of low socioeconomic status), parent of resident children (vs. childless or parent of non-resident children), in a married or non-married relation (vs. living without a partner), work incapacity (more than 150 days of sickness or disability benefits a year), unemployment (more than 150 days of unemployment a year), antidepressant consumption of the partner, change of antidepressant prescriber, distance of move.

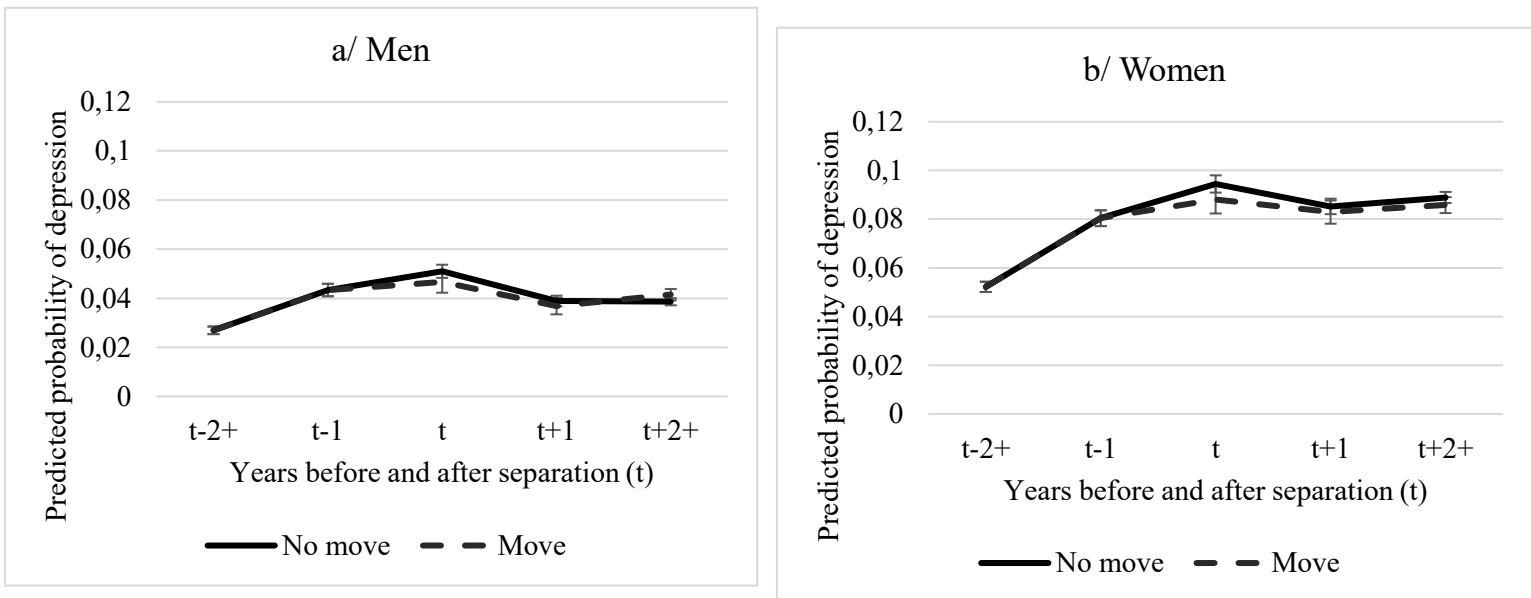
Full models are in Appendix (A-1)

Hypothesis 1: Does Moving During Separation Increase Antidepressant Use?

Figure 2 examines mobility as a time-varying variable, coding individuals as movers only from the year of separation onward. Those who stayed in the shared municipality displayed slightly higher

antidepressant use in the separation year, but differences were small and statistically insignificant. Thus, Hypothesis 1 is not supported.

Figure 2. Predicted probability of antidepressants intake being 90DDD+ a year (based on random-effect logistic regression models) according to the mobility status of the individual at the time of separation (t). The mobility status during the year of separation (t) is attributed during this separation year (not before).

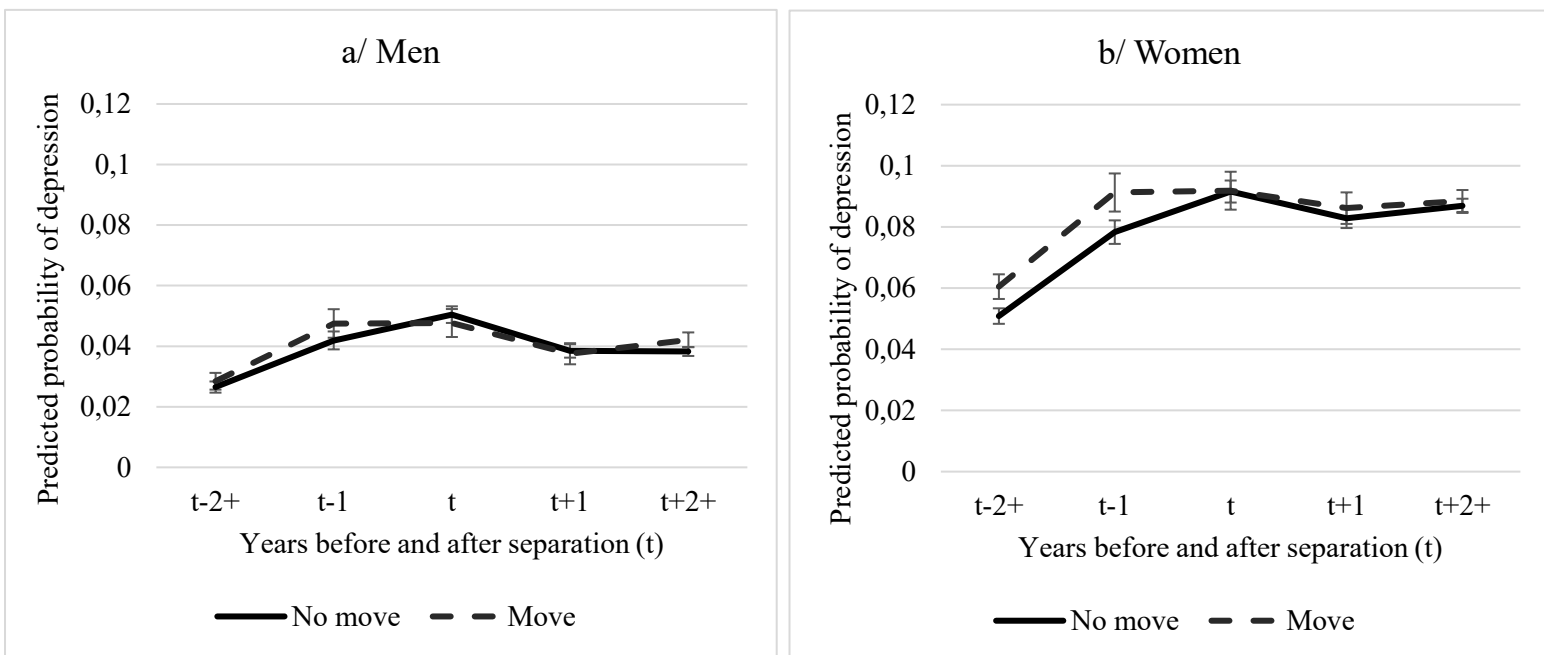


Model controls for age, region of residence, increased reimbursement (proxy of low socioeconomic status), parenthood, couple configuration, work incapacity, unemployment, antidepressant consumption of the partner, change of antidepressant prescriber, distance of the move. Source: Belgian socialist health insurance fund.

