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## Abstract

This study examines the long-term effects of the PKK conflict in Türkiye, using a difference-in-differences approach to exploit variations in conflict intensity across regions and cohorts. Our findings indicate that exposure to conflict during childhood significantly reduces educational attainment and adversely affects labor market outcomes in adulthood. Specifically, affected individuals are less likely to complete primary and secondary school and are more likely to be informally employed or engaged in low-skill jobs. In addition, exposure to conflict is associated with lower skill levels and a decreased likelihood of employment in the formal and manufacturing sectors, especially for males. Furthermore, we find that parental exposure to conflict negatively impacts the health outcomes of their children, particularly their height and weight for age, although the educational impacts generally do not persist into the second generation. These results are robust to the use of alternative samples and specifications, including controlling for migration and excluding the less affected regions and the major urban centers. Our findings highlight the profound and lasting impact of conflict on human capital development, emphasizing the importance of targeted policies to support affected children.

**Keywords:** armed conflict, human capital, labor market, PKK, children, intergenerational transmission

**JEL Classifications:** I21, I12, J24, N34

## ملخص

تدرس هذه الورقة التأثيرات طويلة المدى للصراع بين حزب العمال الكردستاني في تركيا، باستخدام نهج الاختلاف في الاختلافات لاستغلال الاختلافات في شدة الصراع عبر المناطق والفئات. تشير نتائجنا إلى أن التعرض للصراع أثناء الطفولة يقلل بشكل كبير من التحصيل التعليمي ويؤثر سلباً على نتائج سوق العمل في مرحلة البلوغ. وعلى وجه التحديد، فإن الأفراد المتضررين أقل احتمالاً لإكمال التعليم الابتدائي والثانوي، وأكثر عرضة للعمل بشكل غير رسمي أو الانخراط في وظائف منخفضة المهارة. وعلاوة على ذلك، يرتبط التعرض للصراع بانخفاض مستويات المهارات وانخفاض احتمالات التوظيف في القطاعين الرسمي والتصنيعي، وخاصة بالنسبة للذكور. وعلاوة على ذلك، نجد أن تعرض الوالدين للصراع يؤثر سلباً على النتائج الصحية لأطفالهم، وخاصة طولهم ووزنهم بالنسبة للعمر، على الرغم من أن التأثيرات التعليمية لا تستمر عموماً في الجيل الثاني. وتعتبر هذه النتائج قوية في مواجهة استخدام عينات ومواصفات بديلة، بما في ذلك التحكم في الهجرة واستبعاد المناطق الأقل تضرراً والمراكز الحضرية الكبرى. تسلط نتائجنا الضوء على التأثير العميق والدائم للصراع على تنمية رأس المال البشري، مع التأكيد على أهمية السياسات المستهدفة لدعم الأطفال المتضررين.

# 1 Introduction

Two-thirds of extremely poor people are expected to live in conflict settings by 2030, further exacerbating vicious intergenerational cycles of poverty precipitated by armed conflicts (Coral et al., 2020). Exposure to conflicts have devastating consequences that include the loss of lives, displacement of people, destruction of human and physical capital, disintegration of institutions, changes in preferences and expectations, and reduced economic growth. Despite evidence of rapid recovery at the aggregate level (Miguel and Roland, 2011; Brakman et al., 2004; Davis and Weinstein, 2002), early life exposure to armed conflicts could still have persistent adverse consequences for survivors and their descendants (Halbmeier and Schröder, 2024; Happel et al., 2024).

Therefore, the consequences of conflicts for social mobility, and the formation and transmission of human capital remains an important research question. Armed conflicts can interrupt social mobility by disrupting the accumulation of human capital through destroying schools, missing teachers, displacement of people or by altering the composition and resources of the household (Akbulut-Yuksel, 2014; Akresh and de Walque, 2008; Shemyakina, 2011). There are very few studies on the intergenerational impacts of conflict exposure, compared to studies of impacts on those directly affected by conflicts. Akresh et al. (2023) show that war exposure adversely affected the health and education of the next generation following the Biafran war in Nigeria. Conflict exposure is also found to have adverse physical and mental health impacts for the children of those affected by conflicts in Peru and Nepal (Hidalgo-Aréstegui et al., 2025; Phadera, 2021). This paper builds on the nascent literature on the intergenerational impacts of conflict to investigate how exposure to conflict at school-age shapes the lives of women—their human capital, labor market, marriage, fertility and wealth outcomes—and the health and human capital of their children.

We use data from multiple sources to provide causal evidence on the long-term consequences of the PKK conflict in Türkiye (the Kurdish conflict) that began in the early 1980s. The long-running nature of the conflict provides a unique opportunity to investigate

how conflict shapes socioeconomic outcomes for women and their children over the long-run. Conflict exposure is calculated using data on women and their migration histories from multiple waves of the Demographic and Health Surveys to calculate total human losses per 1000 people, from the Global Terrorism Database ([National Consortium for the Study of Terrorism and Responses to Terrorism, 2022](#)), in each province of residence between the ages of 7 to 19 (typical school ages in Turkiye). Our measure of conflict exposure varies at the level of the individual, and depends on the province of residence and intensity of conflict in any given year, between the ages of 7 of 19. This approach accounts for migration and avoids making assumptions about exposure to conflict based on group identity, such as place of birth, residence, or ethnicity, as has been the case in other studies.<sup>1</sup>

Our paper estimates the effects of conflict on women and their descendants using two complementary strategies. The first is a generalized two-way fixed effects model that accounts for province of residence and birth cohort fixed effects, focusing on exposure between the ages of 7 to 19. Identification comes from differences in age of exposure, and conflict intensity at provinces of residence between the ages of 7 to 19. However, given that individual conflict exposure over time might be endogenous, we extend the analyses using an instrumental variables approach. The instrument is motivated by the fact that the mountainous and rugged terrain in eastern and southeastern Turkiye served as a refuge and stronghold for the PKK, which meant that the conflict was more intense in this area, and that the intensity of the conflict fluctuated over time (see Figures 1-3). The instrument is the distance of the province of residence to the mountainous border regions of eastern Turkiye interacted by total national human losses in any given year, summed up across all years between the ages of 7 to 19. The intuition is that, in any given year, conflict related human losses will be higher in provinces closer to the PKK strongholds, but the amount of human losses will also vary over time depending on fluctuations in national conflict events.

Our main results using both identification strategies are as follows. Exposure to conflict

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<sup>1</sup>We also incorporate property losses from the same dataset in the analyses. Further, we show that our results are robust to using combatant fatalities from [Kibris \(2020\)](#).

between the ages of 7 to 19 significantly reduces education attainment, measured as years of schooling and highest levels of education attained (primary, secondary, and higher levels). An individual experiencing the mean human loss per 1000 will have about .10 fewer years of schooling compared to an individual with no exposure. Age of exposure matters because the effects are not found for those exposed between the ages of 25 to 45. Intensity of exposure also matters, because the estimated effects are larger for cohorts born after 1980s who were of school-age during the peak of the conflict. The negative effects we find are also reflected in worse labor market and household outcomes as adults—conflict related human losses between the ages of 7 to 19 lead to less employment, labor market participation, and decreased likelihood of living in wealthier households. While conflict exposure does not affect the likelihood of being married, it increases fertility and decreases the probability of having an educated partner. We also find that female children of these mothers have lower birth weights, height-for-age (HFA) and weight-for-age (WFA) z-scores, some of which may be explained by mother’s education, labor market, and household outcomes. We do not find any robust evidence of adverse child health outcomes for male children, and no evidence of negative education attainment for all of their children.<sup>2</sup>

We implement a number of robustness checks. We demonstrate that the results are only found for those exposed to conflict related human losses during school-ages. The results are also robust to accounting for possibly different time trends across provinces when we control for region-birth cohort fixed effects and province-specific linear time trends. We examine whether the results are driven by the incomparability of regions where the conflict was most intense to other parts of Türkiye, and show that the results are robust to excluding the wealthier and western regions of Türkiye from the sample, and find similar results when the sample is restricted to the Kurdish and OHAL regions where the conflict was most intense (Aydin and Emrence, 2015). Regarding migration and displacement, we show that

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<sup>2</sup>Our data does not allow us to test for learning, cognitive and non-cognitive skills, obtained through education, which could be a channel through which the negative effects of conflicts are transmitted from mothers to their children.

the intensity of conflict exposure is not related to the probability of migration, and the estimated effects of conflict on women and their children are larger for those who have moved. Importantly, our findings are robust to using different data sources on PKK conflict fatalities from [Kibris \(2020\)](#).

To the best of our knowledge, this paper will be the first to examine the intergenerational impacts of childhood exposure to armed conflict in Türkiye and the MENA region. Our paper is connected to a relatively new literature on the intergenerational effects of conflict ([Akresh et al., 2023](#); [Hidalgo-Arístegui et al., 2025](#); [Phadera, 2021](#)). Compared to [Hidalgo-Arístegui et al. \(2025\)](#) and [Phadera \(2021\)](#) who focus on non-cognitive skills and child health, respectively, we examine a broader set of outcomes across two generations. The closest paper to ours is [Akresh et al. \(2023\)](#), who examine the long-run intergenerational impacts of the Biafran war. Our paper differs in context, methods, and some important findings. Compared to the Biafran war that lasted 3 years and concentrated in a relatively more prosperous part of Nigeria, the PKK conflict has persisted for decades and is concentrated in relatively less prosperous parts of Türkiye, hence at an increased risk of vicious poverty cycles. Methodologically, we use migration histories for more precise measures of exposure at place of residence, and do not rely on ethnicity or other group characteristics. Additionally, our estimates focus on exposure and conflict intensity at school-ages. On results, while we do not find any negative impacts on schooling for the children of exposed women, consistent with results in [Akresh et al. \(2023\)](#), we do find negative impacts on employment and household wealth, and increased fertility, for exposed women. This possibly reflects the vicious impacts of long-running conflict in an already relatively poorer region, and suggests that context might be important for the long-run impacts of conflict.

Our paper is linked to a broader literature on impacts of early life conditional, critical periods for human capital investments, social mobility, and the intergenerational transmission of human capital ([Almond et al., 2018](#); [Bhalotra and Rawlings, 2013](#); [Cunha and Heckman, 2008](#); [Van den Berg et al., 2014](#)). As children and youth are one of the most vulnerable



groups of a demographically young MENA region, the results here also have important policy implications. We make several contributions by shedding light on the legacy of early life shocks caused by conflict, specifically how conflict during school-ages not only lead to adverse education outcomes, as well as decreased labor market participation and household wealth, increased fertility and choosing a less educated spouse. All of these have implications for the next generation, especially girls, who experience adverse childhood health outcomes pointing to a quality-quantity tradeoff (Becker and Lewis, 1973). We also contribute to this literature by showing that migration does not necessarily reduce conflict exposure, consistent with findings from Peru in Hidalgo-Ar  stegui et al. (2025), and might amplify the negative effects of conflict on women and their children. Lastly, our results comparing different forms of conflict related losses indicate that the impacts of human losses are much more persistent compared to the destruction of physical capital, consistent with evidence of rapid aggregate recovery of physical capital (Miguel and Roland, 2011).

The remainder of the paper is organized as follows. Section 2 provides a brief history of the PKK conflict in Türkiye. Section 3 describes the data used in the analysis and presents the descriptive statistics. We discuss the empirical strategy used to estimate the effects of the PKK conflict on education and labor market outcomes across generations in Section 4. Section 5 presents the empirical results for affected women, and results for their children are discussed in Section 6. The final section concludes and discusses the implications of the findings.

## 2 Background of the Armed Conflict in Türkiye

The Kurdistan Workers’ Party (PKK), formally established on October 27, 1978, by Abdullah   calan, originated as a Marxist and radical Kurdish nationalist group. This movement has emerged from long-standing grievances of the Kurdish population in Türkiye. Initially, its primary goal was to establish an independent Kurdish state across Southeastern Türkiye,

Northern Iraq, and Northeastern Syria (Bilgel and Karahasan, 2017). However, in the 1990s, the PKK shifted its focus from seeking full independence to advocating for a federal structure that would grant greater autonomy to Kurds within Turkiye (Kibris, 2011).

