

# Fertility Behaviour and Migration: A comparison between urban refugees and local populations

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## 1 Introduction

Fertility literature has long shown interest in migration events, both internal and international, and their potential effect on fertility patterns. Studies have provided evidence for different and conflicting hypotheses on the relationship between migration and fertility behaviour using various case studies. In cases of international migration and fertility, these studies usually examine labour (economic) migration, where the direction of the migration is mostly from developing or under-developed countries towards developed countries. This aspect means that adjustment (or non-adjustment) to destination fertility behaviour often seeks to understand whether fertility of migrant women decrease or remain the same after migration.

This study aims to contribute to the previous literature by combining the analysis of fertility behaviour with respect to both internal migration and forced international migration, focusing on the case of Turkey. To that end we use the Demographic and Health Survey data that, for the first time, includes a separate Syrian migrant sample. Using the detailed migration history information and demographic indicators in the Demographic and Health Survey we seek to shed light to the fertility behaviour of women with (internal and/or international) migration background with a comparative perspective between refugee and local populations in the context of Turkey.

This study uses the Demographic and Health Survey data to examine the relationship between the number of migration events as well as type of migration (internal or international) and fertility behaviour of refugee and local populations. We further use ethnic background and certain women's empowerment indicators, such as education and participation in work life to examine the potential role of intersectionalities, to see whether such

intersectionalities would close or widen the gap between the refugee and host populations' fertility patterns.

## 2 Theoretical Framework

The relationship between fertility behaviour and migration has been conceptualised by five main hypotheses, all of which have found both support and opposition over the course of the time. These five hypotheses on migration and fertility behaviour are; *socialisation hypothesis*, *adaption hypothesis*, *selection hypothesis*, *disruption hypothesis* and *interrelations hypothesis* (Hervitz, 1985; Kulu, 2005; Schmid and Kohls, 2010). The socialisation and adaptation hypotheses oppose each other focusing on the dichotomy of fertility patterns in origin and destination, both for internal and international migration. The *socialisation* hypothesis assumes that the fertility behaviour of migrant women mirrors the fertility behaviour of the place where they had spent their childhood and a convergence to the fertility behaviour of the destination would only occur in the next generation(s) (Goldberg, 1959; Rosenwaike, 1973; Stephen and Bean, 1992). In contrast, *adaptation* hypothesis suggests that the current context an individual is living in has a more important role in shaping the fertility behaviour and therefore the fertility behaviour of migrant women converges to that of the destination relatively soon (Myers and Morris, 1966; Goldstein, 1973).

The *selection* (or *selectivity*) hypothesis rejects the behavioural change assumption in the study of migration and fertility, and claims that migrants are a special group of people whose fertility behaviour is already more similar to that of the destination and through migration they self-select into the destination (Zarate and De Zárate, 1975; Courgeau, 1989). The *disruption* hypothesis assumes that the challenging conditions following the migration event disrupts the fertility of migrant women, at least in the short-term. In this way, a decrease in fertility, be it after rural to urban or developing/under-developed to developed country, occurs as a consequence of the challenging new life conditions (Hervitz, 1985; White et al., 1995).

Last but not least, the *interrelations* hypothesis stems from the observations that migrants' fertility increases following the migration event, which can not be explained by migration only but also with the help of other factors behind the migration decision (Schmid and Kohls, 2010; Lübke, 2015). The interrelations theory seems most compatible with the facts that can be observed in the case of this paper, where the fertility of Syrian refugees increase after arrival to Turkey.

## 3 Background: Syrian refugee Crisis in Turkey

The arrival of Syrian refugees in Turkey began shortly after the breakout of civil war in Syria in 2011. The inflow of refugees increased over the years and a special regulation granting temporary protection status to Syrian citizens arriving in Turkey due to the war has been issued in 2014. The temporary protection status recognizes Syrian citizens' access to public services, international assistance and job market in Turkey but blocks any eventual citizenship or permanent residence possibilities. The refugee flow reached the peak in 2015 and it turned into a large-scale refugee crisis affecting all Mediterranean

countries in particular and all of Europe in general. In March 2016, the EU-Turkey Deal came into effect, which brought stricter border controls and shut down the passageway from Turkey into the EU for Syrian refugees (i.e. to Greece and Bulgaria).