Hypothesis 2: Anticipation and Gender Differences

To test for anticipatory effects, we recoded movers as such throughout the observation period (Figure 3). Women who moved during the separation year exhibited higher antidepressant use already before the separation, suggesting psychological strain leading up to the breakup. After separation, antidepressant use levels converged between movers and non-movers. No similar anticipatory pattern was observed among men. These results partially support Hypothesis 2: results confirm the anticipation effect among women, and partially support the weaker differences among women after separation, but not the expected greater post-separation strain among men.

Figure 3. Predicted probability of antidepressants intake being 90DDD+ a year (based on random-effect logistic regression models) according to the mobility status of the individual at the time of the separation (t). The mobility status during the separation year (t) is attributed to the whole period (before and after the separation).



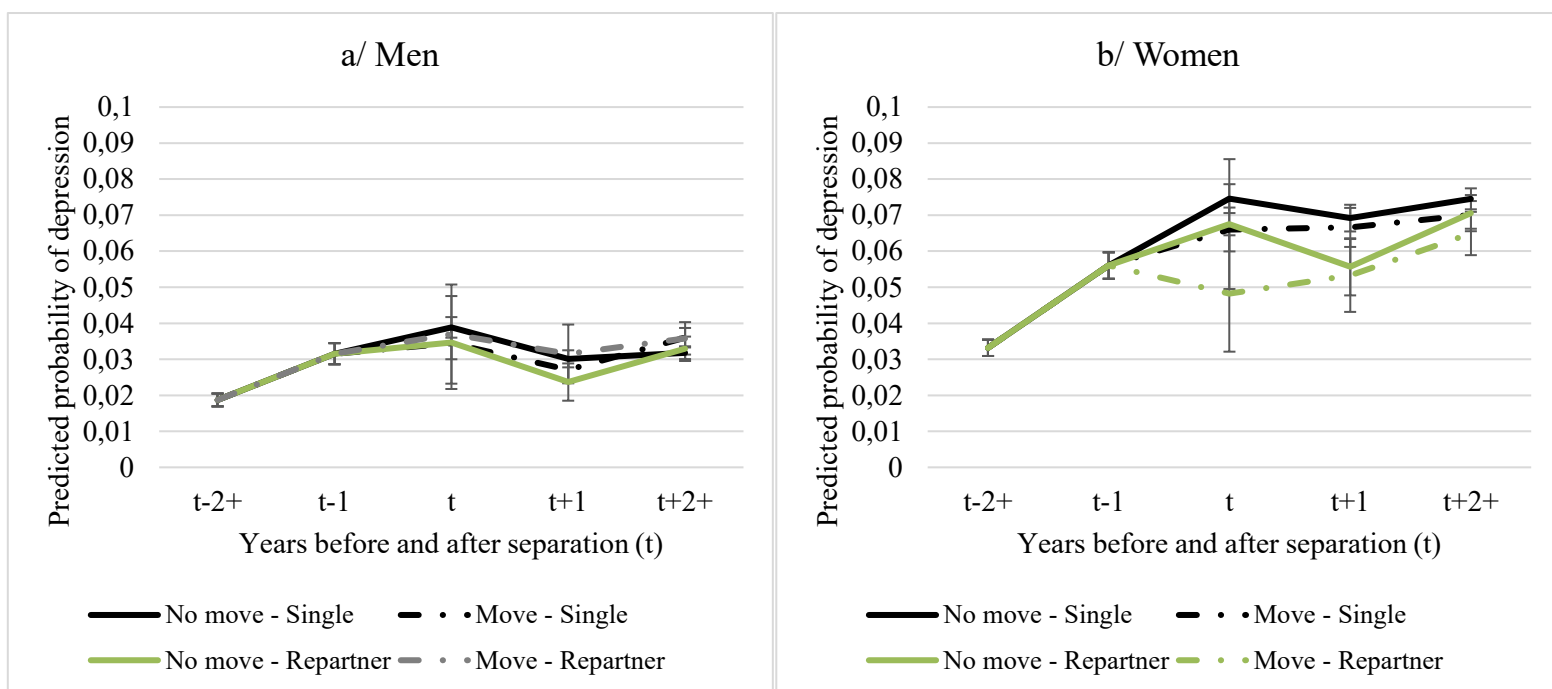
Model controls for age, region of residence, increased reimbursement (proxy of low socioeconomic status), parenthood, couple configuration, work incapacity, unemployment, antidepressant consumption of the partner, change of antidepressant prescriber, distance of the move.

Source: Belgian socialist health insurance funds.

Hypothesis 3: The Role of Repartnering

Figure 4 explores how repartnering interacts with mobility. Among men, antidepressant use patterns did not vary significantly by mobility or repartnering status. For women, however, those who moved and repartnered in the same year showed lower antidepressant use, both immediately and in the following years, compared to women who moved but remained single. Regardless of mobility, being in a new relationship was associated with lower levels of antidepressant use among women, confirming Hypothesis 3.

Figure 4. Predicted probabilities of antidepressants intake being 90DDD+ a year (based on logistic regression models) according to the mobility status of the individual at the moment of the separation (t) and the following year, and according to the repartnering status. The mobility status during the separation year (t) and the year after the separation is attributed from this separation. Source:



Model controls for age, region of residence, increased reimbursement (proxy of low socioeconomic status), parenthood, couple configuration, work incapacity, unemployment, antidepressant consumption of the partner, change of antidepressant prescriber, distance of the move.

Source: Belgian socialist health insurance fund

However, even if several associations reach statistical significance, the estimated effect sizes are generally small, particularly for the mobility variable (odds ratios close to 1.0). This indicates that although the associations are detectable in a large sample, their substantive impact on antidepressant use is limited.

Robustness checks

To test the stability of our findings, several robustness checks were conducted. Linear regressions using continuous DDD values (without thresholds) confirmed the absence of significant differences between movers and non-movers (Figures A1–A2). Poisson regressions, accounting for the rare nature of high antidepressant use, yielded similar results (Figures A3–A4). A subsample analysis of individuals with no antidepressant use at baseline (2008) confirmed that selection bias from pre-existing mental health conditions did not drive results. Women who eventually moved still showed higher predicted probabilities of antidepressant use, consistent with earlier findings (Figure A5). However, women without baseline use showed slightly lower medication use if they remained in the shared municipality during the separation year, particularly at that exact time. Together, these checks reinforce the main conclusion: residential mobility during separation does not uniformly predict increased antidepressant use, though gendered and anticipatory patterns, especially among women, are evident.

DISCUSSION

This study examined how residential mobility intersects with the mental health consequences of union dissolution, using a large panel of couples affiliated with the Socialist Health Insurance Fund (SHIF) in Belgium. By tracking antidepressant use before, during, and after separation, we assessed how moving out of the shared home may shape psychological outcomes, both overall and by gender.

Our results reaffirm previous research showing that mental health declines in the lead-up to separation, with antidepressant use peaking during the separation year. For men, usage drops relatively quickly afterwards, returning to baseline within two years. For women, however, antidepressant use remains elevated even in the longer term, reflecting the enduring effects of separation. Although our

large sample size yields statistically significant results, the effect sizes, particularly for mobility, are small and must be interpreted with caution regarding their practical implications.

Contrary to expectations, moving to a different municipality during the separation year was not strongly associated with increased antidepressant use (H1 not confirmed). While separation-related moves are often made under financial or emotional pressure, they may not independently worsen mental health outcomes. On the one hand, moving can represent a disruptive life event that compounds the emotional strain of a breakup, mainly if it entails financial hardship, housing insecurity, or weakened social ties [22,63,64]. On the other hand, relocation may offer psychological relief, symbolic closure, or access to new opportunities [11,12].