By 1984, the PKK had launched significant militant actions in the Eastern provinces of Hakkari and Siirt, marking the beginning of a prolonged conflict characterized by ambushes, bombings, and assassinations. These attacks, carried out by the PKK, were countered by extensive Turkish military operations, including airstrikes and ground assaults. As shown in Figure 1, which illustrates the total number of casualties since the PKK's first attack, the insurgency has predominantly focused on Southeastern Turkiye. This region, characterized by its underdevelopment, large Kurdish population, poor economic conditions, and limited infrastructure, has facilitated the PKK's recruitment efforts and provided strategic advantages for hideouts and operations (Kibris, 2011). The rural and mountainous terrain further benefited PKK guerrillas. Initially, PKK attacks targeted rural villages and civilians accused of collaborating with the state, along with military and police installations (Kibris (2011)). By the early 1990s, the PKK expanded its tactics to include urban terrorism, intensifying the conflict (Eyrice, 2013).

[Figure 1 about here.]

This ongoing conflict has taken a heavy toll, resulting in more than 40,000 to 50,000 deaths and costing 300 to 450 billion dollars, making it one of the most devastating conflicts in Turkish history, far surpassing the combined human losses of all other conflicts involving Turkiye since its founding in 1923 (Schoon, 2015; Bacik and Coskun, 2011; Mutlu, 2008). The southeastern and eastern regions of Turkiye, where the conflict was most intense, have suffered from underdevelopment, population displacement, and disruptions in access to education and healthcare.

Figure 2 depicts the annual fatalities linked to PKK activities since its formation in 1984. The data shows that the conflict between PKK militants and the Turkish Army escalated throughout the 1990s, reaching a peak in the mid-1990s with over 4,000 casualties

per year. This peak period was followed by a decline in the intensity of the conflict which coincides with the PKK’s shift in objectives from pursuing full independence to seeking federal autonomy (Kibris, 2011). Additionally, Figure 2 highlights reductions in combatant fatalities during specific ceasefire periods: from 1999 to 2004, following the capture and imprisonment of PKK leader Abdullah Ocalan in February 1999; in 2009, when the PKK declared a unilateral ceasefire; and from 2013 to 2015 during the Peace Process (Kibris and Cesur, 2023).

[Figure 2 about here.]

The protracted nature of the conflict and the associated trauma can have significant long-term implications for children’s development and their offspring. The disruption of education and health services, combined with the psychological impact of living in a conflict zone, can have detrimental effects on children’s cognitive and physical development. The long-term exposure to conflict and displacement can lead to lower educational attainment, poorer health outcomes, and reduced economic opportunities in adulthood which could transcend generations. In this paper, we provide empirical evidence on the impact of the PKK conflict on wartime children’s socioeconomic outcomes and their offspring’s early life health and education outcomes by exploiting the variation in exposure to the conflict across different provinces and age at exposure.

### 3 Data and Descriptive Statistics

#### 3.1 Data on First and Second Generation Outcomes

Our analysis is built on the 2008, 2013, and 2018 waves of the Demographic and Health Surveys (DHS), which provide comprehensive data on individuals’ socioeconomic characteristics, including education, labor market outcomes, fertility, partner’s characteristics as well as health and education outcomes of children such as birth weight, height, weight, ed-

educational attainment and other household characteristics. A key advantage of the DHS is the ability to link mothers to their children and fathers, which is crucial for analyzing the intergenerational effects of conflict exposure. Importantly, the DHS data includes detailed migration histories for women, enabling us to accurately track their residences and match their total conflict exposure during the critical ages of 7 to 19 when they should have been in school.<sup>3</sup> The analysis focuses on women aged 25–49, who are expected to have completed their education and are in their childbearing years.

To analyze the impact of early life conflict exposure on the education of the first generation, we focus on years of schooling and highest levels of education attained. In terms of labor market and socioeconomic outcomes, we use information from the DHS on whether the individual is working and unemployed (not working but looking for a job), which captures labour force participation. Further, we examine the impacts of conflict on socioeconomic outcomes using information on the household’s wealth quintile and classify households as wealthier if they are in the top 2 categories of the wealth index as computed by the DHS. Lastly, we incorporate information on marital status, number of living (total) children, and whether the partner has completed secondary education to examine the long-term impacts of conflict on a broad set of socioeconomic outcomes.

For the second generation, we examine the impacts of mother’s exposure to conflict during her school-age on their health and education outcomes. We collect data on children of the mothers in our first generation who were born within the 5 years preceding the survey when we analyze second generation’s health outcomes. These early life health outcomes include the children’s birth weight, and weight and height for age at the time of the survey. It is important to note that the DHS only reports these health variables for children age 5 and younger. The choice of health outcomes is driven by the fact that these early life outcomes reflect maternal health conditions, choices and environment, in-utero and in early life (Bhalotra and Rawlings, 2013). To examine educational outcomes, we focus on second-

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<sup>3</sup>Information on migration and place of residence is a key advantage of the DHS compared to other surveys, such as the Turkish Household Labor Force Survey (LFS)

generation children of school age—that is, between age 7, when schooling began in Türkiye at the time, and age 14, when students typically completed junior high school. Using this sample of second generation children, we first create a “Progress” variable that is defined as being at the correct grade-for-age. Progress is computed by dividing years of schooling by years since age 7.<sup>4</sup> In addition to progress, we also examine whether there are differences in the propensity to still be in school, to dropout, to complete primary school, and to attend secondary school, based on mother’s exposure to conflict. Table A1 in the Appendix summarizes all outcome variables used in the analyses.

### 3.2 Measure of Conflict Exposure

We primarily quantify the spatial and temporal variation in armed conflict using the Global Terrorism Database (GTD) (START, 2022), which documents more than 190,000 international and domestic terrorist attacks that have occurred worldwide since 1970. It provides details on various dimensions of each attack, such as the date and location of the incident, weapons used, type and target of the attack, and number of casualties. For each event, the exact date, location at the province level, perpetrator group name, number of fatalities, and number of wounded are reported.

The second source of armed conflict data comes from TPCONED (Kibris, 2020), an open-source dataset that documents fatal events from the PKK-Türkiye conflict within Turkish territory. This dataset is a collection of information from various sources, including the Turkish Ministry of Defense, Turkish General Staff, the Directorate General of Press and Information of the Turkish Prime Ministry, and various other state offices and local administrations in Türkiye, the archives of the Gendarmerie Museum in Ankara, the digital and hard copy archives of five major Turkish daily newspapers, PKK publications, daily and yearly reports by the Turkish Human Rights Association, and personal contacts and inter-

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<sup>4</sup>Assuming that children start school at age 7, then a child who is on track will have a Progress value of 1 if they are 10 years old and have completed 3 years of schooling. Progress will be less than 1 if the child has less than 3 years of schooling at age 10, and progress will be greater than 1 if the child started school earlier than age 7.

views with the families of the casualties. This data covers incidents between 1984 and 2018 and contains detailed information on 7,063 conflict events, with 17,308 PKK casualties and 7,514 state casualties during this time period.

To quantify conflict intensity by province and year, we utilize two key indicators: the number of fatalities and injured individuals from the GTD, and the number of fatalities and injured individuals from the TPCONED Database. We define conflict exposure as the total fatalities and injuries experienced while the individual was between the ages of 7 and 19, which are typical school ages in Türkiye at the time. The conflict measures are normalized to per-thousand of the population of the province in any given year in order to ensure comparability across different provinces and over time. Using detailed migration histories of women in our sample, we carefully match women to their place of residence each year during their school going year to address concerns about selective migration and the possibility that individuals may no longer reside in the province where they were born or raised. Because this matching is only feasible for women in the dataset, our analysis focuses exclusively on women.<sup>5</sup>

[Table 1 about here.]

Table 1 provides a summary of the data used in the study by exposure to conflict at the province level, with values shown relative to the mean exposure. As is evident from the first panel, individuals in high-conflict provinces, where human losses per thousand people are roughly four times the mean, tend to have fewer years of schooling and lower educational attainment. They are also less likely to be working and live in poorer households. In high-conflict provinces, individuals generally have more living children, are less likely to have educated partners, and are younger on average. Table 1 further illustrates that children in high conflict provinces are less likely to have progress through grades at their age, and less likely to still be in school. They also have lower birth weights, and are shorter and lighter

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<sup>5</sup>We also use information on the the value of property damage (in USD) from the GTD in our analyses. Exposure to property damage is computed similarly.

for their ages. In sum, Table 1 shows systematic differences in education, socioeconomic and health outcomes across generations in high and low conflict provinces, which could also reflect differences across Turkish provinces (see Figure 1), but our focus is on the intergenerational impacts of individual-level exposure, accounting for fixed province and cohort characteristics. In the next section, we discuss the empirical framework and identification strategies that we use to study the causal impacts of conflict exposure.

## 4 Empirical Framework and Identification Strategy

PKK insurgencies have been predominantly concentrated in the Kurdish-majority eastern and southeastern regions of Türkiye, which are less developed compared to other regions. Given that these regions are different from the rest of Türkiye, our primary empirical strategy relies on difference-in-differences, exploiting within-province and cross-cohort variation, to identify the effects of conflict. This specification controls for differences between different provinces (within regions) of Türkiye and accounts for differences across birth cohorts.<sup>6</sup> We further supplement the baseline strategy with an instrumented difference-in-differences approach.

### 4.1 Baseline Strategy

We estimate Equation (1) below to study the effects of conflict exposure during childhood on long-term education and labour market outcomes, exploiting time and spatial variation in conflict exposure. This approach allows us to credibly isolate the effect of the conflict, independent of general differences across time and provinces. The proposed estimate of the average treatment effect is given by  $\beta$  in the following equation:

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<sup>6</sup>Recent research has highlighted that the standard difference-in-differences estimator may lead to biased results when there are heterogeneous treatment effects (e.g., Goodman-Bacon, 2021; de Chaisemartin and d’Haultfoeuille, 2020). However, this issue does not affect our study because our treatment variable is not staggered; instead, it is calculated based on cumulative conflict exposure at the individual level.

$$Y_{ipt} = \alpha + \beta \text{Conflict}_{ipt} + \delta_p + \gamma_t + \Omega X_{ipt} + \epsilon_{ipt} \quad (1)$$

Where  $Y_{ipt}$  is the outcome for individual  $i$  living in province  $p$  born in year  $t$ .  $\text{Conflict}_{ipt}$  is the childhood exposure in province  $p$  in year  $t$ , measured as the cumulative exposure between 7-19 years of age, which are typical school-ages in Turkiye.  $\delta_p$  is current province of residence fixed effects, and  $\gamma_t$  is the year of birth fixed effects.  $X_{ipt}$  includes a vector of controls for urban/rural residence, mother and father literacy, and the survey year dummies. The standard errors,  $\epsilon_{ipt}$ , are clustered by province. We apply the main sample weight in all analyses.

We emphasize that  $\text{Conflict}_{ipt}$  is calculated by tracking individuals as they move across provinces and time and it could vary for individuals of the same age currently living in the same province. Identification comes from differences in cumulative conflict exposure between the school-ages of 7 and 19, and not necessarily differences across cohorts.

After estimating the effects of the armed conflict on the first generation, we proceed to quantify how exposure to armed conflict during the formative years of mothers influences their children's outcomes. The proposed estimate of the average treatment effect for children is given by  $\beta$  in the following equation:

$$Y_{iptm} = \alpha + \beta \text{Mother's Exposure}_{iptm} + \delta_p + \gamma_t + \Omega X_{iptm} + \epsilon_{iptm} \quad (2)$$

Where  $Y_{iptm}$  is the outcome for children  $i$  of province  $p$  born in year  $t$  to mother  $m$ .  $\text{Conflict}_{iptm}$  is the mother's exposure, measured as discussed above.  $\delta_p$  is province fixed effects, and  $\gamma_t$  is the mother's year of birth fixed effects.  $X_{iptm}$  includes a vector of controls for child's age dummies and gender, urban/rural residence, mother's and father's educational attainment, mother's working status, number of children, wealth index dummies and survey year indicators. In the baseline specification, we include only child's age dummies, child's gender, and survey year indicators. Furthermore, we extend the baseline approach above



by incorporating regional-birth year interactions and linear cohort trends at the province and NUTS2 region levels in some estimations. The standard errors,  $\epsilon_{iptm}$ , are clustered by province.

