

Mental Health Consequences of Migrant Fathers' Parental Leave Use: A Swedish Policy Analysis

Helena Honkaniemi, Srinivasa Vittal Katikireddi, Mikael Rostila, Sol Pía Juárez

INTRODUCTION

The Swedish parental leave system has long sought to promote the gender-equitable sharing of work and family responsibilities (1), a goal which has been accompanied by various health benefits. While mothers' parental leave uptake is found to reduce the risk of depression (2, 3) and promote positive breastfeeding behaviors and preventive healthcare service use (4), fathers' uptake appears to protect against all-cause mortality, potentially through the adoption of more child-friendly (i.e., health-promoting) behaviors (5). However, given the strong work requirement for full parental leave benefits, it remains to be seen whether these health effects extend to populations with weak labor attachment, including migrants. The following study will thus assess changes to Swedish family policy to illustrate the potential mental health benefits of migrant participation in the parental leave system.

The Swedish parental leave system

In Sweden, parents are each eligible to 240 days of paid, job-protected leave per child. Of these days, 195 are reimbursed at 77.6% of earnings up to a certain ceiling, with the remaining paid at a flat rate. Parents that do not fulfill the work requirement for earnings-related benefits (i.e., lack an adequate income in the eight months prior to childbirth) receive a low flat-rate benefit for the full leave period (6).

Fathers have been eligible to participate in the Swedish parental leave system since 1974, when parental leave days were equally allocated to each parent. However, given that these days could be transferred freely from one parent to another, the vast majority were claimed by mothers, contributing to a so-called "double burden" of caretaking and employment (7). In 1995, Swedish policymakers responded by introducing the "Daddy quota", which reserved 30 days of the existing paid parental leave for the father, to be forfeited completely if left unused. The goal was to encourage more equal sharing of parental leave days and work-family responsibilities between parents. Indeed, the reform successfully promoted fathers' leave uptake, resulting in the quota being expanded to two and three months in 2002 and 2016, respectively (6). However, to this day the greatest improvements in fathers' leave use appear to have been confined to the first reform (8).

Parental leave use among migrants

All Swedish residents qualify for parental leave, regardless of their citizenship (9), yet migrants – especially migrant fathers – are much less likely to use parental leave than their Swedish counterparts (9, 10). These differences in leave use can be interpreted as an indicator of migrant integration, reflecting various systemic disadvantages among migrants, including a lack of knowledge of the parental leave system and its benefits, and contradicting cultural and gender norms with regards to fathers' leave use (11). Furthermore, migrants are more likely to receive flat-rate benefits than Swedish natives (6), a reflection of their weaker labor market attachment and socioeconomic disadvantages. Migrants' parental leave use can thus be indicative of integration in both work and family domains (12). Indeed, as with many other integration

factors, both migrant fathers and mothers have been found to increase their use of parental leave days with duration of residence, converging to native patterns with longer time in Sweden (9, 10).

Study motivation and aim

To date, there is little to no evidence on the health consequences of migrants' parental leave use. Furthermore, quasi-experimental studies investigating the effects of explicit welfare policies on migrant health are lacking (13). Only one study has examined the influence of parental leave policy on both mothers' and fathers' health (14), but overlooked one of the earliest parental leave reforms, the "Daddy quota", and failed to account for heterogeneity in outcomes by nativity.

Based on these knowledge gaps, the aim of this study will be to capture the role of parental leave policy, conceptualized here as an indicator of both welfare and migrant integration, on migrants' health. The study will apply a quasi-experimental design to illustrate how changes in migrant fathers' uptake of parental leave influence the psychiatric health of migrant fathers and mothers alike. As a policy instrument, the "Daddy quota" reform's abrupt implementation on January 1st, 1995 provides a unique source of exogenous variation to study these health effects, reducing the possibility of bias from other integration factors. We will focus on this first reform as it had the strongest impact on fathers' uptake of parental leave. We hypothesize that by increasing parental leave use among migrant fathers, the reform will improve psychological outcomes for both parents. We also expect to see increased effects with longer residence and stronger labor market attachment corresponding to more advanced stages of integration.

DATA

Data source

General population data will be drawn from linked registers including the Swedish Total Population Register and Longitudinal Integration Database for Health Insurance and Labor Market Studies (TPR and LISA, respectively; both 1990-2015), which provide annual information on parental socioeconomic characteristics (e.g., education, income), migrant characteristics (e.g., region of origin, year of migration), and social insurance benefits (e.g., unemployment, sick leave, parental leave benefits); the Medical Birth Register (MBR; 1973-2015), which covers data on maternal and infant health during pregnancy and at birth; and the Hospital Discharge Register (HDR; 1986-2015), which includes information on inpatient hospitalizations and diagnoses.

Study population

All first-time foreign-born mothers and fathers with singleton children born in Sweden in the two years before (1993-94) and after (1995-96) the reform date (January 1st, 1995) will be included. We will exclude same-sex couples as our interest is in biological birth effects in the context of fathers' leave use. Multiple births (twins, triplets, etc.) will be excluded as each child would increase the length of parental leave beyond the standard and could thus confound the health effects observed in our analysis. We will focus on common first-order children, so as to

avoid confusion regarding combined use of parental leave for multiple children (10). Fathers or children that emigrated or died in the follow-up period will be censored.

Exposure

Fathers', mothers', and children' records will be linked via the TPR. The primary exposure of interest is the birthdate of the first-born child, as a proxy of fathers' eligibility for the "Daddy quota". Using the MBR, we will identify singleton births with no complications at childbirth to limit the potential for confounding on the parents' health outcomes.

Outcome

Based on the availability of data from 1993-96, mothers' and fathers' inpatient hospitalizations and linked diagnostic codes (International Classification of Diseases, 9th Revision; ICD-9) will be drawn from the HDR. The diagnostic outcomes of interest include mental and behavioral disorders (ICD-9 Codes 290-319). Given that most fathers take out their leave in the first two years of the child's life (15), we will observe these diagnoses in the six, twelve, and twenty-four months after birth.

METHODS

Natural experiments utilize sources of exogenous variation to isolate causal effects (16). One approach to capturing these effects is the interrupted time series (ITS) (17). By modeling observations over a specified time period interrupted by an intervention, we can attribute potential changes in our outcome of interest to that intervention.

We will apply a segmented Poisson regression to model the trajectory of parents' psychiatric hospitalizations, measured as event counts, for children born in the two years prior to and after the implementation of the "Daddy quota". We expect there to be a step-wise change in the outcome following the intervention – in other words, given the instant implementation of the reform, we believe that the rate of psychiatric hospitalizations will immediately fall for parents of children born after the reform. The size of this change will be captured by a regression coefficient, providing evidence for a health effect of fathers' parental leave use. In addition, based on previous evidence on the seasonality of postpartum depression (18), we expect to observe variations in psychiatric hospitalizations for parents of children born in different times of year. These patterns will be confirmed through a preliminary exploration of the data, and will be additionally accounted for by controlling for birth month (19).

To confirm the robustness of these models, we will plot residuals and check for autocorrelation in our observations (17, 19). We will additionally explore the heterogeneity of our findings across migrant groups, conducting sub-group analyses stratified by fathers' region of origin and duration of stay in Sweden, as well as both parents' labor market attachment. We hypothesize that migrants arriving for labor purposes (as proxied by region of origin), with longer residence in Sweden, and in dual-earner households would experience the greatest improvement in psychiatric outcomes given their higher likelihood of using parental leave, whereas recently arrived migrants from single-earner households would experience smaller health effects.

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