Importantly, our use of both time-varying and time-constant mobility indicators revealed gendered anticipatory patterns (H2 confirmed). Women who moved at the time of separation already had higher antidepressant use before the event, suggesting emotional distress leading up to the decision. This aligns with prior findings that women are more likely to initiate separations [41] and, when doing so, are also more likely to move [39]. In many cases, moving might reflect efforts to escape a low-quality or even abusive relationship, situations known to increase depression risk [65]. For women with limited financial resources, anticipating the financial burden of staying in the shared home may also generate stress [66,67]. Another possibility is a selection effect: women with pre-existing mental health vulnerabilities may be both more likely to leave a relationship and more likely to relocate [68,69].

Gender differences were also evident in the duration of mental health effects. For men, the psychological impact of separation appears more short-lived and may reflect temporary disruptions in social support [29]. In contrast, women often experience longer-term stressors, such as income loss and single parenthood [70]. Moreover, men may underreport mental health symptoms and are less likely to seek care, especially when unpartnered [54,71]. This could partly explain why their antidepressant use decreases so quickly post-separation, despite ongoing vulnerabilities.

Finally, our analysis of repartnering trajectories reveals another gender-specific pattern (H3 confirmed for women). Women who both moved and entered a new relationship shortly after separation had a significantly lower probability of antidepressant use. Repartnering may buffer the emotional and financial toll of separation [72] and can represent a new source of stability and support. It is also possible that healthier individuals are more likely to enter new relationships [73], suggesting a self-selection mechanism. Among men, however, we observed no clear mental health benefit of repartnering, possibly because their healthcare-seeking behaviours are less sensitive to changes in relationship status. In some cases, partnered men may even be more likely to engage with healthcare services if encouraged by their partners [74].

In sum, while mobility itself is not a strong predictor of antidepressant use, its intersection with gender and relationship dynamics provides essential insight. For women, mobility can signal pre-existing stress, anticipation of hardship, or a pathway to rebuilding life – depending on context. For men, mobility appears less consequential, although underuse of healthcare services may obscure deeper psychological challenges. It is important to note that, despite statistical significance in some associations, the effect sizes are modest. This suggests that residential mobility, in itself, may not be a strong determinant of antidepressant use when compared to broader socioeconomic and relational factors. The small magnitude of these effects should temper causal interpretations and underscore the need for nuanced, context-specific policy responses rather than broad generalisations.

Our findings contribute conceptually by positioning residential mobility not simply as a logistical consequence of separation, but as a socially embedded process shaped by structural constraints and resources. By showing that anticipatory mental health effects are more pronounced among women who move, we highlight how economic insecurity, gendered caregiving roles, and housing market pressures intersect to influence both the decision to relocate and its mental health implications. This framing moves beyond documenting descriptive patterns to demonstrate how mobility functions within broader social determinants of health, reinforcing the need to address housing affordability, income protection, and gender equity as part of mental health policy.

Limitations and methodological considerations

This study draws on a unique longitudinal dataset combining medical records from the Socialist Health Insurance Fund (SHIF) and demographic data from the Belgian National Register. While this linkage enables rich, multi-year tracking of partnership transitions, residential mobility, and antidepressant use, several limitations must be acknowledged.

First, our sample includes only couples where both partners are SHIF members, which may introduce selection bias. In Belgium's pillarized health insurance system, affiliation often reflects socio-political orientation, socioeconomic background, and family history [49,75]. SHIF members tend to be more socioeconomically disadvantaged, as evidenced by higher rates of increased reimbursement status (see Appendix – Table A1). They are also more often unmarried or childless, characteristics associated with greater partnership instability [76]. While this does not undermine internal validity, caution is needed when generalising to the entire Belgian population.

Then, we use antidepressant consumption as a proxy for mental health, a common approach in register-based studies. This indicator offers objectivity and avoids biases inherent in self-reported measures. However, it may underestimate undiagnosed or untreated mental health issues, especially among populations less likely to seek care. In contexts like separation, where sadness and stress are expected, antidepressant use captures only more severe or clinically treated episodes.

Due to data constraints, we do not distinguish between marital and non-marital unions, even though these partnership types differ in their stability and socioeconomic profiles [77]. Additionally, key socioeconomic variables, such as education or income, are unavailable. While we adjust for unemployment, increased reimbursement, and work incapacity, the lack of detailed socioeconomic data may mask substantial heterogeneity, particularly regarding women's post-separation outcomes [4,8].

We employed random-effects logistic regression to account for both within- and between-individual variation. This approach allows us to include time-invariant covariates, unlike fixed-effects models. However, random-effects models assume no correlation between individual-specific effects and explanatory variables, an assumption that may not fully hold. Importantly, unobserved time-varying factors, such as the quality of the relationship before separation, reasons for the breakup, or availability of informal support, could influence both residential decisions and mental health, leading to residual confounding. Future research should complement administrative data with qualitative or survey-based approaches to explore these dynamics more fully.

Finally, a notable limitation is our inability to observe intramunicipal relocations. Our measure of residential mobility is restricted to changes between municipalities, which may underestimate the full extent of post-separation movement—particularly short-distance moves that maintain proximity to children, schools, or support networks. Such moves can still represent major changes in daily life and well-being, especially for parents. As a result, we may understate the broader effects of housing instability following union dissolution.

Contribution and policy implications

Despite certain limitations, this study demonstrates the value of linked insurance and register data for understanding mental health trajectories following separation. It offers two key contributions. First, it sheds light on the nuanced relationship between separation-driven mobility and mental health, showing that moving is not uniformly harmful or beneficial. Context, such as the reasons for the move or who initiated the separation, matters greatly. Second, it highlights gendered vulnerabilities, particularly for women who leave the shared home and exhibit signs of poor mental health before separation, likely reflecting the impact of difficult or low-quality relationships. While this study draws on Belgian data, the mechanisms identified are relevant to many welfare state contexts. Similar patterns may be expected in other high-income countries with comparable housing pressures and gendered divisions of labour, making these findings applicable to broader discussions on the social determinants of mental health.

These findings highlight that the mental health impact of separation is shaped by housing markets, welfare systems, and gendered labour divisions, not solely by individual resilience. Policies should expand affordable housing, ensure income support during life course transitions, and promote gender

equity in work and caregiving. At separation, priority should be given to stable housing access, especially for women leaving difficult partnerships, through measures such as emergency accommodation or rental assistance. Longer-term support for single mothers and recently separated women, including financial aid, employment programs, and mental health services, is essential to reduce the economic and psychological toll of union dissolution.

Finally, our findings echo broader concerns about men's mental health underdetection. Despite lower antidepressant use, men are at elevated risk of suicide post-separation. Public health strategies must address gendered barriers to care by promoting open dialogue and improving men's access to mental health support, particularly during life transitions.

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Appendix

Table A-1. Random-effect logit regression on the risk of consuming at least 90DDD of antidepressants over a year for men and women, expressed in Odds Ratio.