The validity of our difference-in-differences analysis depends on the assumption that exposure to conflict at the ages of 7-19 is important, so birth-year trends in schooling outcomes would have been similar across provinces in the absence of conflict exposure *during school-ages*. In order to provide support for this assumption, we also measure exposure to conflict between the ages of 24-45 and use the measure as a placebo check. The measure captures conflict exposure for individuals who were exposed to conflict outside their formative years. This approach allows us to examine any potential confounding trends in schooling outcomes that is correlated with the PKK insurgency, but not related to the insurgency during school-age.

## 4.2 Robustness Checks and Alternative Specifications

We conduct numerous robustness checks and analyses to strengthen the causal interpretation of our findings. For instance, our analysis could be biased by changes in the population composition of the provinces, which may independently affect the education, and socioeconomic outcomes of individuals exposed to conflict during their school years and those of their children. These changes could be due to migration or cohort sizes due to differences in births and deaths. Note that our measure of conflict exposure already takes migration into account, because we use migration histories from the DHS and match each woman’s residence during their formative years (ages 7-19) with the armed conflict events in the province of residence during those years. Further, we investigate how conflict exposure drive migration status and how the effects of conflict exposure vary by migration status. These strategies allow us to account for the potential biases introduced by migration and displacement.

Conflict could also influence cohort sizes, due to fertility rates and infant mortality, potentially affecting the size and characteristics of birth cohorts and investments in schooling.

To investigate this possibility, we examine fertility as a potential outcome, allowing us to understand how conflict impacts reproductive behavior and subsequent population dynamics. We also find that migration rates are similar between provinces with high and low conflict exposure, suggesting that migration likely has only a minor impact on our analysis. Lastly, we do not find evidence that conflict intensity across provinces is related to cohort sizes across waves of the DHS, suggesting that differential cohort sizes over time do not drive our results.

There are systematic socioeconomic differences between regions of Türkiye that might not be fully captured by province or region fixed effects. We address this concern through several additional analyses. First, we control for linear province-time trends and region-by-birth cohort fixed effects. In addition, we demonstrate that the results are robust to excluding less affected (wealthier, western) regions such as Marmara, Aegean, and Mediterranean regions, and the three most prosperous and largest provinces: Istanbul, Ankara, and Izmir, from our control group. By comparing conflict-affected regions without including these major urban centers, we ensure that our findings are not influenced by the unique characteristics of more economically prosperous provinces that were not seriously affected by the conflict.

In additional robustness checks, we focus on comparisons between provinces in the Kurdish areas of Türkiye, specifically within the OHAL region, to ensure that we are comparing more similar provinces where trends are more likely to be more comparable. The OHAL “super-region” was established under state of emergency legislation from 1994 to 2002 as part of Türkiye’s approach to the Kurdish–Turkish conflict ([Aydin and Emrence, 2015](#)). By concentrating on these areas, we aim to further address concerns about regional differences and divergent trends between regions of Türkiye in outcomes of interest by comparing individuals from the most severely affected regions. Examining individuals within the OHAL region also helps to mitigate the impacts of migration and displacement, as all individuals are within the most affected areas.

### 4.3 Instrumental Variable Approach

It is possible that our measure of conflict exposure during school years is correlated with unobserved individual characteristics related to conflict exposure and schooling outcomes. For example, children born to parents in poor households might be less able to flee conflict zones, leading to a correlation between conflict exposure and schooling outcomes.<sup>7</sup> Therefore, we employ an instrumental variable strategy that generates plausibly exogenous variation in conflict exposure at the individual level to strengthen the causal interpretation of the estimates. The instrument is motivated by the fact that the intensity of the conflict varied over time but was more intense in eastern and southeastern Turkiye. The Zagros mountain range in eastern and southeastern Turkiye, which includes the Qandil Mountains, was a refuge and stronghold for the PKK due to the challenging terrain. Figure 3 shows that conflict events are strongly concentrated around the mountainous border regions, which borders parts of Kurdistan along the border with Iran and Iraq, and corroborates several news reports on the importance of the rugged terrain for the PKK’s operations.<sup>8</sup>

In order to construct the instrument, we calculate the distance between each province’s centroid to the mountainous border region, and interact this distance with total conflict events in any given year at the national level. This generates variation across provinces and time in the instrument. The cumulative distance-national conflict events interaction between the ages of 7-19 is then used as an instrument for conflict exposure between the ages of 7-19. More specifically, we track the distance of the province of residence between 7 to 19, for each individual, interacted with total conflict events at the national level, sum this up, and use it as an instrument for conflict exposure between the ages of 7 to 19.

[Figure 3 about here.]

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<sup>7</sup>Hidalgo-Arístegui et al. (2025) use data from Peru to find that migrants tend to come from wealthier households.

<sup>8</sup>See the following news reports for examples. “With the P.K.K. in Iraq’s Qandil Mountains” <https://archive.nytimes.com/atwar.blogs.nytimes.com/2011/01/05/with-the-p-k-k-in-iraqs-qandil-mountains/>; “Interviews with Female PKK Fighters in the Qandil” <https://www.bbc.com/news/av/world-middle-east-25610424>

The instrument is relevant under the assumption that conditional on total national conflict events, individuals living in provinces closer to the mountainous areas will face greater conflict exposure. Therefore, we expect that, in any given year, conflict exposure will be higher for individuals living in provinces close to the Qandil mountains. The size of the exposure in a given year between the ages of 7-19 will be driven by total conflict events in that year, which generates differences across cohorts living in the same province. We include cohort and province fixed effects in the estimation to account for systematic differences across provinces and cohorts. Empirical results are presented in the next section.

## 5 Empirical Results

### 5.1 Exposure to Conflict and Education Attainment

Table 2 provides estimates from Equation (1) of the effects of the PKK conflicts, measured as human losses per 1000 people experienced in each province of residence between the ages of 7 to 19, on educational achievement, specifically years of schooling, and the probability of attaining and completing different levels of education (primary, secondary, and higher).<sup>9</sup> We first present results for the full sample in Panel A. Panel B presents results controlling for parental education, specifically mother’s and father’s literacy status. Panels C and D directly allows for different linear time trends across provinces and a full set of region (NUTS1) and birth-cohort fixed effects, which are flexible ways to account for differential time trends across provinces and regions over time.

[Table 2 about here.]

In Panel A of Table 2, we find that exposure to the PKK conflicts during an individual’s formative years significantly reduces adult educational attainment. Specifically, an additional

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<sup>9</sup>We also explored the impacts of conflict exposure measured as the value of property damage from (START, 2022), and do not find robust evidence that property damage experienced in school-age is associated with education outcomes. The results are in Table A6.

human casualty per 1000 people during the conflict is associated with approximately 1.88 fewer years of schooling. Estimates in column (1) of Panel A imply that an individual experiencing the mean human loss per 1000 (.055) will have about .10 fewer years of schooling compared to an individual with no exposure. Furthermore, in columns (2) to (4), we find that exposure to human losses during the PKK conflicts significantly negatively impacts the likelihood of obtaining a primary school degree, a secondary school degree, and proceeding beyond secondary school.

Given that the PKK conflict was concentrated in regions and places that are generally poorer and less educated, there is a possibility that our findings may partly reflect parental characteristics rather than the causal impact of conflict exposure. Therefore, in Panel B of Table 2, we present results controlling for parental literacy/educational attainment. The results continue to show the negative impacts of the conflict on education attainment, specifically years of schooling, and the probabilities of obtaining primary and secondary school degrees. As expected, children with educated parents tend to perform better overall.

Panels C and D account for differential time trends between provinces (linear) and regions (region-by-cohort fixed effects). This is important because there are important differences between regions of Türkiye where the conflict was more intense, as is evident in Figure 3, and these differences could also imply differential trends in education. Controlling for differential time trends at the province and region levels, the results consistently show that conflict-related human losses during school years negatively impact adult education outcomes. The estimated impacts on the probability of obtaining a secondary school degree, and moving beyond secondary school, are similar to the baseline estimates, but slightly noisier when we include region-by-cohort fixed effects. Overall, Table 2 indicates that human loss from conflict significantly reduces the educational attainment of the affected cohorts. We also find that parental literacy and education do not account for these negative effects. Next, we explore the robustness of our findings to different identification and measurement concerns.

## Identification and Robustness Checks

**Relevance of School-Age:** An important question is whether the estimates in Table 2 capture the impact of being school-aged during the conflict, or merely reflect the disadvantages of living in a poorer region of Türkiye with generally lower schooling outcomes. One might also question whether education trends were already different across provinces regardless of conflict. We address this question in several ways. First, we calculate conflict exposure for those who were much older at the time of the conflicts (between the ages of 25-45), and use this as a placebo check and to test the “parallel trends” assumption. The results are in Table 3. Panel A shows the estimated impacts of conflict exposure between the ages of 25-45, Panel B shows the impacts of conflict exposure between the ages of 25-35. In both cases, we do not find any evidence that conflict exposure outside of school ages is relevant for education outcomes. This is what will be expected if our empirical framework identifies the impacts of conflict during school-age on education, and not general province-cohort variation in education and conflict. The null results imply that province-cohort differences in education only emerge for those who were of school-age during the conflict.

[Table 3 about here.]

Further, as the PKK conflict was at its peak between 1990 and 2000 (as shown in Figure 2), we investigate whether the estimated effects are greater for the cohort most likely to have been in school during this peak. We restrict the sample to those born after 1980, and the results are in Panel C of Table 3. The estimates show that the estimated impacts of conflict exposure are larger for the cohort born after 1980—the cohort in Panel C of Table 3 has a higher mean human loss due to the conflict, .080 vs .055 for the full sample, and combined with a larger estimated coefficient, -2.56 vs -1.88, implies much stronger impacts on education for this group. This indicates that younger cohorts at the peak of the conflict experience more substantial educational setbacks due to conflict-related human loss, which provides more evidence in support of the research design.

**Comparability Across Regions:** The PKK conflict is heavily concentrated in the eastern and southeastern regions of Türkiye, which are predominantly Kurdish and may not be directly comparable to western regions. We note that the concern here is primarily different time trends in educational outcomes because any time-invariant differences across provinces have been taken into account by controlling for province fixed effects in our analysis. In addition, we have already demonstrated that the results are robust to differential time trends in Panels C and D of Table 2 and that there are no observable trends in educational outcomes for exposure occurring beyond school-age years, as summarized in the first two panels of Table 3. In order to further address potential concerns about comparability between regions and time, we dropped from the analysis wealthier and more developed provinces, Istanbul, Ankara, Izmir, Marmara, Aegean and Mediterranean regions, in Panels A–C of Table A2, which allows us to focus on regions that are more comparable to the Kurdish-majority areas. The results show that the estimates are not driven by comparing exposed individuals in the eastern and southeastern parts of Türkiye to individuals who grew up or living in Istanbul, Ankara, Izmir, Marmara, Aegean and Mediterranean regions. The point estimates are quite similar to the baseline results in Panel A of Table 2.

Furthermore, in Panels D and E of Table A2, we restrict the sample to individuals living in the Kurdish and OHAL regions, respectively. The OHAL regions represent areas where the conflict was most intense, where a state of emergency was declared at the height of the conflict (Aydin and Emrence, 2015).<sup>10</sup> Our results are very similar to the baseline estimates even when the sample is restricted to individuals in the Kurdish and OHAL regions. Taken together, these results imply that the results are not driven by comparing individuals in different regions with different characteristics and trends.

