# Mandatory Daycare for 1-Year Olds: Alleviating Barriers to Integration of Female Refugees and Their Children?

Linea Hasager and Mette Foged

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#### 1 Motivation

Many countries have seen large influxes of refugees in recent years, and these immigrants seem hard to integrate in European countries. Several measures have been taken to improve the labor market integration of refugees. Nevertheless, refugees generally perform less well in the labor market of their host countries compared to other immigrants and natives. Especially, female refugees are lacking behind.<sup>1</sup>

Multiple policy measures have been introduced to increase assimilation of this group, but many have proven ineffective. Noticeably, providing economic incentives by reducing welfare benefits does not seem to enhance female employment prospects.<sup>2</sup> Recent initiatives that intensified the regular employment support to immigrants also seem less effective for female immigrants compared to their male counterparts.<sup>3</sup> It is therefore of utmost importance to study potential barriers to female integration and how such barriers can be alleviated. Hence, the question of how to improve the integration of female refugees and the effectiveness of early childhood interventions for the particularly vulnerable group of refugee children remain highly relevant to policy-makers internationally.

The main objective of this project is to determine how mandatory daycare for young children affects refugee mothers' economic and social integration such as employment probabilities, earnings, performance in Danish language training and enrollment in formal education. Furthermore, the project aims to study the impact on children's acquisition of language skills when they are exposed to Danish daycare.<sup>4</sup> To study this we will make use of Danish registry data on enrollment in daycare, monthly labor market outcomes and weekly welfare dependency matched to data on adult language course performance.

### 2 Literature and Background

Brell, Dustmann, and Preston (2020) show that the ratio of female to male employment is particularly low for refugees in high-income host countries. This pattern is most dramatic in the immediate years after immigration, but the difference persists even after a decade. One potential explanation behind this observed pattern is that women are delaying fertility upon fleeing insecure and uncertain conditions in their home countries, but post immigration birth rates increase dramatically (above the level of native women), see Nordic Labour Journal (2018).<sup>5</sup> This puts female refugees at disadvantage in terms of reaping the benefits of early language and employment support provided in some refugee-receiving countries. Moreover, high fertility rates may directly decrease female labor force participation, especially if women do not make use of the daycare options offered to young children. A vast literature studies the relationship between maternal labor supply and the availability of childcare. See Gelbach (2002), Baker, Gruber, and Milligan (2008), and Cascio, Haider, and Nielsen (2015) among others. However, despite the availability of extensive childcare

<sup>&</sup>lt;sup>1</sup>See Brell, Dustmann, and Preston (2020).

<sup>&</sup>lt;sup>2</sup>See e.g. Arendt (2020) or Andersen, Dustmann, and Landersø (2019) among others.

<sup>&</sup>lt;sup>3</sup>See e.g. Arendt (2019) and Joona and Nekby (2012).

<sup>&</sup>lt;sup>4</sup>Language assessment of two and three year olds awaits approval from STIL ("Styrelsen for IT og læring"). Hence, at this stage we focus on the women but we hope to be able to include measures of language proficiency of the child.

<sup>&</sup>lt;sup>5</sup>According to The World Bank (2020) the average fertility rate is higher in typical refugee-sending countries such as Syria (2.8), Afghanistan (4.5), and Somalia (6.1). Compared to 1.8 in Denmark in 2018.

options in Denmark, refugee mothers have much lower labor force participation rates than native women, and early daycare enrollment of immigrant children is below the enrollment rate of native children.

Moreover, lowering welfare benefits have proven ineffective in promoting labor market integration for refugee women, while resulting in adverse crime outcomes.<sup>6</sup> This suggests that the key to female refugee integration may be found at other margins than pure financial incentives. Arendt, Bolvig, Foged, Hasager, and Peri (2020) find that expanding the mandatory language classes for refugees did increase women's investments in language skills and did improve their earnings and employment in the long run, with gradual improvements starting from the post program years. Arendt (2019) show that requiring refugees to search more intensively does not change women's employment chance. These findings show that women gain significantly from policies that enable them to upgrade their skills, e.g. through language training and educational attainment.

Therefore, there may be substantial returns to policies encouraging immigrant families to rely more on public daycare and allow women to invest in their human capital. Moreover, the early exposure of their children to Danish language may also have consequences for the second generation.

#### 3 Contribution and Policy Relevance

The contribution of this project is to provide knowledge on a potential barrier to integration of female refugees, which have not been studied previously. Previous research has shown that these women are lacking significantly behind in terms of economic assimilation, and a range of studies have documented that providing economic incentives and employment support is not sufficient. The type of policy considered in this project may be a way to reduce the remarkably large employment and earnings gap. Thus, the project provides valuable information to policy-makers on the effectiveness of such policies in integrating women and their children. The lessons to be learned from this policy intervention not only carry relevance to a Danish audience, but also apply to other high-income host countries who experience similar difficulties with refugee integration.