	Men		Women	
	Model 1	Model 2	Model 1	Model 2
N	49,930	49,930	52,786	52,786
Separation period				
2 years and more before separation	1.00	1.00	1.00	1.00
1 year before separation (t-1)	1.63 [1.52-1.75]	1.63 [1.52-1.75]	1.58 [1.51-1.68]	1.58 [1.51-1.68]
Year of separation (t)	1.80 [1.67-1.95]	1.80 [1.65-1.95]	1.84 [1.73-1.95]	1.82 [1.71-1.93]
1 year after separation (t+1)	1.13 [1.04-1.22]	1.13 [1.03-1.22]	1.46 [1.38-1.55]	1.45 [1.37-1.54]
2 years and more after separation	0.99 [0.92-1.06]	0.99 [0.93-1.76]	1.22 [1.16-1.30]	1.21 [1.14-1.29]
Residential move at t		1.01 [0.94-1.08]		1.02 [0.98-1.08]
Age	1.06 [1.05-1.06]	1.06 [1.05-1.06]	1.09 [1.09-1.10]	1.09 [1.09-1.10]
Increased reimbursement	1.43 [1.34-1.52]	1.43 [1.34-1.52]	1.30 [1.23-1.35]	1.30 [1.23-1.35]
Parent of resident children	0.96 [0.90-1.02]	0.96 [0.90-1.02]	1.04 [1.00-1.08]	1.04 [1.00-1.08]
Married or in non-marital relationship	0.89 [0.86-0.92]	0.89 [0.86-0.92]	0.92 [0.90-0.95]	0.92 [0.90-0.95]
Region (ref. Flanders)				
Brussels	0.86 [0.74-0.98]	0.86 [0.74-0.98]	0.68 [0.61-0.77]	0.68 [0.61-0.77]
Wallonia	1.72 [1.58-1.86]	1.72 [1.58-1.86]	2.10 [1.97-2.25]	2.10 [1.97-2.25]
Incapacity	3.25 [2.97-3.53]	3.25 [2.97-3.53]	2.86 [2.69-3.03]	2.86 [2.69-3.03]
Unemployment	1.03 [1.90-1.15]	1.03 [1.90-1.15]	1.01 [0.90-1.14]	1.01 [0.90-1.14]
Consumption of the partner	1.01 [1.01-1.01]	1.01 [1.01-1.01]	1.00 [1.00-1.01]	1.00 [1.00-1.01]
Change of prescriber	4.81	4.81	2.80	2.80

	[4.62-5.00]	[4.62-5.00]	[2.72-2.89]	[2.72-2.89]
Intercept	-8.59	-8.59	-8.95	-8.95

Note: N=33,101 (297,909 person-years); and 34,947 women (314,523 person-years), who separated during the observation period of 9 years.

Control for age, region of residence, increased reimbursement, parent of resident children (vs. childless or parent of non-resident children), in a married or non-married relation (vs. living without a partner), work incapacity, unemployment, antidepressant consumption of the partner, change of antidepressant prescriber.

Source: Belgian socialist health insurance fund.

Table A-2. Random-effect logit regression on the risk of consuming at least 90DDD of antidepressants over a year for men and women, expressed in Odds Ratio.

	Men			Women		
	OR	CI 95%		OR	CI95%	
Timing of the separation x Mobility at the moment of the separation (ref. 2 years+ before separation x No move)						
1 year before separation x No move	2.05	1.82	2.30	2.14	1.95	2.33
Year of separation x No move	2.77	2.43	3.16	2.86	2.59	3.17
Year after separation x No move	1.78	1.56	2.03	2.37	2.15	2.62
2 years+ after separation x No move	1.77	1.57	1.98	2.59	2.37	2.83
2 years+ before separation x Move	1.11	0.94	1.31	1.35	1.18	1.53
1 year before separation x Move	2.51	2.10	3.01	2.84	2.46	3.28
Year of separation x Move	2.52	2.07	3.08	2.88	2.46	3.37
Year after separation x Move	1.71	1.42	2.06	2.55	2.21	2.94
2 years+ after separation x Move	2.06	1.78	2.39	2.68	2.39	3.01
Age						
	1.03	1.03	1.04	1.05	1.05	1.06
Preferential fees (ref. No)	1.42	1.30	1.55	1.26	1.19	1.33
Have children	0.99	0.92	1.07	1.12	1.06	1.17
Couple status (ref. Unpartnered)						
Marital union	0.88	0.79	0.98	0.84	0.77	0.90
Non-marital union	0.80	0.73	0.88	0.85	0.79	0.91
Region of residence (ref. Flanders)						
Brussels	0.73	0.63	0.86	0.75	0.66	0.86
Wallonia	1.46	1.34	1.60	1.60	1.49	1.72
Temporary work incapacity						
	3.23	2.91	3.59	2.96	2.75	3.19
Long-term work incapacity	6.82	6.20	7.49	5.61	5.24	6.01
Temporary unemployment	0.89	0.79	1.01	0.97	0.88	1.05
Long-term unemployment	0.99	0.86	1.14	0.95	0.86	1.05
Partner's antidepressants consumption	1.00	1.00	1.00	1.00	1.00	1.00
Change of prescriber	9.62	9.12	10.15	5.05	4.86	5.24

Distance of the move (ref. No move)

Under 16 km	1.07	0.96	1.18	1.07	0.99	1.15
16km and more	1.00	0.88	1.14	0.95	0.85	1.06
Constant	0.00	0.00	0.00	0.00	0.00	0.00
Panel-level variance component	1.77	1.72	1.82	1.89	1.85	1.92
Standard deviation	2.43	2.37	2.49	2.57	2.52	2.61
Proportion of the total variance contributed by the panel-level variance component	0.64	0.63	0.65	0.67	0.66	0.67

Table A-3. Predicted probabilities (PP) of consuming at least 90DDD of antidepressants over a year for men and women, according to whether men and women moved during the separation year or not. Moving status is attributed to the whole period (before and after the separation/mobility).

Men						
	No move			Move		
	PP	IC95%		PP	IC95%	
2 years+ before separation	0.027	0.025	0.028	0.028	0.026	0.031
Year before separation	0.042	0.039	0.045	0.048	0.043	0.052
Year of separation	0.050	0.048	0.053	0.048	0.043	0.052
Year after separation	0.038	0.036	0.041	0.038	0.034	0.041
2 years+ after separation	0.038	0.037	0.040	0.042	0.040	0.045
Women						
	No move			Move		
	PP	IC95%		PP	IC95%	
2 years+ before separation	0.051	0.048	0.053	0.060	0.056	0.065
Year before separation	0.078	0.074	0.082	0.091	0.085	0.098
Year of separation	0.092	0.088	0.095	0.092	0.086	0.098
Year after separation	0.083	0.080	0.086	0.086	0.081	0.091
2 years+ after separation	0.087	0.085	0.089	0.088	0.085	0.092

Table A-4. Random-effect logit regression on the risk of consuming at least 90DDD of antidepressants over a year for men and women, expressed in Odds Ratio.