**Selective Migration:** Conflict often leads to selective migration. A potential concern is that moving is a way to avoid conflict and also attain more education. We note that our measure of conflict is not affected by compositional changes across provinces due to

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<sup>10</sup>Note that the OHAL regions were a subset of the larger Kurdish regions.

migration because conflict exposure is constructed at the individual level by tracking each individual’s province of residence over time using their migration histories. Nevertheless, we examine whether conflict exposure is associated with migration probability in Table A3 and find no evidence of such a relationship. This is consistent with other results in the literature using different datasets from Peru and Nepal (Hidalgo-Arístegui et al., 2025; Phadera, 2021). Table A4 further investigates how the estimated impacts of conflict vary by migrant status. We find that the estimated effects of conflict are found for movers and non-movers, but the estimates are much larger for those who have moved, indicating that moving is not a way to escape all of the negative effects of conflict. This is in contrast to other studies who do not find heterogeneous effects by migration status (Galdo, 2013; Leon, 2012).<sup>11</sup> In sum, we may conclude that biases induced by selective migration do not explain the results.

**Alternative Data Sources:** We extend our analysis using another data source on the PKK conflict from Kibris (2020), which records combatant fatalities. The results are presented in Table A5. Following the construction of our conflict exposure measure, in Panel A of Table A5, we use total combatant fatalities during the ages of 7 to 19 as the measure of conflict exposure and continue to find negative impacts on years of schooling and level of educational attainment. The point estimates are somewhat larger than our baseline estimates. We find similar results when the measure of exposure is restricted to Turkish Armed Forces fatalities or PKK fatalities. The results here indicate that the impacts we find are robust to different data sources.<sup>12</sup>

## 5.2 Instrumental Variable Estimates

In order to strengthen the causal interpretation of our findings, we present results in this section exploiting the fact that conflict exposure in any given year is likely to be higher

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<sup>11</sup>In the case of the PKK conflict, it is possible that those who move experienced the most personal or intense negative effects of the conflict or face discrimination away from their home province, but our data does not permit us to investigate these possibilities.

<sup>12</sup>Table A6 also show that the results are robust to including estimates of property losses.



for individuals living in provinces closer to the eastern mountainous border regions. The instrument is constructed as described in Section 4.3, and results are presented in Table 4.

[Table 4 about here.]

Panel A includes the full sample of individuals and provinces. We find that distance to the eastern mountain ranges (including Qandil mountains) interacted with total human losses in any given year through the ages of 7 to 19 is a good instrument for human losses between the ages of 7 to 19. The first stage is strong with F-stats well above 100, and shows that distance from the mountains is negatively related to human losses experienced in a given province. In the second stage, we continue to find that conflict exposure leads to fewer years of schooling, and reduces the probability of obtaining primary and secondary school degrees. Individuals with more conflict exposure are also less likely to attain higher levels of education.

In Panels B-D of Table 4, we demonstrate that the IV results are not primarily driven by comparing eastern and southeastern Kurdish-majority provinces with wealthier or non-Kurdish majority provinces. Panel B shows that the results are robust to dropping the wealthier western and coastal provinces (regions with NUTS level 1 > 6), Panel C shows that the results are robust to restricting the sample only to individuals within Kurdish regions (NUTS level 1 > 9), and Panel D shows robustness to restricting the sample to individuals living within the OHAL emergency regions. In sum, we may conclude that the IV results are robust to restricting the sample to more comparable provinces in the Kurdish and OHAL regions, where the conflict was more intense. Next, we extend the framework to study the effects of conflict exposure between the ages of 7 to 19 on a broad range of outcomes in adulthood.

### 5.3 Conflict and Adult Labor Market and Social Outcomes

This section discusses the impacts of early-life conflict exposure on labor market, household, and socioeconomic outcomes. Specifically, we examine impacts on the probability of working, looking for work (available to work), wealth level of the household, probability of being married, the number of living children, and the education level of the respondent’s partner.<sup>13</sup> While these labor market and socioeconomic outcomes are of independent interest, they are also mechanisms that could lead to the transmission of human capital outcomes from mothers to children (Akresh et al., 2023).

[Table 5 about here.]

The main results are in Table 5, and are estimated using Equation 1. The results in columns (1) and (2) of Panel A show that people with increased exposure to the conflict have relatively worse labor market outcomes; they are less likely to be working and looking for work. At the mean human loss exposure, the estimates imply that exposure to the conflict leads to a 1 percentage point decline in the probability of working and a .05 percentage point decline in the probability of looking for work. Taken together, the estimates imply that increased exposure to human losses is associated with an increased likelihood of being out of the labor force (not working and not looking for work). Column (3) demonstrates that exposure to conflict is also associated with living in poorer households, measured as a decrease in the probability of being in a household in the top 2 wealth quintiles. Social outcomes are summarized in columns (4) to (6). We find that conflict exposure does not affect the probability of being married, which is not surprising given the high marriage rates in Türkiye as shown in Table 1. However, we find that individual exposed to conflict have more living children, are and less likely to have an educated partner as measured by the

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<sup>13</sup>The primary sample for this analysis consists of women surveyed in the DHS. The Türkiye Labour Force surveys (LFS) is another dataset that could be used to study labor force outcomes in adulthood. A major shortcoming of that dataset is the absence of migration histories that can be used to accurately measure the extent of conflict exposure between the ages of 7 to 19.

likelihood of partner having completed secondary education or more.<sup>14</sup>

Panel B of Table 4 demonstrates that the results are robust to including parental controls. Panel C suggests that the negative effects of conflict on labor market outcomes, household wealth, fertility, and partner’s education, are partly driven by decreased schooling; the point estimates are much smaller and largely insignificant once we control for years of schooling. Schooling is also positively associated with labor market participation, household wealth, and the probability of an educated partner, but negatively associated with probability of marriage and number of living children. Lastly, Panel D uses the IV approach discussed earlier to strengthen the causal interpretation of the findings. The first-stage remains strong and significant, but in the second stage the point estimates are now larger but noisier than the baseline estimates in Panel A. Overall, we continue to find that exposure to conflict leads to poorer labor market outcomes, a decline in household wealth, an increase in the number of living children, and a reduced probability of having an educated partner.

**Robustness Checks:** As with the analysis of educational outcomes, we conduct several robustness checks on the estimated effects of conflict-related human losses on labor market and social outcomes in adulthood. Table A7 shows that the results are robust to dropping wealthier regions (Panel A), and restricting the sample to individuals living within majority-Kurdish and OHAL regions (Panels B and C). Table A8 shows that the results are much stronger for those who have moved. Moving by itself does not seem to mitigate the impacts of exposure to human losses during conflicts, as we found for impacts on schooling.

To summarize, we have demonstrated that exposure to human losses due to conflict between the ages of 7-19 is associated with a decrease in years of schooling and education attainment. We show that this result is specific for exposure at school-ages, and is robust to differential trends across Türkiye, selective migration, and alternate data sources. The causal

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<sup>14</sup>We also examine differences in the number of total children ever born, which does not account for differences in mortality rates, and find similar results to the impacts on number of living children suggesting that differential mortality rates is not an issue (results available on request).

interpretation of these findings is strengthened using province-time variation in the conflict driven by national trends in conflict intensity interacted with proximity to the mountainous border region in eastern and southeastern Türkiye. Further, exposure to human losses reduces labor force participation, increases the likelihood of living in poorer households, leads to having more living children, and lowers the probability of having an educated partner; all outcomes that can be explained by decreased schooling levels. Next, we investigate the impacts of the conflict on the second generation.

## 6 Conflict and the Second Generation

In this section, we examine more closely the effects of exposure to the PKK conflict on the health and education of children whose mothers grew up during the height of the conflict. We link individuals to their mothers in the DHS, and measure the parent’s exposure to the conflict during their formative years, between the ages of 7 to 19, on their children’s health and education outcomes. A unique strength of our analyses is in directly connecting the second generation to their mothers’ conflict exposure, without assuming that young people in a treated area are the children of those who were exposed to the conflict. The results estimated following Equation 2 are presented in Tables 6 and 7 for health outcomes, and Table 8 for educational outcomes.<sup>15</sup>

### Conflict and Health in the Second Generation

Table 6 examines the intergenerational effects of the conflict on the health outcome of children born within 5 years of the survey date. We specifically study impacts on birth weight, height-for-age (HFA) and weight-for-age (WFA) z-scores, and the results are disaggregated by birth

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<sup>15</sup>Health outcomes are restricted to children born to mothers within the last 5 years before the survey due to data availability, and education outcomes are restricted to children younger than 15 which reduces biases due to selection in who might have left home after school (the survey is only conducted on offspring still living in the household). Table A9 demonstrates that we continue to find a negative impact of conflict on the education of parents using the child dataset as well.

sex. The results in Panel A show that girls born to mothers who experienced more human losses during the ages of 7-19 have lower birth weights, HFA, and WFA. In contrast, we do not observe any meaningful effects on birth outcomes for boys. The rest of the analyses provides evidence that these finds are robust. Panels B, C and D, of Table 6, show that while parent’s education is positively related to birth outcomes, they might not completely explain the link between mother’s exposure and child health, especially for girls.

[Table 6 about here.]

In Table 7 we continue to investigate whether the negative effects of the impact of conflict on the health of girls can be explained by mother’s employment (Panel A), household wealth (Panel B), number of living children (Panel C), and all parental characteristics (Panel D). Overall, Panel D of Table 7 shows that some of the negative health impacts on girls can be explained by parental characteristics (education, employment, household wealth, and living children). All health impacts become smaller, and insignificant in some cases, once parental characteristics are taken into account.<sup>16</sup>

**Robustness Checks:** In Appendix Table A10, we show that the findings are robust to controlling for linear-province trends and region-birth year fixed effects. The estimated impacts of maternal exposure on the health of female children are also found when we drop richer, western and coastal provinces, and when we restrict the sample to the more intensely affected Kurdish-majority and OHAL regions, as shown in Table A11. Similar to the findings for mothers’ schooling, Table A12 indicates that the negative impacts on girls are greater among children of mothers who migrated, suggesting that migration is associated with worse conflict-related outcomes even for the second generation. Lastly, we find similar but less precisely estimated effects using the IV approach, in Table A13, and using alternate data on conflict exposure, in Table A14.

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<sup>16</sup>The evidence from Panel A of Table 7 indicates that this is likely driven by mother’s employment, because girl children with mothers working tend to have better health outcomes. However, this evidence is not conclusive.

Overall, the estimates provide a mixed picture of the impact of human losses experienced by parents during conflicts on their children. There are negative impacts on birth and health outcomes for girls, but no significant impacts on boys. We cannot separately identify the different pathways between mother’s exposure and child health outcomes, because we find different impacts on mothers (education, labour market, marriage, fertility, and household wealth) with one instrument (conflict exposure).<sup>17</sup> Nonetheless, it is well known that women’s education is related to health-seeking behaviors and investments in children, which would explain the negative health outcomes for girl children born to mothers with more intense conflict exposure (Akresh et al., 2023). Other studies have also found that the effects of war vary by sex, because of biological and social reasons (Akresh et al., 2011; Valente, 2015). Next, we investigate the impact of parental conflict exposure on children’s educational attainment.

[Table 7 about here.]

## Conflict and Education in the Second Generation

Table 8 provides estimates of the impacts of maternal conflict exposure between the ages of 7 to 19 on educational outcomes for their children. We focus on progress through the school system for age (years of schooling divided by age since they turned 7), whether they are still in school, probability of having dropped out, whether they have completed primary school, and attained secondary education. The sample is restricted to children younger than 15, who are still likely to live at home. We find no evidence that maternal conflict exposure has any impacts on education outcomes for their children, boys and girls (Panels A, B, and C). Panels D to F show that while parental education, especially mother’s education, is positively associated with all education outcomes, it does not explain the null findings.

[Table 8 about here.]

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<sup>17</sup>This is a common issue in the literature, and is discussed in Akresh et al. (2023) in the context of the Nigerian civil war.