#### 4 Methodology

We study the introduction of a mandatory daycare program in Denmark that mandated 25 hours of daycare per week for 1-year old children. The children were required to participate in the program until completion of a language test between age two and three.<sup>7</sup> This program thus loosened one of the possible barriers to female labor force participation in Denmark by reducing the number of hours the mothers spend looking after a child, for a period of minimum a year. The program applied to children of age 1 who were living in a disadvantaged neighborhood.<sup>8</sup> It applied to all regardless of ethnic origin, but we will focus on those of non-western origin - and specifically on the group of refugees. The definition of a disadvantaged neighborhood is determined by the Danish authorities who publish a list of these neighborhoods each year based on the following criteria:

- i. The share of residents aged 18-64 without labor market attachment or education exceeds 40 pct. 9
- ii. The share of residents convicted of violation of the criminal code, the arms' act or the law on euphoric drugs is above three times the national average. <sup>10</sup>
- iii. The share of residents aged 30-59 with only basic education is above 60 pct.
- iv. The average gross income for taxpayers aged 15-64 is less than 55 pct. of the average gross income in the region.

<sup>&</sup>lt;sup>6</sup>See Arendt (2020), Andersen, Dustmann, and Landersø (2019), and Arendt, Bolvig, Foged, Hasager, and Peri (2020).

<sup>&</sup>lt;sup>7</sup>This test was mandatory for all children at age 3 (also those not in daycare), see Danmarks Evalueringsinstitut (2007).

<sup>8</sup>The Act on amendments to the Daycare Offers Act and the Act on Child and Youth Benefits 2018 (LOV nr 1529 af 18/12/2018).

<sup>&</sup>lt;sup>9</sup>Averaged over the two most recent years.

 $<sup>^{10}</sup>$ Averaged over the two most recent years.

If a neighborhood meets at least two of the four criteria, it is considered a disadvantaged area. The number of neighborhoods on the list varies over time as the composition of residents in the area changes, which makes it difficult for individual residents to perfectly forecast whether their neighborhood will be on this list or not prior to publication of the annual list.<sup>11</sup>

The identification of the causal impact for refugee women of sending their young children to daycare relies on the classification of these neighborhoods. The classification rules allow us to compare women living in areas which were on the margin of being included in the list with areas that barely satisfy two of these criteria. Specifically, we can compare two neighborhoods which are identical in terms of criteria i)-iii), but differ on criterion iv). Then average gross income in the neighborhood will determine whether residents are subject to mandatory daycare or not. This can be exploited in a Regression Discontinuity Design (RDD) using average gross income as a running variable assigning subjects to treatment. Since multiple criteria determine treatment assignment, we can exploit multiple cutoffs in the RDD.<sup>12</sup>

This approach addresses potential concerns of endogeneity such as self-selection of women with unfavorable employment opportunities into certain neighborhoods as well as positive selection in the use of daycare.

## 5 Project Participants

Mette Foged, Assistant Professor, University of Copenhagen. Linea Hasager, Ph.D. Student, University of Copenhagen.

Mette Foged is specialized within Immigration Economics and she is one of Denmark's leading experts on immigration and refugee integration. She is the PI of the Economic Assimilation Research Network (EARN), a 5-year research project dedicated to evaluating integration efforts targeted towards refugees in Denmark.

Linea Hasager is a third-year Ph.D. student currently working closely with Mette on joint projects within EARN using Danish administrative data. As a part of the Ph.D. dissertation, she is also working on a project on female refugee integration relating their type of residence permit to economic and social integration as well as a project on neighborhood effects on refugees' health. Her thesis is supervised by Assistant Professor Mette Foged and Professor Jacob Roland Munch.

<sup>&</sup>lt;sup>11</sup>As of December 2018, 43 neighborhoods with roughly 87,000 inhabitants were classified as a disadvantaged neighborhood by the Danish Ministry of Transport and Housing (Ministry of Transport and Housing (2018)). Earlier work shows that refugees often cluster in these types of areas.

<sup>&</sup>lt;sup>12</sup>An alternative approach is to use a RDD in children's birth date, since the program only applied to children born after September 30, 2018. We will analyse both. However, we have greatest confidence in the first one as this relies on a larger sample. Since both approaches will estimate a local average treatment effect, but at cutoff points in different variables, comparing them will also shed light on the extent to which we can generalize from the local effect we estimate.

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