Over a year for men and women, expressed in Odds Ratio.						
	Men			Women		
	OR	CI 95%		OR	CI95%	
Timing of the separation x Mobility at the moment of the separation (ref. 2 years+ before separation x No move)						
1 year before separation x No move	2.11	1.91	2.33	2.15	1.99	2.31
Year of separation x No move	2.76	2.46	3.09	2.90	2.66	3.17
Year after separation x No move	1.77	1.58	1.99	2.39	2.19	2.61
2 years+ after separation x No move	1.75	1.58	1.93	2.59	2.40	2.79
Year of separation x Move	2.38	2.00	2.83	2.54	2.22	2.91
Year after separation x Move	1.62	1.38	1.90	2.27	2.02	2.55
2 years+ after separation x Move	1.96	1.74	2.22	2.42	2.21	2.65

Age	1.03	1.03	1.04	1.05	1.05	1.06
Preferential fees (ref. No)	1.42	1.30	1.55	1.26	1.19	1.34
Have children	0.99	0.92	1.07	1.10	1.05	1.15
Couple	0.90	0.85	0.94	0.93	0.90	0.96
Region of residence (ref. Flanders)						
Brussels	0.74	0.63	0.86	0.75	0.66	0.85
Wallonia	1.46	1.34	1.60	1.60	1.49	1.73
Temporary work incapacity	3.23	2.91	3.59	2.96	2.74	3.19
Long-term work incapacity	6.82	6.20	7.49	5.60	5.23	6.00
Temporary unemployment	0.89	0.79	1.01	0.97	0.89	1.06
Long-term unemployment	0.99	0.86	1.14	0.95	0.86	1.05
Partner's antidepressants consumption	1.00	1.00	1.00	1.00	1.00	1.00
Change of prescriber	9.62	9.12	10.15	5.05	4.86	5.24
Distance of the move (ref. No move)						
Under 16 km	1.07	0.97	1.18	1.07	0.99	1.15
16km and more	1.00	0.88	1.14	0.95	0.85	1.06
Constant	0.00	0.00	0.00	0.00	0.00	0.00
Panel-level variance component	1.77	1.72	1.82	1.89	1.85	1.92
Standard deviation	2.43	2.37	2.49	2.57	2.52	2.61
Proportion of the total variance contributed by the panel-level variance component	0.64	0.63	0.65	0.67	0.66	0.67

Table A-5. Predicted probabilities (PP) of consuming at least 90DDD of antidepressants over a year for men and women, according to whether men and women moved during the separation year or not. Moving status is attributed from the year of separation.

Men						
	No move			Move		
	PP	IC95%		PP	IC95%	
2 years+ before separation	0.027	0.025	0.028	0.027	0.025	0.028
Year before separation	0.043	0.041	0.046	0.043	0.041	0.046
Year of separation	0.051	0.048	0.054	0.047	0.042	0.051
Year after separation	0.039	0.037	0.041	0.037	0.033	0.040
2 years+ after separation	0.039	0.037	0.040	0.041	0.039	0.044
Women						
	No move			Move		
	PP	IC95%		PP	IC95%	
2 years+ before separation	0.052	0.050	0.054	0.052	0.050	0.054
Year before separation	0.080	0.077	0.084	0.080	0.077	0.084
Year of separation	0.094	0.091	0.098	0.088	0.082	0.094
Year after separation	0.085	0.082	0.088	0.083	0.078	0.088
2 years+ after separation	0.089	0.087	0.091	0.086	0.083	0.089

Table A-6. Random-effect logit regression on the risk of consuming at least 90DDD of antidepressants over a year for men and women, expressed in Odds Ratio.

	Men			Women		
	OR	CI 95%		OR	CI95%	
Timing of the separation x Mobility at the moment of the separation (ref. 2 years+ before separation)						
1 year before separation	2.16	1.90	2.47	2.31	2.09	2.56
Year of separation x No move x Single	2.99	2.47	3.61	3.79	3.28	4.38
Year after separation x No move x Single	2.02	1.66	2.45	3.32	2.87	3.84
2 years+ after separation x No move x Single	2.19	1.83	2.62	3.78	3.30	4.33
Year of separation x Move x Single	2.47	1.92	3.19	3.06	2.52	3.72
Year after separation x Move x Single	1.72	1.35	2.19	3.11	2.60	3.72
2 years+ after separation x Move x Single	2.65	2.17	3.23	3.39	2.92	3.95
Year of separation x No move x Repartner	2.50	1.42	4.40	3.18	2.02	5.02
Year after separation x No move x Repartner	1.41	1.03	1.92	2.29	1.82	2.88
2 years+ after separation x No move x Repartner	2.31	1.99	2.68	3.44	3.06	3.86
Year of separation x Move x Repartner	2.76	1.56	4.90	1.81	1.05	3.10
Year after separation x Move x Repartner	2.16	1.47	3.18	2.13	1.56	2.89
2 years+ after separation x Move x Repartner	2.63	2.18	3.17	2.97	2.56	3.46
Age	1.03	1.02	1.03	1.05	1.04	1.05
Preferential fees (ref. No)	1.39	1.26	1.54	1.23	1.15	1.31
Have children	0.98	0.90	1.07	1.11	1.05	1.18
Couple	0.90	0.81	0.99	0.99	0.91	1.07
Region of residence (ref. Flanders)						
Brussels	0.71	0.60	0.83	0.77	0.67	0.88
Wallonia	1.44	1.31	1.58	1.54	1.42	1.68
Temporary work incapacity	3.01	2.67	3.39	2.98	2.73	3.26
Long-term work incapacity	6.63	5.96	7.39	5.63	5.19	6.10
Temporary unemployment	0.85	0.74	0.98	0.99	0.89	1.10
Long-term unemployment	0.97	0.82	1.14	0.89	0.79	1.00
Partner's antidepressants consumption	1.00	1.00	1.00	1.00	1.00	1.00
Change of prescriber	12.99	12.21	13.83	6.70	6.40	7.01
Distance of the move (ref. No move)						
Under 16 km	1.04	0.93	1.17	1.08	0.99	1.18
16km and more	1.06	0.91	1.23	0.96	0.85	1.09
Constant	0.00	0.00	0.00	0.00	0.00	0.00
Panel-level variance component	1.63	1.58	1.69	1.77	1.73	1.81
Standard deviation	2.26	2.20	2.32	2.42	2.37	2.47
Proportion of the total variance contributed by the panel-level variance component	0.61	0.59	0.62	0.64	0.63	0.65

Table A-7. Predicted probabilities (PP) of consuming at least 90DDD of antidepressants over a year for men and women, according to whether men and women moved during the separation year or not, and their partnership status (single or repartnered).

	Men											
	No move - Single			Move - Single			No move - Repartner			Move - Repartner		
	PP	IC95%		PP	IC95%		PP	IC95%		PP	IC95%	
2 years+ before separation	0.019	0.017	0.020	0.019	0.017	0.020	0.019	0.017	0.020	0.019	0.017	0.020
Year before separation	0.032	0.029	0.034	0.032	0.029	0.034	0.032	0.029	0.034	0.032	0.029	0.034
Year of separation	0.039	0.036	0.042	0.034	0.030	0.039	0.035	0.022	0.048	0.037	0.023	0.051
Year after separation	0.030	0.028	0.032	0.027	0.024	0.031	0.024	0.018	0.029	0.031	0.023	0.040
2 years+ after separation	0.032	0.030	0.034	0.036	0.033	0.039	0.033	0.030	0.036	0.036	0.031	0.040
	Women											
	No move - Single			Move - Single			No move - Repartner			Move - Repartner		
	PP	IC95%		PP	IC95%		PP	IC95%		PP	IC95%	
2 years+ before separation	0.033	0.031	0.035	0.033	0.031	0.035	0.033	0.031	0.035	0.033	0.031	0.035
Year before separation	0.056	0.052	0.060	0.056	0.052	0.060	0.056	0.052	0.060	0.056	0.052	0.060
Year of separation	0.075	0.071	0.079	0.066	0.060	0.072	0.068	0.049	0.086	0.048	0.032	0.064
Year after separation	0.069	0.065	0.073	0.067	0.061	0.072	0.056	0.048	0.064	0.053	0.043	0.063
2 years+ after separation	0.075	0.072	0.077	0.070	0.066	0.074	0.071	0.066	0.076	0.065	0.059	0.071

Robustness checks

OLS models

Figure A1. Predicted margins of antidepressant intake (based on OLS regression models) according to the mobility status of the individual at the moment of the separation (t). The mobility status during the year of separation (t) is attributed from this separation year (not before). Source: Belgian socialist health insurance fund.