**Robustness Checks:** We briefly discuss some robustness checks on the findings in Table 8. First, the Turkish government implemented an important program designed to get girls in conflict affected regions back to school, called the “Off to School Program” (Somuncu, 2006). Table A15 shows that the program cannot explain the null impact of maternal conflict exposure on children’s education. We do not find evidence that migration affects the estimates, for boys and girls, in Table A16. Table A17 demonstrates that the null effect of maternal conflict exposure on children’s educations are also found using the IV approach. The point estimates are slightly larger but largely insignificant. Lastly, the null results are also found when we drop richer regions or restrict the sample to the Kurdish and OHAL regions, as shown in Table A18, and when we use conflict exposure data from Kibris (2020).

The finding that mother’s exposure to conflict has no effect on children’s education is echoed in other findings. Akresh et al. (2023) find no impact on children’s education for mothers exposed to conflict in adolescence, but find significant impacts on child stunting and probability of being underweight, which are consistent with our findings here. One possible explanation is that health and schooling outcomes are driven by different factors. For example, child health could be strongly driven by household and maternal characteristics, while schooling is driven by the availability of schools and compulsory schooling laws after conflict.<sup>18</sup> These results suggest that the mechanisms behind the intergenerational transmission of human capital can be quite complex.

## 7 Conclusion

This study provides robust empirical evidence on the long-term consequences of childhood exposure to armed conflict, specifically the PKK conflict in Türkiye. Our analysis reveals significant adverse effects on both educational attainment and labor market outcomes for

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<sup>18</sup>One could also further separate learning and cognitive skills from schooling attainment, so that maternal exposure to conflict might also strongly predict cognitive skills if health in childhood is important for the development of cognitive skills (Cunha and Heckman, 2008). Further, Hidalgo-Aréstegui et al. (2025) find that maternal exposure to conflict has long-term impacts on non-cognitive skills for children in Peru.

individuals exposed to conflict during their early years. The results persist in the health outcomes of the second generation. We show that conflict exposure significantly decreases the number of years of schooling and the likelihood of achieving primary, secondary, and higher education degrees. These effects are more pronounced for cohorts who were of school-age during the height of the PKK conflict. Furthermore, individuals exposed to conflict are more likely to work in the informal sector, in jobs with lower skill levels, and are less likely to be employed in the formal manufacturing sector. These labor market impacts are particularly significant for males. Our findings are robust to controlling for differential time trends across provinces, using alternative data sources, and restricting the sample to the most impacted Kurdish regions. These confirm that the negative impacts on education and labor market outcomes are not artifacts of data selection or regional biases.

Our study fills a critical gap in the literature by offering causal evidence on the micro-level effects of armed conflict in Türkiye and contributes to the broader understanding of how early-life shocks can shape socioeconomic outcomes. These findings are important because addressing the needs of children and youth in conflict zones remains an urgent priority for researchers and policymakers alike. Such policies are essential not only for improving the lives of children growing up in conflicts and their future generations, who are also adversely impacted by warfare. Addressing the needs of these children is a vital step toward fostering long-term stability and peace. Our results highlight the persistent and long-lasting effects of early-life exposure to conflict on human capital development. The results emphasize the need for targeted policies and interventions to support children affected by armed conflicts. Providing access to education and stable employment opportunities is crucial to mitigate the long-term impacts of conflict and foster economic resilience in affected regions.

In conclusion, this paper provides evidence on the long-term impact of the PKK conflict in Türkiye. Our findings suggest that exposure to conflict during early childhood has significant negative effects on educational attainment and labor market outcomes. Future work may further examine the intergenerational impacts of conflicts, especially as the children of the



cohort born after the 1980's move into adulthood.

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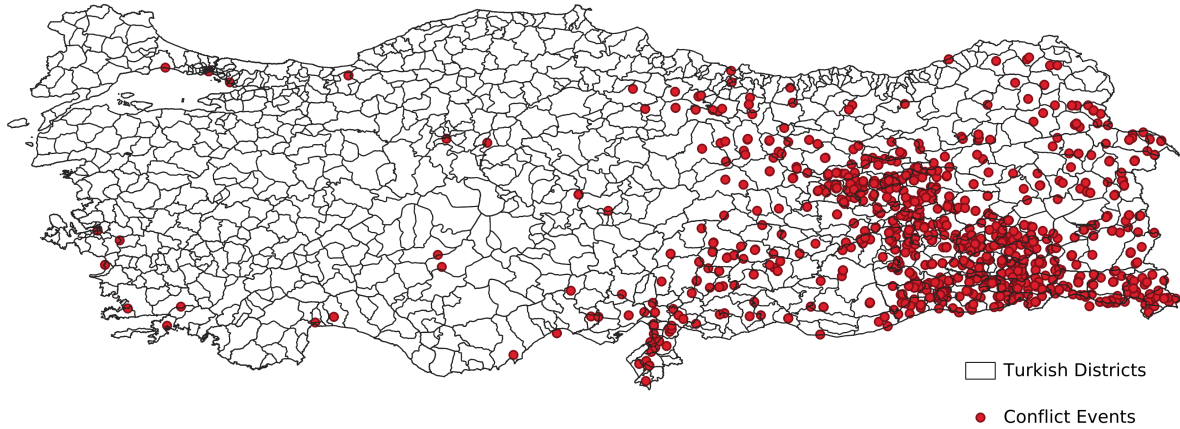
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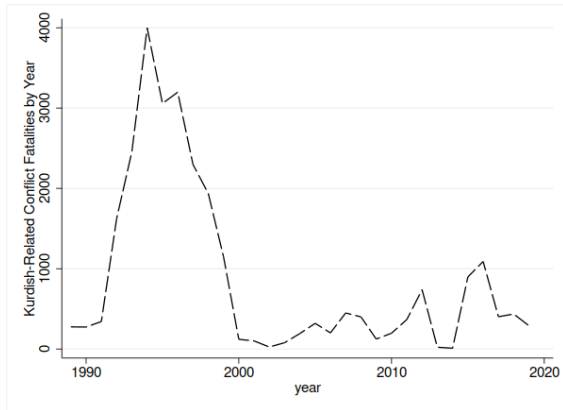
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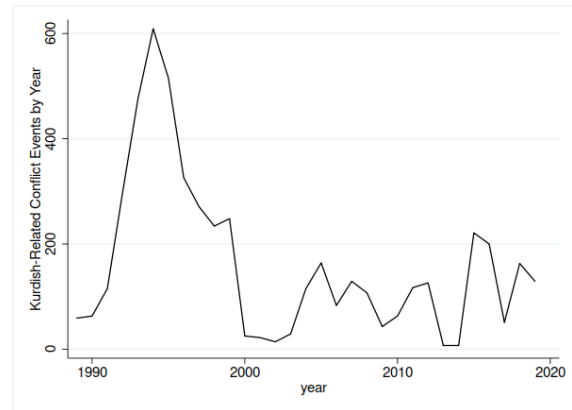
Figure 1: PKK Conflict in Turkiye



**Figure 2: PKK Conflict Data**

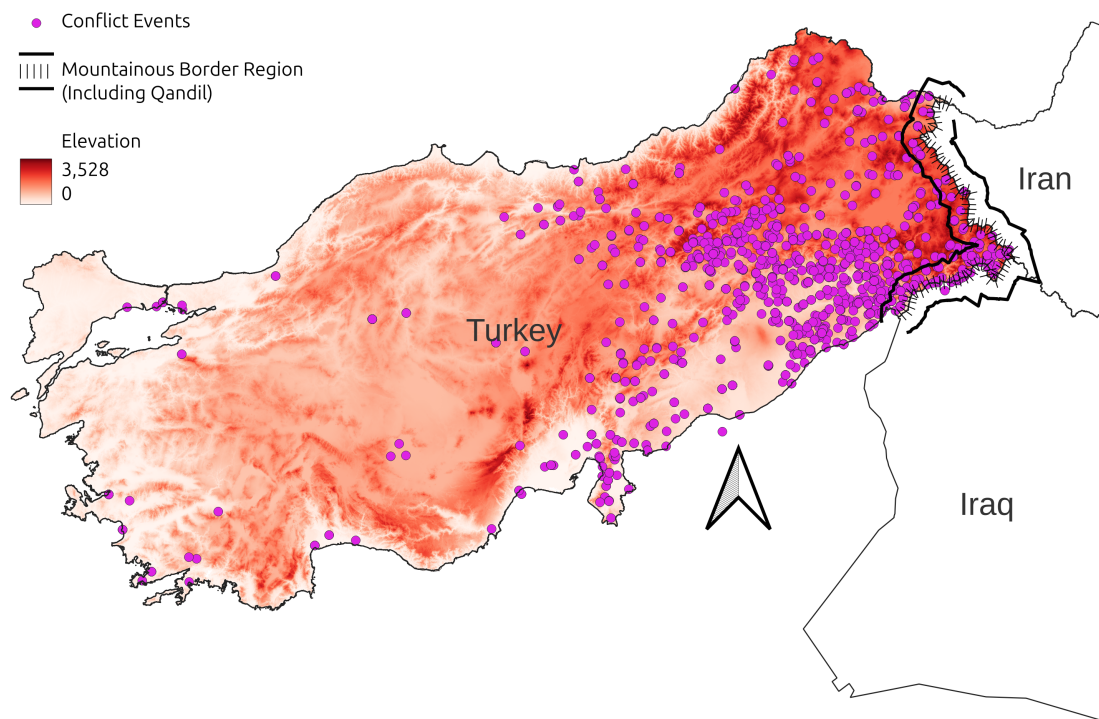


**(a) Number of PKK-related Fatalities**



**(b) Number of Conflict-Incidences**

**Figure 3: Conflict Events, Elevation, and Proximity to the Zagros Mountains**





**Table 1: Descriptive Statistics by Province-Level Conflict Exposure**

	Full Sample (1)	High Conflict Provinces (2)	Low Conflict Provinces (3)
<b>Panel A: First Generation</b>			
Human Loss (per 1000)	0.055 (0.147)	0.202 (0.257)	0.012 (0.015)
Property Loss (USD per 1000)	45.0233 (134.795)	122.325 (183.946)	22.270 (106.228)
Years of Schooling	6.493 (4.399)	5.695 (4.737)	6.728 (4.266)
Primary School Degree	0.858 (0.349)	0.747 (0.435)	0.890 (0.312)
Secondary School Degree	0.373 (0.484)	0.345 (0.476)	0.381 (0.486)
Higher than Secondary	0.168 (0.374)	0.150 (0.357)	0.173 (0.378)
Working	0.427 (0.495)	0.337 (0.473)	0.453 (0.498)
Looking for Work	0.309 (0.462)	0.307 (0.461)	0.309 (0.462)
Wealthier	0.392 (0.488)	0.334 (0.472)	0.409 (0.492)
Married	0.898 (0.302)	0.903 (0.297)	0.897 (0.304)
Living Children	2.467 (1.703)	2.700 (1.948)	2.399 (1.617)
Partner is Secondary Educated	0.427 (0.495)	0.404 (0.491)	0.434 (0.496)
Age	36.377 (7.012)	33.676 (5.970)	37.172 (7.098)
Urban	0.733 (0.442)	0.747 (0.435)	0.729 (0.444)
Observations	18,321	4,166	14,155
<b>Panel B: Second Generation Health Outcomes</b>			
Birth Weight (g)	3176.853 (682.742)	3115.130 (752.699)	3193.128 (661.840)
Height-for-Age (HFA)	-0.093 (1.000)	-0.156 (0.991)	-0.072 (1.002)
Weight-for-Age (WFA)	0.004 (0.999)	-0.085 (0.958)	0.034 (1.011)
Observations	8,264	1,747	6,521
<b>Panel C: Second Generation Education Outcomes</b>			
Progress	0.9407 (0.3113)	0.9194 (0.3597)	0.9470 (0.2951)
Still	0.9607 (0.1943)	0.9491 (0.2197)	0.9641 (0.1860)
Dropout	0.0127 (0.1120)	0.0135 (0.1154)	0.0125 (0.1110)
Primary School Degree	0.9495 (0.2191)	0.9347 (0.2471)	0.9533 (0.2110)
Secondary School Attendance	0.6557 (0.4752)	0.7194 (0.4495)	0.6391 (0.4803)
N	15,860	3,641	12,219

Notes: The table reports summary statistics by province-level conflict exposure, with standard deviations shown in parentheses. Averages for human and property losses are per 1000 people. Second generation education outcomes are for children younger than 15 who live in the same household as mothers. Second generation health outcomes are for children born in the 5 years preceding the survey.