As of October 2021, 3,726,206 Syrian citizens are registered in Turkey under temporary protection status (hereafter uTP) and 3,674,382 of Syrians uTP live outside the camps, in urban areas (DGMM 2021). At the end of 2018, thus at the time of the fieldwork of the survey this study uses, the number of Syrians uTP in Turkey was 3,622,366 (end of the year figures) (DGMM 2018).

## 4 Data and Methods

The data for this paper is obtained from the Demographic and Health Survey in Turkey (hereafter DHS Turkey). The Demographic and Health Survey is being conducted in Turkey since 1993 every five years by Hacettepe University Institute of Population Studies, using the methodology by the DHS Program. The 2018 DHS Turkey includes as separate Syrian sample, for the first time, in response to the Syrian refugee crisis and subsequent settlement of Syrians in Turkey under temporary protection.

2018 DHS Turkey follows a multi-stage, stratified cluster sampling approach at NUTS-1 level regions. The survey includes two main questionnaires, one for the household and one for the women. 2018 DHS Turkey includes 11,056 households and 7,346 women at ages 15-49. 2018 DHS Turkey - Syrian Migrant Sample follows the same sampling approach as the 2018 DHS Turkey. It includes 1,826 households and 2,391 women at ages 15-49. Among the many topics covered by the 2018 DHS Turkey, this study will focus on the data from women's questionnaire and indicators on background characteristics, migration history, pregnancy and birth history, fertility preferences, knowledge and use of contraceptive methods. A summary statistics of the data on these indicators are given in Tables 1 to 4 in the Appendix.

This study will seek to answer two main questions. The first question is, how the number of migration events affect the number of children and perceived ideal number of children for women. In line with this question the study will test the following hypothesis 1;

*H1: Multiple migration events would close the apparent gap in the fertility behaviour of Turkish citizens and Syrians uTP.*

Following up on the previous question and relevant hypothesis we further ask, how factors such as migration status (internal migrant or temporary protection), ethnicity (measured by the reported mother tongue), age, education as well as origin and destination (place of childhood and place of current residence) interact with the number of migration events and affect the fertility behaviour. Thus, the relevant hypothesis 2 is formulated as below;

*H2: Intersectionalities play a role beyond the migration events and change the fertility*

profile.

The methodology this study will apply, is primarily a poisson regression. Poisson regression is a preferred method in the literature, when the dependent variable is count data. As the dependent variables in this study are total number of children and ideal number of children, poisson regression is selected as the suitable method. The main explanatory variable is the number of migrations, while the age, education, residence type and place as well as the mother tongue (indicator of ethnicity) variables will be used as controls. In the second part of the analysis, intersectionalities will be investigated, primarily to understand if and how migration events affect the fertility behaviour of women, by ethnic identity (Turkish, Kurdish and Syrian-Arab), education, place of residence and place of birth. Marginal effects calculations will be used to observe and show how intersectionalities affect the probability of having and/or wanting more children, following the migration events.

## 5 Expected Outcomes

Based on the DHS data, the total fertility rate in Turkey is 2.3, while it is 5.3 for Syrian women, which is higher than the total fertility rate in Syria. Broken down to ethnic background, the total fertility rate in Turkey (local population) shows divergences, with 2.05 for Turkish, 3.17 for Kurdish and 5.01 for Arabic women, although the sample size is very small for the Arab minority to make sound claims on these figures. Ethnic background changes the total fertility rate also in Syrian migrant sample, though they are all at around 5 and sample size necessitates cautiousness for the ethnic Turkish and Kurdish women in the Syrian migrant sample.

The total fertility rates, calculated using the DHS data provide evidence for the interrelations hypothesis and requires answers to the question of what other factors besides migration could be contributing to this increase. We will investigate the influence of ethnicity, education, origin and destination places in addition to the number and type of migration events in an attempt to better explain this increase.