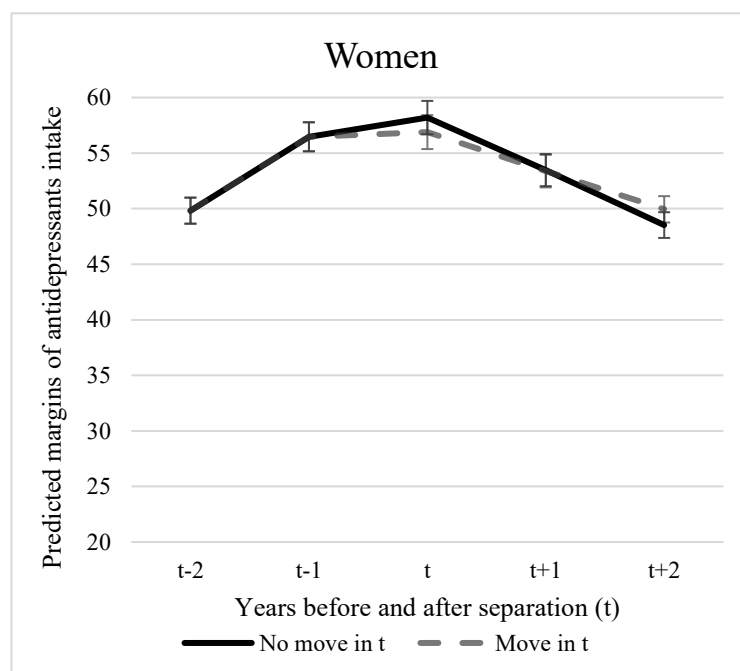
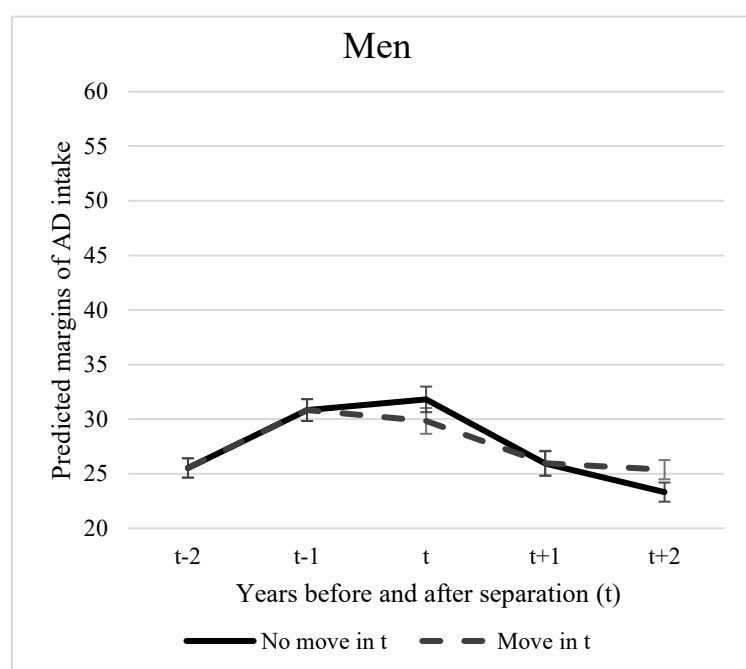
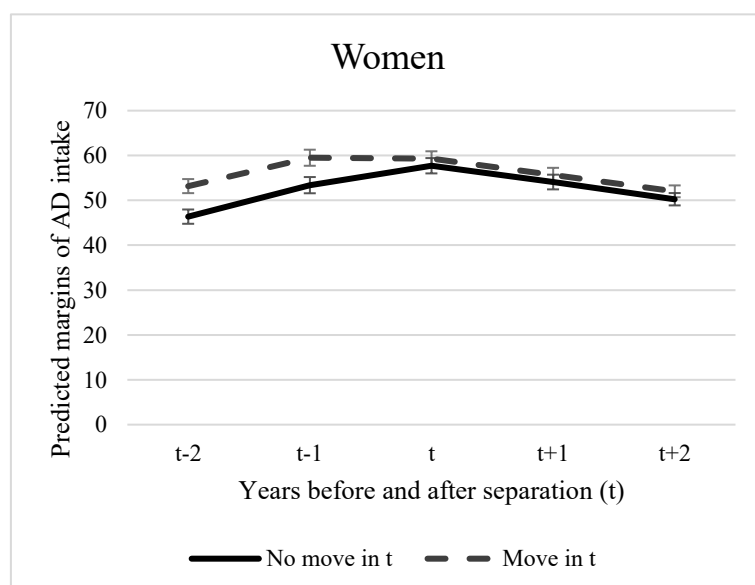


Figure A2. Predicted margins of antidepressant intake (based on OLS regression models) according to the mobility status of the individual at the moment of the separation (t). The mobility status during the year of separation (t) is attributed to the whole period (before and after the mobility). Source: Belgian socialist health insurance fund.



Model controls for age, region of residence, increased reimbursement (proxy of low socioeconomic status), parenthood, couple configuration, work incapacity, unemployment, antidepressant consumption of the partner, change of antidepressant prescriber.

N= 33,101 and 34,947 women observed for 9 years

Source: Belgian socialist health insurance fund.

Poisson models

Figure A3 - Predicted incidence rates of depression (based on Poisson regression models) according to the mobility status of the individual at the moment of the separation (t). The mobility status during the year of separation (t) is attributed from this separation year (not before). Source: Belgian socialist health insurance fund.