**Table 2: Effects of Conflict on Educational Attainment**

	Years of Schooling (1)	Primary School Degree (2)	Secondary School Degree (3)	Higher than Secondary (4)
<b>Panel A: Full Sample</b>				
Human Loss	-1.8837*** (0.3585)	-0.1490*** (0.0448)	-0.1140*** (0.0339)	-0.0757** (0.0378)
$R^2$	0.234	0.197	0.201	0.101
N	18,319	18,321	18,321	18,321
Mean Dependent Variable	6.493	0.858	0.373	0.168
Mean Human Loss	0.055	0.055	0.055	0.055
<b>Panel B: Controlling for Parent's Education</b>				
Human Loss	-1.7415*** (0.3320)	-0.1395*** (0.0437)	-0.1011*** (0.0334)	-0.0680* (0.0373)
Both Parents Literate	2.6086*** (0.2391)	0.1749*** (0.0127)	0.2362*** (0.0274)	0.1416*** (0.0221)
$R^2$	0.272	0.23	0.226	0.115
N	18,319	18,321	18,321	18,321
<b>Panel C: Controlling for Linear Province-Time Trends</b>				
Human Loss	-1.8838*** (0.3606)	-0.1896*** (0.0386)	-0.0912** (0.0369)	-0.0675 (0.0417)
$R^2$	0.240	0.221	0.207	0.106
N	18,319	18,321	18,321	18,321
<b>Panel D: Controlling for Region-Birth Cohort Fixed Effects</b>				
Human Loss	-2.1598*** (0.4295)	-0.2069*** (0.0400)	-0.1125** (0.0538)	-0.0628 (0.0465)
$R^2$	0.252	0.231	0.220	0.122
N	18,319	18,321	18,321	18,321

Notes: Table shows the effect of exposure to conflicts, measured as human loss from (START, 2022), on educational outcomes from DHS. Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with province and birth year fixed effects, survey year indicators, and urban dummy. Panel B controls for parent's literacy, and Panels C and D control for differential trends across cohorts at the nuts1 level (nuts1xcohort trends), and different linear trends across provinces, respectively.

**Table 3: Identification Tests: Placebo Exposure and Cohort Restriction**

	Years of Schooling (1)	Primary School Degree (2)	Secondary School Degree (3)	Higher than Secondary (4)
<b>Panel A: Placebo Exposure Between 25-45</b>				
Human Loss btw 25-45	-0.0430 (0.5889)	-0.0573 (0.0381)	0.0644 (0.0747)	0.0004 (0.0335)
$R^2$	0.200	0.198	0.168	0.08
N	14,426	14,427	14,427	14,427
<b>Panel B: Placebo Exposure Between 25-35</b>				
Human Loss btw 25-35	-1.0079 (0.8048)	-0.0351 (0.0560)	-0.1034 (0.0796)	-0.0184 (0.0523)
$R^2$	0.201	0.188	0.182	0.079
N	7,865	7,866	7,866	7,866
<b>Panel C: Cohorts Born after 1980</b>				
Human Loss btw. 7-19	-2.5554*** (0.4108)	-0.2551*** (0.0368)	-0.1638*** (0.0332)	-0.0969** (0.0471)
$R^2$	0.218	0.179	0.208	0.095
N	6,789	6,790	6,790	6,790
Mean Dependent Variable	7.764	0.898	0.531	0.224
Mean Human Loss	0.080	0.080	0.080	0.080

Notes: Table shows the effect of conflicts, measured as human losses from [START, 2022](#), on education outcomes from the DHS. Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with the province, birth year fixed effects, survey year indicators and an urban dummy. Estimates show results when the sample is restricted to individuals who would have been too old to be in school during the conflict, and when the sample is restricted to individuals who would have spent most of their school years during the conflict.

**Table 4: Conflict and Education: IV Estimates**

	Years of Schooling (1)	Primary School Degree (2)	Secondary School Degree (3)	Higher than Secondary (4)
<b>Panel A: Full Sample</b>				
Human Loss	-24.9820* (13.2045)	-0.9963* (0.5843)	-2.3254* (1.2375)	-1.7071* (0.8930)
First-stage	-0.0174*** (0.0005)	-0.0174*** (0.0005)	-0.0174*** (0.0005)	-0.0174*** (0.0005)
F-stats	128.68	128.69	128.69	128.69
N	18,319	18,321	18,321	18,321
<b>Panel B: Drop Istanbul, Ankara, and Coastal Regions (NUTS1 &gt; 6)</b>				
Human Loss	-11.0330*** (3.1423)	-0.2340* (0.1178)	-1.0992*** (0.3170)	-0.9315*** (0.2574)
First-stage	-0.0520*** (0.0016)	-0.0520*** (0.0016)	-0.0520*** (0.0016)	-0.0520*** (0.0016)
F-stats	143.05	143.05	143.05	143.05
N	8,900	8,901	8,901	8,901
<b>Panel C: Restrict to Kurdish Regions (NUTS1 &gt; 9)</b>				
Human Loss	-15.8314*** (4.3061)	-0.7481*** (0.2152)	-1.2955*** (0.3742)	-1.1609*** (0.3263)
First-stage	-0.0688*** (0.0030)	-0.0688*** (0.0030)	-0.0688*** (0.0030)	-0.0688*** (0.0030)
F-stats	102.91	102.91	102.91	102.91
N	4,669	4,669	4,669	4,669
<b>Panel D: Restrict to OHAL Regions (NUTS1 &gt; 10)</b>				
Human Loss	-14.4861*** (4.1711)	-0.7017*** (0.2214)	-1.1578*** (0.3541)	-1.0299*** (0.3006)
First-stage	-0.0811*** (0.0039)	-0.0811*** (0.0039)	-0.0811*** (0.0039)	-0.0811*** (0.0039)
F-stats	84.93	84.93	84.93	84.93
N	3,341	3,341	3,341	3,341

Notes: Table shows the effect of conflicts, measured as human losses from [START, 2022](#), on education outcomes from the DHS, using the instrumental variable approach described in the text. The outcome in the first-stage is predicted human loss exposure. The instrument is an interaction of distance of the province of residence in a given year to the Zargos Mountain range containing the Qandil mountains, interacted by total conflict deaths within the country in each year. Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with the province, birth year fixed effects, survey year indicators and an urban dummy. Panel B restricts the sample to provinces outside the western and coastal regions with the least conflict exposure, and Panels C and D restricts the sample to the Kurdish and OHAL regions with the largest conflict exposure.

**Table 5: Conflict Exposure and Adult Labor Market and Social Outcomes**

	Working (1)	Looking for Work (2)	Wealthier (3)	Married (4)	Living Children (5)	Partner Educated (6)
<b>Panel A: Full Sample</b>						
Human Loss	-0.1555*** (0.0321)	-0.1041** (0.0488)	-0.1435*** (0.0415)	-0.0126 (0.0362)	0.2551** (0.1161)	-0.1358*** (0.0420)
$R^2$	0.152	0.086	0.262	0.054	0.284	0.107
N	18,319	8,714	18,321	18,321	18,321	17,361
Mean Dependent Variable	0.427	0.308	0.392	0.945	2.590	0.427
Mean Human Loss	0.055	0.055	0.055	0.054	0.054	0.054
<b>Panel B: Parental Controls</b>						
Human Loss	-0.1525*** (0.0317)	-0.1024** (0.0491)	-0.1322*** (0.0399)	-0.0134 (0.0362)	0.2258* (0.1150)	-0.1286*** (0.0416)
Both parents literate	0.0540*** (0.0168)	0.0392*** (0.0118)	0.2058*** (0.0172)	-0.0149* (0.0078)	-0.5376*** (0.0645)	0.2150*** (0.0163)
$R^2$	0.153	0.087	0.281	0.054	0.296	0.128
N	18,319	8,714	18,321	18,321	18,321	17,361
<b>Panel C: Education Control</b>						
Human Loss	-0.1027*** (0.0291)	-0.0707 (0.0431)	-0.0544* (0.0300)	-0.0343 (0.0380)	0.0155 (0.1128)	-0.0405 (0.0373)
Years of Schooling	0.0280*** (0.0021)	0.0205*** (0.0015)	0.0472*** (0.0012)	-0.0115*** (0.0011)	-0.1272*** (0.0044)	0.0563*** (0.0007)
$R^2$	0.199	0.111	0.396	0.074	0.378	0.29
N	18,317	8,713	18,319	18,319	18,319	17,359
<b>Panel D: IV Full Sample</b>						
Human Loss	-1.3906** (0.5783)	-0.5682 (0.4023)	-2.3548* (1.2628)	0.4764* (0.2559)	5.318 (3.4576)	-1.8198** (0.8476)
First-stage	-0.0174*** (0.0005)	-0.0194*** (0.0008)	-0.0174*** (0.0005)	-0.0174*** (0.0005)	-0.0174*** (0.0005)	-0.0167*** (0.0005)
N	18,319	8,714	18,321	18,321	18,321	17,361

Notes: Table shows the effect of exposure to conflicts, measured as human loss from (START, 2022), on labor market and social outcomes from the DHS. Variables are as described in the text. Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with province and birth year fixed effects, survey year indicators, and an urban dummy.

**Table 6: Conflict and Health Outcomes for the Second Generation I**

	Birth Weight (1)	Girls HFA z-score (2)	WFA z-score (3)	Birth Weight (4)	Boys HFA z-score (5)	WFA z-score (6)
<b>Panel A: Baseline Specification</b>						
Human Loss	-152.8921** (73.9037)	-0.1381** (0.0535)	-0.0992*** (0.0324)	51.9263 (125.2365)	-0.0242 (0.0474)	-0.1037 (0.0688)
$R^2$	0.048	0.823	0.667	0.049	0.841	0.721
N	3,986	3,466	3,657	4,278	3,746	3,883
Mean Dependent Variable	3116.893	-0.161	-0.075	3239.170	-0.028	0.104
Mean Human Loss	0.094	0.094	0.094	0.086	0.086	0.086
<b>Panel B: Controlling for Mother's Education</b>						
Human Loss	-139.0713* (70.7947)	-0.1189** (0.0540)	-0.0730** (0.0360)	79.4918 (120.7972)	0.0036 (0.0494)	-0.0729 (0.0703)
Mother's Education	6.1740** (2.9800)	0.0095*** (0.0018)	0.0128*** (0.0024)	9.9257*** (3.2178)	0.0107*** (0.0022)	0.0118*** (0.0038)
$R^2$	0.049	0.825	0.669	0.052	0.842	0.723
N	3,986	3,466	3,657	4,278	3,746	3,883
<b>Panel C: Controlling for Father's Education</b>						
Human Loss	-135.2099* (75.4518)	-0.1351** (0.0550)	-0.1016*** (0.0333)	80.1158 (127.7055)	-0.0187 (0.0431)	-0.0765 (0.0612)
Father's Education	3.5884** (1.5606)	0.0111** (0.0045)	0.0107** (0.0046)	9.7111*** (3.4624)	0.0069*** (0.0017)	0.0092*** (0.0022)
$R^2$	0.052	0.825	0.668	0.053	0.843	0.728
N	3,831	3,339	3,520	4,088	3,591	3,722
<b>Panel D: Controlling for Mother's and Father's Education</b>						
Human Loss	-130.0946* (74.1170)	-0.1292** (0.0540)	-0.0913*** (0.0339)	90.4088 (125.6783)	-0.0003 (0.0452)	-0.0602 (0.0649)
Mother's Education	3.0956 (3.8651)	0.0039 (0.0039)	0.0068 (0.0044)	5.0979 (4.7304)	0.0083*** (0.0027)	0.0073* (0.0041)
Father's Education	2.7586 (2.0791)	0.0100* (0.0056)	0.0088 (0.0060)	7.1069 (4.5983)	0.0039** (0.0019)	0.0065*** (0.0023)
$R^2$	0.053	0.825	0.669	0.053	0.843	0.729
N	3,831	3,339	3,520	4,088	3,591	3,722

Notes: Table shows the effects of exposure to conflict, measured as human losses from (START, 2022) for the mother's generation on health and birth outcomes of the second generation from the DHS. HFA and WFA stand for height-for-age and weight-for-age, respectively. Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with the province, mother's birth year and child's age fixed effects, urban dummy and survey year indicators. Parental controls include the mother's and father's educational attainment dummies.