## 6 Appendix

Variable	Obs.	Min	Max	St.Dev.	Mean	#NA
Number of migrations	3751	1	10	1.152	2.65	3595
Number of migrations (incl. no migration)	7346	0	10	1.555	1.32	0
Ideal number of children	7291	0	15	1.349	2.78	55
Total born children	7346	0	15	1.677	1.64	0
Total alive children (+ current pregnancy)	7346	0	12	1.593	1.62	0

Table 1: Summary Statistics 1: 2018 DHS Turkey

Variable	Obs.	Min	Max	St.Dev.	Mean	#NA
Number of migrations	2216	1	8	0.797	2.39	0
Number of migrations (incl. no migration)	2216	1	8	0.797	2.39	0
Ideal number of children	2156	0	20	2.158	3.95	60
Total born children	2216	0	13	2.503	2.67	0

Total alive children (+ current pregnancy) 2216 0 13 2.326 2.67 0

Table 2: Summary Statistics 1: 2018 DHS Turkey - Syrian Migrant Sample

Variable	Levels	N	Weighted N	Weighted Share
Age Group	15-19	1012	1163	15.8%
	20-24	969	1034	14.1 %
	25-29	1051	1035	14.1 %
	30-34	1138	1065	14.5 %
	35-39	1149	1105	15.0 %
	40-44	1058	1025	14.0 %
	45-49	969	918	12.5 %
	all	7346		100.0
Education	No education	624	509	6.9 %
	Incomplete primary	196	169	2.3 %
	Complete primary	2113	1940	26.4 %
	Incomplete secondary	816	911	12.4 %
	Complete secondary	2133	2131	29.0 %
	Higher	1464	1685	22.9 %
	all	7346		100.0
Mother Tongue	Turkish	5626	5826	79.4 %
	Kurdish	1365	1157	15.7 %
	Arabic	173	193	2.6 %
	Other	182	160	2.2 %
	all	7346	100.0	
Residence Type	Urban	5245	5744	78.2 %
	Rural	2101	1602	21.8 %
	Camp	0	0.0	100.0
	all	7346		100.0
Changed Childhood Place of Residence	Yes	3664	3550	49.1 %
	No	3595	3686	50.9 %
	NA	87	110	
	all	7346		100.0
Ever Worked	No	3480	3382	46.0 %
	Yes	3864	3963	54.0 %
	NA	2	1	
	all	7346		100.0
NUTS1	Istanbul	607	1549	21.1 %
	West Marmara	638	299	4.1 %
	Aegean	547	884	12.0 %
	East Marmara	604	718	9.8 %
	West Anatolia	542	777	10.6 %
	Mediterranean	894	914	12.4 %
	Central Anatolia	528	347	4.7 %
	West Black Sea	600	384	5.2 %
	East Black Sea	498	168	2.3 %
	Northeast Anatolia	525	172	2.3 %
	Central East Anatolia	574	355	4.8 %
	Southeast Anatolia	789	778	10.6 %
	all	7346		100.0

Table 3: Summary Statistics 2: 2018 DHS Turkey

Variable	Levels	N	Weighted N	Weighted Share
Age Group	15-19	438	467	21.1 %
	20-24	473	476	21.5 %
	25-29	398	397	17.9 %
	30-34	333	326	14.7 %
	35-39	259	245	11.1 %
	40-44	188	183	8.2 %
	45-49	127	123	5.5 %
	all	2216	100.0	
Education	No education	278	278	12.5 %
	Incomplete primary	139	148	6.7 %
	Complete primary	755	744	33.6 %
	Incomplete secondary	424	427	19.3 %
	Complete secondary	482	481	21.7 %
	Higher	138	138	6.2 %
		all	2216	100.0
Mother Tongue	Turkish	102	94	4.2 %
	Kurdish	171	186	8.4 %
	Arabic	1912	1907	86.0 %
	Other	31	29	1.3 %
		all	2216	100.0
Residence Type	Urban (non-camp)	1963	2126	96.0 %
	Rural	0	0	0.0 %
	Camp	253	90	4.0 %
		all	2216	100.0
Ever Worked	No	1637	1628	73.5 %
	Yes	579	588	26.5 %
		all	2216	100.0
NUTS1	Istanbul	353	379	17.1 %
	West Marmara	0	0	0.0 %
	Aegean	51	56	2.5 %
	East Marmara	19	20	0.9 %
	West Anatolia	85	92	4.1 %
	Mediterranean	847	849	38.3 %
	Central Anatolia	48	52	2.3 %
	West Black Sea	0	0	0.0 %
	East Black Sea	0	0	0.0 %
	Northeast Anatolia	0	0	0.0 %
	Central East Anatolia	17	18	0.8 %
	Southeast Anatolia	796	751	33.9 %
	all	2216	100.0	

Table 4: Summary Statistics 2: 2018 DHS Turkey - Syrian Migrant Sample

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