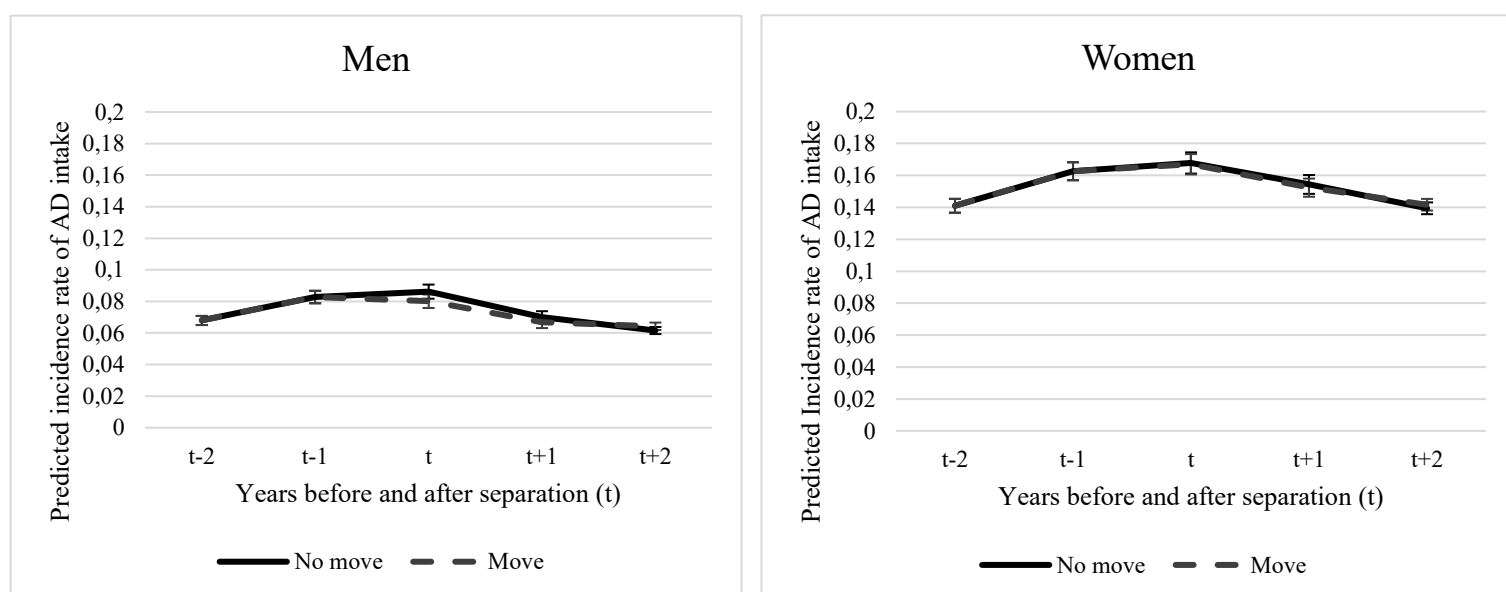
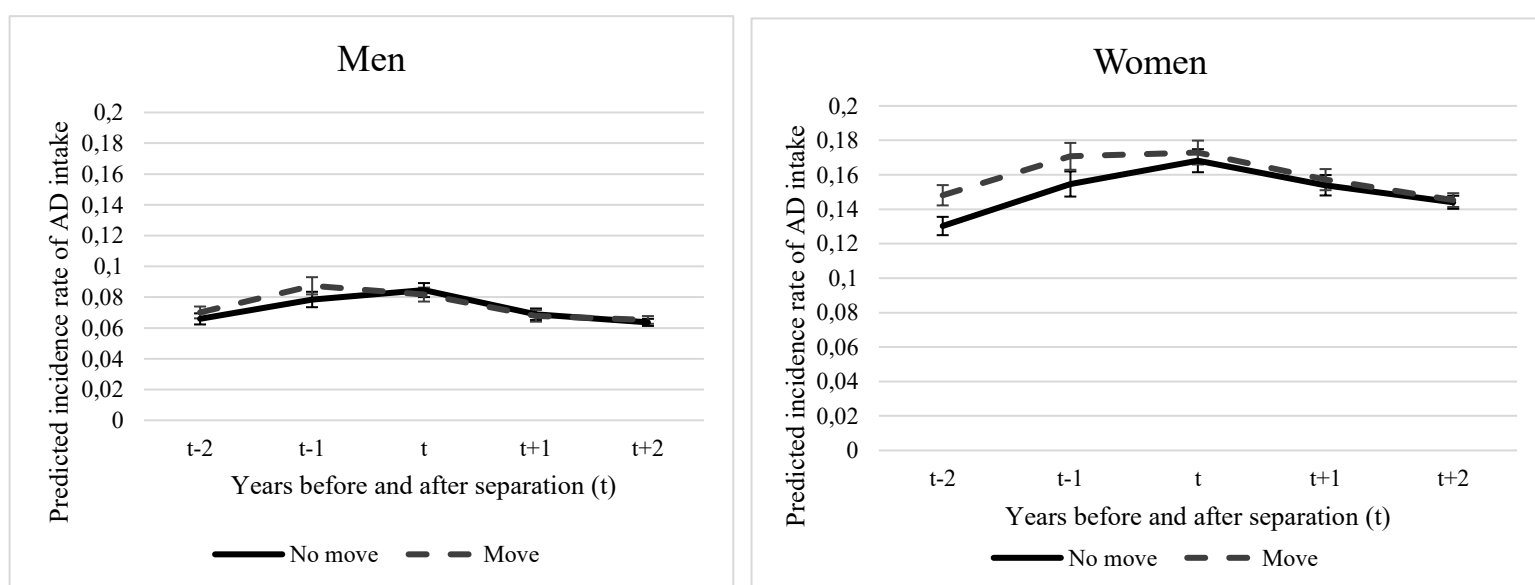


Figure A4 - Predicted incidence rates of depression (based on Poisson regression models) according to the mobility status of the individual at the moment of the separation (t). The mobility status during the year of separation (t) is attributed during the whole period (before and after the



mobility). Source: Belgian socialist health insurance fund.

Model controls for age, region of residence, increased reimbursement (proxy of low socioeconomic status), parenthood, couple configuration, work incapacity, unemployment, antidepressant consumption of the partner, change of antidepressant prescriber.

N= 33,101 and 34,947 women observed for 9 years

Source: Belgian socialist health insurance fund.

No consumption at the beginning of observation (in 2008)

Figure A5 – Predicted probabilities of a yearly antidepressants intake of at least 90DDD, of men and women who did not consume any antidepressants in 2008 (at the beginning of the observation period), according to their mobility status at the moment of their separation. The moving status is attributed from the moment of the mobility.