**Table 7: Conflict and Health Outcomes for the Second Generation II**

	Birth Weight (1)	Girls HFA z-score (2)	WFA z-score (3)	Birth Weight (4)	Boys HFA z-score (5)	WFA z-score (6)
<b>Panel A: Controlling for Mother's Employment</b>						
Human Loss	-127.2044* (76.1747)	-0.1318** (0.0530)	-0.0822** (0.0344)	53.1385 (123.7512)	-0.0203 (0.0477)	-0.0987 (0.0709)
Mother's Working	91.3833*** (30.8303)	0.0241 (0.0177)	0.0646* (0.0367)	6.7025 (43.5879)	0 (0.0170)	0.0299 (0.0330)
$R^2$	0.051	0.824	0.668	0.049	0.841	0.721
N	3,986	3,466	3,657	4,278	3,746	3,883
<b>Panel B: Controlling for Household Wealth</b>						
Human Loss	-156.0023** (73.9464)	-0.1263** (0.0548)	-0.0859** (0.0339)	74.4267 (122.6019)	-0.0069 (0.0468)	-0.0804 (0.0658)
Wealthier	-19.6628 (23.4254)	0.0721*** (0.0200)	0.0798*** (0.0248)	121.7095*** (26.0500)	0.1115*** (0.0338)	0.1461*** (0.0221)
$R^2$	0.048	0.824	0.668	0.055	0.843	0.724
N	3,986	3,466	3,657	4,278	3,746	3,883
<b>Panel C: Controlling for Mother's Number of Living Children</b>						
Human Loss	-141.1744* (74.3182)	-0.1123** (0.0490)	-0.0688** (0.0341)	49.5403 (125.9157)	0.0074 (0.0440)	-0.0814 (0.0694)
Mother's Numb.of Living Children	-11.9344 (11.0893)	-0.0253*** (0.0066)	-0.0299*** (0.0091)	2.131 (14.7070)	-0.0314*** (0.0050)	-0.0222*** (0.0065)
$R^2$	0.048	0.824	0.669	0.049	0.842	0.721
N	3,986	3,466	3,657	4,278	3,746	3,883
<b>Panel D: Controlling for All Parental Characteristics</b>						
Human Loss	-112.5247 (77.1154)	-0.1171** (0.0519)	-0.0691* (0.0359)	75.7773 (121.7948)	0.0184 (0.0438)	-0.0484 (0.0678)
$R^2$	0.058	0.826	0.67	0.057	0.845	0.73
N	3,831	3,339	3,520	4,088	3,591	3,722

Notes: Table shows the effects of exposure to conflicts, measured as human losses from (START, 2022) for the mother's generation on health and birth outcomes of the second generation from the DHS. HFA and WFA stand for height-for-age and weight-for-age, respectively. Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with the province, mother's birth year and child's age fixed effects, urban dummy and survey year indicators. Parental controls include the mother's and father's educational attainment dummies, the mother's wealth index, employment status and the number of living children.

**Table 8: Conflict and Education Outcomes for the Second Generation**

	Progress (1)	Still in School (2)	Dropout (3)	Primary School (4)	Secondary School Att. (5)
<b>Panel A: Full Sample</b>					
Human Loss	-0.0209 (0.0266)	-0.0037 (0.0138)	0.0101 (0.0127)	0.0017 (0.0265)	-0.0014 (0.0432)
$R^2$	0.045	0.057	0.048	0.076	0.762
N	15,225	15,848	15,818	5,857	5,857
Mean Dependent Variable	0.941	0.961	0.013	0.949	0.656
Mean Human Loss	0.079	0.079	0.079	0.079	0.079
<b>Panel B: Girls Only</b>					
Human Loss	-0.0329 (0.0476)	0.0031 (0.0210)	0.0106 (0.0111)	-0.0238 (0.0458)	-0.0572 (0.0567)
$R^2$	0.047	0.086	0.06	0.097	0.751
N	7,406	7,803	7,787	2,912	2,912
Mean Dependent Variable	1.115	0.951	0.016	0.946	0.655
Mean Human Loss	0.081	0.081	0.081	0.081	0.081
<b>Panel C: Boys Only</b>					
Human Loss	-0.0054 (0.0311)	-0.0177 (0.0204)	0.0103 (0.0199)	0.0252 (0.0260)	0.0421 (0.0433)
$R^2$	0.061	0.046	0.052	0.089	0.786
N	7,819	8,045	8,031	2,945	2,945
Mean Dependent Variable	0.936	0.972	0.009	0.953	0.656
Mean Human Loss	0.078	0.078	0.078	0.078	0.078
<b>Panel D: Control for Mother's Education</b>					
Human Loss	-0.0181 (0.0248)	-0.0055 (0.0132)	0.0095 (0.0126)	-0.0063 (0.0281)	-0.0043 (0.0438)
Mother's Education	0.0041*** (0.0009)	0.0023*** (0.0004)	-0.0006 (0.0004)	0.0032*** (0.0007)	0.0036*** (0.0011)
$R^2$	0.049	0.063	0.048	0.084	0.763
N	15,223	15,846	15,816	5,855	5,855
<b>Panel E: Control for Father's Education</b>					
Human Loss	-0.0249 (0.0264)	-0.0075 (0.0134)	0.0093 (0.0136)	-0.0083 (0.0298)	0.0006 (0.0526)
Father's Education	0.0017** (0.0008)	0.0012** (0.0005)	-0.0007*** (0.0001)	0.0014** (0.0006)	0.0024*** (0.0008)
$R^2$	0.048	0.062	0.049	0.083	0.761
N	14,428	15,011	14,984	5,493	5,493
<b>Panel F: Control for Mother's and Father's Education</b>					
Human Loss	-0.0195 (0.0252)	-0.0048 (0.0132)	0.009 (0.0139)	-0.0059 (0.0299)	0.0032 (0.0522)
Mother's Education	0.0035*** (0.0011)	0.0019*** (0.0006)	-0.0002 (0.0004)	0.0028*** (0.0009)	0.0029** (0.0012)
Father's Education	0.0009 (0.0006)	0.0008 (0.0006)	-0.0006*** (0.0002)	0.0009 (0.0006)	0.0018** (0.0009)
$R^2$	0.050	0.063	0.049	0.084	0.761
N	14,426	15,009	14,982	5,491	5,491

Notes: Table shows the effects of exposure to conflicts, measured as human losses from (START, 2022) for the mother's generation on educational outcomes of the second generation from the DHS. Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with the province, mother's birth year and child's age fixed effects, urban dummy and survey year indicators. Each column also controls for child's gender with the exception of Panels B and C. Education outcomes are defined in the text.



# Appendices

**Table A1: Description of Key Outcome Variables**

**Panel A: First generation outcomes: Women aged 25-49**

Years of schooling	Years of schooling
Primary School Degree	Has completed primary school.
Secondary School Degree	Has completed secondary school.
More than Secondary Degree	Has attained more than secondary school.
Working	Respondent is working.
Looking for Work	Respondent is not working but available for work.
Wealthier	Household wealth index is 4 or 5.
Married	Respondent is married.
Living Children	Number of living children
Partner Educated	Respondent's partner has completed secondary school.

**Panel B: Second Generation's Health Outcomes: 0-5 years old children of mothers of the first gen**

Birth Weight	Birth Weight in grams
HFA	Height-for-Age z-score
WFA	Weight-for-Age z-score

**Panel C: Second Generation's Education Outcomes: 7-14 years old children of mothers of the first gen**

Progress	Year of Schooling/(Age-6) for child still in school
Still in school	Child is still in school
Dropout	Does not attend school
Primary school degree	takes a value of 1 if the child has completed primary degree (for children older than 11)
Secondary School attendance	Child has attained secondary school (only for those older than 11)

Notes: Table shows the definitions of outcome variables used in the study. All data come from the Türkiye Demographic and Health Surveys.

**Table A2: Conflict and Education: Robustness to Specific Regions and Provinces**

	Years of Schooling (1)	Primary School Degree (2)	Secondary School Degree (3)	Higher than Secondary (4)
<b>Panel A: Drop Istanbul</b>				
Human Loss	-1.8284*** (0.4197)	-0.1111*** (0.0334)	-0.1304*** (0.0343)	-0.0993*** (0.0349)
$R^2$	0.269	0.219	0.229	0.117
N	16,795	16,797	16,797	16,797
<b>Panel B: Drop Istanbul, Ankara and Izmir</b>				
Human Loss	-1.5459*** (0.3650)	-0.1137*** (0.0369)	-0.1102*** (0.0281)	-0.0735*** (0.0309)
$R^2$	0.256	0.223	0.216	0.108
N	15,448	15,450	15,450	15,450
<b>Panel C: Drop Coastal Regions (NUTS1&gt;6)</b>				
Human Loss	-1.5310*** (0.3990)	-0.0769** (0.0290)	-0.1081*** (0.0330)	-0.1058*** (0.0339)
$R^2$	0.317	0.27	0.25	0.115
N	8,900	8,901	8,901	8,901
<b>Panel D: Restrict to Kurdish Regions (NUTS1&gt;9)</b>				
Human Loss	-1.9568*** (0.5350)	-0.1149*** (0.0364)	-0.1401*** (0.0474)	-0.1192*** (0.0404)
$R^2$	0.269	0.221	0.224	0.099
N	4,669	4,669	4,669	4,669
<b>Panel E: Restrict to OHAL Regions (NUTS1&gt;10)</b>				
Human Loss	-1.9505*** (0.5746)	-0.1178*** (0.0392)	-0.1375** (0.0512)	-0.1163** (0.0427)
$R^2$	0.268	0.225	0.228	0.100
N	3,341	3,341	3,341	3,341

Notes: Table shows the effects of exposure to conflicts, measured as human losses from (START, 2022), on educational outcomes from the DHS, excluding wealthier provinces and regions, and exclusively focusing on Kurdish and OHAL regions (Aydin and Emrence, 2015). Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with province, birth year fixed effects, survey year indicators and an urban dummy.

**Table A3: Conflict and the Probability of Migration**

	Full Sample (1)	Born after 1980 (2)	Parental Educ Control (3)
Human Loss	-0.0483 (0.0711)	-0.0270 (0.0577)	-0.0491 (0.0715)
Both Parents Literate			-0.0146 (0.0103)
$R^2$	0.497	0.451	0.497
N	18,321	6,790	18,321

Notes: Table shows how the effects of exposure to conflicts, measured as human losses from (START, 2022), on the probability of having moved from the DHS. Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with province, birth year fixed effects, survey year indicators and an urban dummy.

**Table A4: Conflict and Education: Robustness to Migration**

	Years of Schooling (1)	Primary School Degree (2)	Secondary School Degree (3)	Higher than Secondary (4)
<b>Panel A: Never Moved</b>				
Human Loss	-1.1853*** (0.3844)	-0.0994*** (0.0370)	-0.0485 (0.0488)	-0.038 (0.0460)
$R^2$	0.259	0.207	0.220	0.111
N	14,203	14,204	14,204	14,204
<b>Panel B: Moved</b>				
Human Loss	-3.4236*** (0.9087)	-0.2435** (0.0992)	-0.2821*** (0.0858)	-0.1469*** (0.0545)
$R^2$	0.207	0.198	0.185	0.113
N	4,116	4,117	4,117	4,117

Notes: Table shows how the effects of exposure to conflicts, measured as human losses from (START, 2022), on educational outcomes, from the DHS, vary by migration history. Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with province, birth year fixed effects, survey year indicators and an urban dummy.