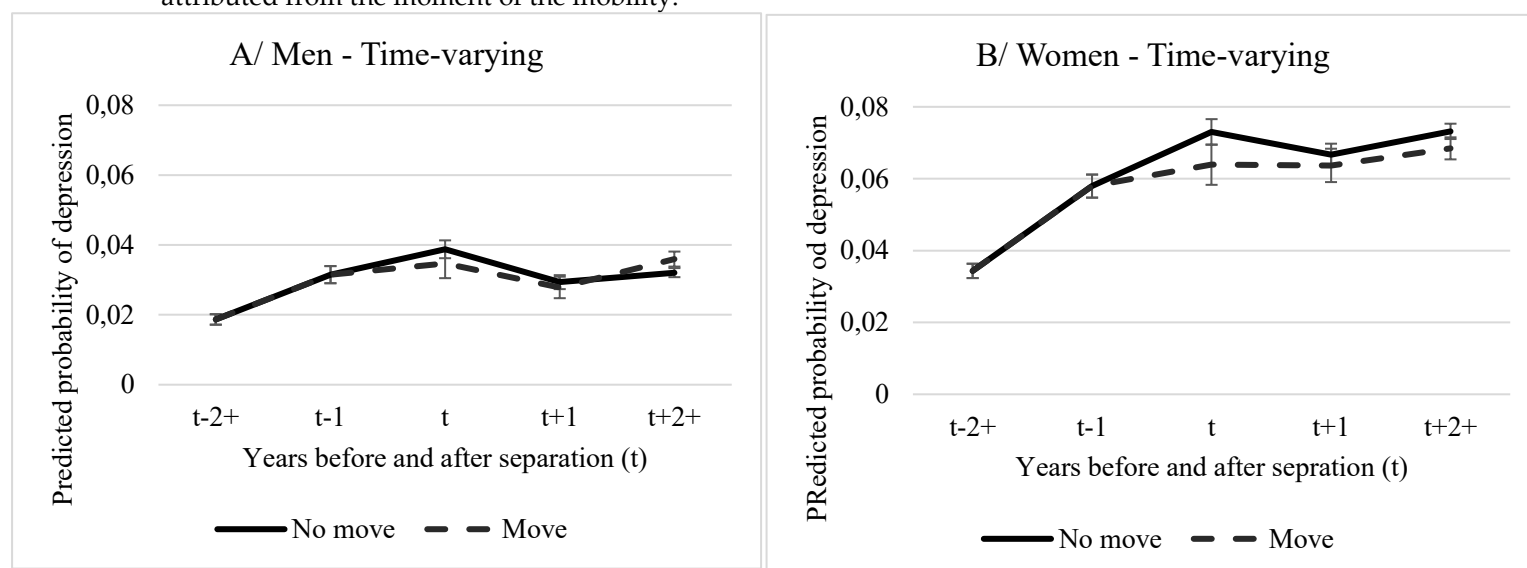
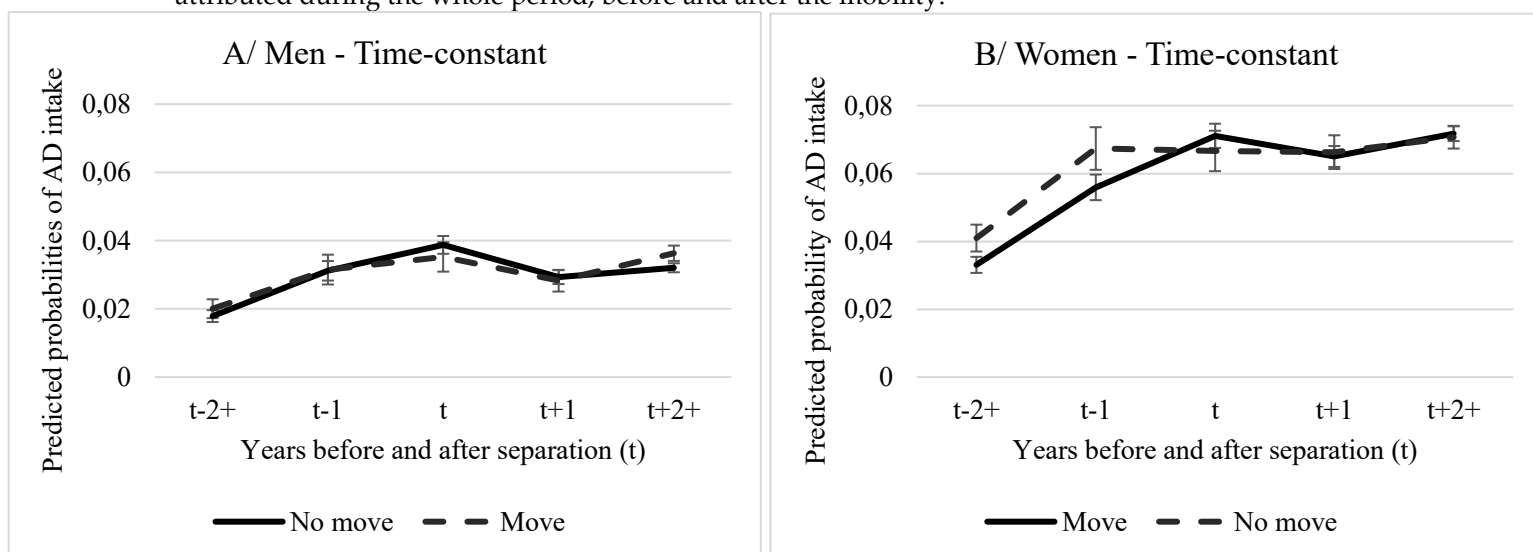


Figure A6. Predicted probabilities of a yearly antidepressants intake of at least 90DDD, of men and women who did not consume any antidepressants in 2008 (at the beginning of the observation period), according to their mobility status at the moment of their separation. The moving status is attributed during the whole period, before and after the mobility.



Model controls for age, region of residence, increased reimbursement (proxy of low socioeconomic status), parenthood, couple configuration, work incapacity, unemployment, antidepressant consumption of the partner, change of antidepressant prescriber.

N(men)=38,199 observed for 9 years (343,791 person-years).

N(women)=40,161 observed for 9 years (361,449 person-years).

Source: Belgian socialist health insurance fund.

Additional material

Table A1. Characteristics of the sample population (adults aged 20 to 54 in 2009 and in a relationship in 2009 who will separate in the period 2009-2018), the socialist health insurance (SHI) fund population (all adults aged 20 to 54 in 2009 affiliated to the socialist health insurance fund in 2009) and the Belgian registered population (all adults aged 20 to 54 who are present in the National Register (NR) in 2009). Source for the Belgian population: Statistics Belgium and INAMI (National Institute for Health and Invalidity Insurances) for the increased reimbursement.

		Men			Women		
		Sample	SHI population	NR	Sample	SHI population	NR
Region							
	Flanders	43.10%	45.82%	47.37%	43.07%	44.74%	48.85%
	Brussels	9.15%	12.56%	12.00%	9.19%	12.42%	9.33%
	Wallonia	47.75%	41.62%	40.63%	47.75%	42.84%	41.82%
Couple							
	No		59.10%	46.80%		56.18%	40.72%
	Married	55.41%	29.53%	41.97%	56.90%	32.66%	47.12%
	Unmarried	44.59%	11.37%	11.23%	43.10%	11.17%	12.16%
Parenthood							
	No	35.56%	66.98%	57.53%	29.74%	54.95%	48.8%
	Yes	64.44%	33.02%	42.47%	70.26%	45.05%	51.2%
Age							
	20-24	4.37%	12.73%	12.65%	7.40%	12.94%	12.66%
	25-29	12.61%	13.78%	13.14%	16.97%	14.24%	13.38%
	30-34	19.23%	14.16%	13.41%	19.51%	13.86%	13.44%
	35-39	22.18%	15.38%	14.50%	20.18%	14.74%	14.39%
	40-44	20.36%	15.51%	15.43%	16.77%	14.86%	15.20%
	45-49	15.37%	14.65%	15.98%	11.70%	14.97%	15.90%
	50-54	5.89%	13.79%	14.89%	7.46%	14.39%	15.03%
Increased reimbursement							
	No	90.02%	88.81%	87.23%	88.41%	85.33%	84.70%
	Yes	9.98%	11.19%	12.77% ^a	11.59%	14.67%	15.30% ^a
Work incapacity							
	No	98.54%	98.81%		98.00%	98.43%	
	Yes	1.46%	1.19%		2.00%	1.57%	
Unemployment (job seeker for more than half a year)							
	No	87.31%	83.73%		95.63%	82.61%	
	Yes	12.69%	16.27%		4.37%	17.39%	

^a Source: Institut national d'assurance maladie-invalidité (INAMI); number on December, 31st 2016.

Please note that the rate of increased reimbursement has risen by 25% between 2009 and 2017 in the general population (78). The numbers are therefore given more for information than for comparison. In terms of region, the Walloon are slightly overrepresented in the socialist health insurance fund, compared to the Belgian population. The Flemish are underrepresented. However, the sample is particularly present in Wallonia compared to other regions.

In terms of couple configuration, the socialist health insurance fund population is more often single than the general population. In terms of marital status, married individuals are underrepresented among the socialist health insurance fund population compared to the Belgian population.

Compared to the National Register, the socialist health insurance fund adults have a lower chance to live with children, especially men. The sample shows a way higher chance to live with children. This was expected as we selected only couples.

In terms of age, the similarities between the socialist health insurance fund population and the Belgian population are high. The sample is concentrated on middle-aged adults (aged 30 to 44), with a lower representation of the younger and especially older adults.

The sample shows a lower risk of having an increased reimbursement compared to the overall socialist health insurance fund population, especially for women. This difference seems to be age-related: the proportion of having an increased reimbursement are higher among the older age categories (78).

The risk of work incapacity is rather comparable between the sample and the socialist health insurance fund population.

The unemployment risk is slightly higher for the sample population than for the socialist health insurance fund population. Job difficulties and transitions can lead to conflicts within the household, as well as financial problems triggering a separation.