**Table A5: Conflict and Education Using Alternate Data**

	<b>Years of Schooling</b>	<b>Primary School Degree</b>	<b>Secondary School Degree</b>	<b>Higher than Secondary</b>
	(1)	(2)	(3)	(4)
<b>Panel A: All Fatalities</b>				
Total Fatalities	-0.3088** (0.1231)	-0.0130* (0.0076)	-0.0291** (0.0120)	-0.0184*** (0.0062)
$R^2$	0.2350	0.1950	0.2020	0.1020
N	18,319	18,321	18,321	18,321
Mean Dependent Variable	6.493	0.858	0.373	0.168
Mean Total Fatalities	0.204	0.204	0.204	0.204
<b>Panel B: TSF Fatalities</b>				
TSF Fatalities	-1.1375*** (0.3812)	-0.0520** (0.0240)	-0.1049*** (0.0370)	-0.0685*** (0.0201)
$R^2$	0.235	0.195	0.202	0.102
N	18,319	18,321	18,321	18,321
Mean Dependent Variable	6.493	0.858	0.373	0.168
Mean TSF Fatalities	0.058	0.058	0.058	0.058
<b>Panel C: PKK Fatalities</b>				
PKK Fatalities	-0.4113** (0.1738)	-0.0168 (0.0107)	-0.0390** (0.0169)	-0.0244*** (0.0088)
$R^2$	0.235	0.195	0.202	0.102
N	18,319	18,321	18,321	18,321
Mean Dependent Variable	6.493	0.858	0.373	0.168
Mean PKK Fatalities	0.145	0.145	0.145	0.145

Notes: Table shows the effect of conflicts, measured as fatalities from [Kibris \(2020\)](#) per thousand people, on education attainment from the DHS. Panel B measures conflict intensity as fatalities of members of the Turkish Armed Forces (TSF), and Panel C as fatalities for members of the PKK. Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with the province, birth year fixed effects, survey year indicators and urban/rural residence.

**Table A6: Conflict and Education: Human vs Property Losses**

	<b>Years of Schooling</b> (1)	<b>Primary School Degree</b> (2)	<b>Secondary School Degree</b> (3)	<b>Higher than Secondary</b> (4)
<b>Panel A: Full Sample</b>				
Human Loss	-2.5456*** (0.5445)	-0.1627*** (0.0591)	-0.1959*** (0.0405)	-0.1276*** (0.0219)
Property Value	0.0026** (0.0011)	0.0001 (0.0001)	0.0003** (0.0001)	0.0002*** (0.0001)
$R^2$	0.240	0.197	0.208	0.106
N	18,319	18,321	18,321	18,321
Mean Dependent Variable	6.489	0.857	0.373	0.168
Mean Human Loss	0.055	0.055	0.055	0.055
Mean Property Value	45.022	45.022	45.022	45.022
<b>Panel B: Kurdish Regions Only</b>				
Human Loss	-2.1045*** (0.5470)	-0.1182*** (0.0382)	-0.1610*** (0.0499)	-0.1315*** (0.0402)
Property Value	0.0010 (0.0010)	0.0000 (0.0001)	0.0001* (0.0001)	0.0001 (0.0001)
$R^2$	0.270	0.221	0.225	0.100
N	4,669	4,669	4,669	4,669
Mean Dependent Variable	4.399	0.646	0.234	0.097
Mean Human Loss	0.135	0.135	0.135	0.135
Mean Property Value	56.467	56.467	56.467	56.467

Notes: Table shows the effects of exposure to conflicts, measured as human and property losses from (START, 2022), on educational outcomes from the DHS. Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with province, birth year fixed effects, survey year indicators and an urban dummy.

**Table A7: Conflict, Labour Market and Social Outcomes: Robustness to Specific Regions**

	Working (1)	Looking for Work (2)	Wealthier (3)	Married (4)	Living Children (5)	Partner Educated (6)
<b>Panel A: Drop Coastal Regions (NUTS1&gt;6)</b>						
Human Loss	-0.0972*** (0.0219)	-0.0525 (0.0481)	-0.1167** (0.0452)	0.0119 (0.0280)	0.0355 (0.1483)	-0.1470*** (0.0425)
$R^2$	0.177	0.093	0.224	0.068	0.348	0.161
N	8,900	4,411	8,901	8,901	8,901	8,398
<b>Panel B: Restrict to Kurdish Regions (NUTS1&gt;9)</b>						
Human Loss	-0.1045*** (0.0252)	-0.0568 (0.0536)	-0.1258** (0.0514)	0.0117 (0.0310)	0.3077*** (0.1002)	-0.1380*** (0.0440)
$R^2$	0.115	0.114	0.16	0.08	0.355	0.151
N	4,669	2,556	4,669	4,669	4,669	4,385
<b>Panel C: Restrict to OHAL Regions (NUTS1&gt;10)</b>						
Human Loss	-0.1075*** (0.0239)	-0.0647 (0.0520)	-0.1227** (0.0537)	0.0099 (0.0328)	0.3434*** (0.1004)	-0.1414*** (0.0479)
$R^2$	0.131	0.128	0.151	0.08	0.361	0.145
N	3,341	1,814	3,341	3,341	3,341	3,117

Notes: Table shows how the effects of exposure to conflicts, measured as human losses from (START, 2022), on labour market and social outcomes, from the DHS, vary across regions and provinces. Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with province, birth year fixed effects, survey year indicators and an urban dummy.

**Table A8: Migration, Conflict, Labour Market and Social Outcomes**

	Working (1)	Looking for Work (2)	Wealthier (3)	Married (4)	Living Children (5)	Partner Educated (6)
<b>Panel A: Never Moved</b>						
Human Loss	-0.0792** (0.0343)	-0.0296 (0.0619)	-0.0924** (0.0429)	-0.0259 (0.0432)	0.0766 (0.1822)	-0.1211*** (0.0310)
$R^2$	0.120	0.098	0.296	0.065	0.291	0.113
N	14,202	6,076	14,204	14,204	14,204	13,458
<b>Panel B: Moved</b>						
Human Loss	-0.3155*** (0.0778)	-0.2134*** (0.0627)	-0.2563*** (0.0865)	0.0197 (0.0326)	0.6044** (0.2520)	-0.2017* (0.1084)
$R^2$	0.129	0.079	0.199	0.062	0.308	0.109
N	4,117	2,638	4,117	4,117	4,117	3,903

Notes: Table shows how the effects of exposure to conflicts, measured as human losses from (START, 2022), on labour market and social outcomes, from the DHS, vary by migration history. Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with province, birth year fixed effects, survey year indicators and an urban dummy.

**Table A9: Conflict and Parental Education: Evidence from Child Data**

	Years of Schooling (1)	Primary School Degree (2)	Secondary School Degree (3)	Higher than Secondary (4)
<b>Panel A: Mother's Education</b>				
Human Loss	-2.2772*** (0.6019)	-0.2198*** (0.0496)	-0.1517*** (0.0492)	-0.1129*** (0.0341)
$R^2$	0.266	0.274	0.222	0.102
N	11,151	11,151	11,151	11,151
Mean Dependent Variable	6.198	0.822	0.396	0.149
Mean Human Loss	0.089	0.089	0.089	0.089
<b>Panel B: Father's Education</b>				
Human Loss	-1.5976** (0.6215)	-0.0224 (0.0160)	-0.1567*** (0.0500)	-0.1050*** (0.0380)
$R^2$	0.105	0.106	0.148	0.086
N	10,669	10,673	10,673	10,673
Mean Dependent Variable	8.042	0.957	0.556	0.147
Mean Human Loss	0.090	0.090	0.090	0.090

Notes: Table shows the effects of mother's exposure to conflicts, measured as human losses from (START, 2022), on educational outcomes for the mother and father from the births dataset of the DHS. Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with province, birth year fixed effects, survey year indicators and an urban dummy.

**Table A10: Conflict and Second Generation Health: Robustness to Differential Trends**

	Birth Weight (1)	Girls HFA z-score (2)	WFA z-score (3)	Birth Weight (4)	Boys HFA z-score (5)	WFA z-score (6)
<b>Panel A: Controlling for Linear Province Trends</b>						
Human Loss	-157.6561** (74.8988)	-0.1486*** (0.0529)	-0.1035*** (0.0345)	58.4533 (126.6788)	-0.0193 (0.0496)	-0.1021 (0.0756)
$R^2$	0.066	0.829	0.674	0.07	0.844	0.728
N	3,986	3,466	3,657	4,278	3,746	3,883
<b>Panel B: Controlling for Region-Birth year Fixed Effects</b>						
Human Loss	-167.3556** (79.0454)	-0.1407** (0.0555)	-0.1025*** (0.0320)	58.9612 (129.8959)	-0.0405 (0.0489)	-0.0896** (0.0450)
$R^2$	0.063	0.827	0.676	0.067	0.844	0.722
N	3,986	3,466	3,657	4,278	3,746	3,883

Notes: Table shows the effects of exposure to conflicts, measured as human losses from (START, 2022) for the mother's generation on health and birth outcomes of the second generation from the DHS, accounting for differential trends and the province and region levels. HFA and WFA stand for height-for-age and weight-for-age, respectively. Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with the province, mother's birth year and child's age fixed effects, urban dummy and survey year indicators.



**Table A11: Conflict and Second Generation Health: Robustness to Specific Regions**

	Birth Weight (1)	Girls HFA z-score (2)	WFA z-score (3)	Birth Weight (4)	Boys HFA z-score (5)	WFA z-score (6)
<b>Panel A: Drop Istanbul</b>						
Human Loss	-167.9453** (83.5692)	-0.1134** (0.0552)	-0.0935*** (0.0347)	37.0625 (162.0208)	0.0000 (0.0553)	-0.0418 (0.0577)
$R^2$	0.052	0.82	0.657	0.053	0.833	0.715
N	3,687	3,234	3,412	3,958	3,470	3,602
Mean Human Loss	0.086	0.086	0.086	0.086	0.086	0.086
<b>Panel B: Drop Istanbul, Ankara and Izmir</b>						
Human Loss	-172.8056** (71.3942)	-0.1061* (0.0584)	-0.0977** (0.0377)	43.9256 (164.3123)	0.0113 (0.0550)	-0.0119 (0.0541)
$R^2$	0.058	0.821	0.648	0.057	0.832	0.724
N	3,452	3,063	3,229	3,725	3,305	3,426
Mean Human Loss	0.088	0.088	0.088	0.088	0.088	0.088
<b>Panel C: Drop Coastal Regions (NUTS1&gt;6)</b>						
Human Loss	-151.7971** (69.3976)	-0.0777 (0.0534)	-0.0890*** (0.0294)	76.8033 (158.9399)	0.04 (0.0579)	0.0313 (0.0548)
$R^2$	0.075	0.826	0.739	0.061	0.826	0.721
N	2,170	2,068	2,171	2,305	2,125	2,216
Mean Human Loss	0.117	0.117	0.117	0.117	0.117	0.117
<b>Panel D: Restrict to Kurdish Regions (NUTS1&gt;9)</b>						
Human Loss	-166.7157** (62.9063)	-0.0826 (0.0586)	-0.0904** (0.0372)	141.5047 (164.9931)	0.0787 (0.0650)	0.0557 (0.0501)
$R^2$	0.08	0.823	0.749	0.068	0.814	0.737
N	1,341	1,401	1,462	1,399	1,402	1,462
Mean Human Loss	0.166	0.166	0.166	0.166	0.166	0.166
<b>Panel E: Restrict to OHAL Regions (NUTS1&gt;10)</b>						
Human Loss	-173.4682** (64.1146)	-0.0885 (0.0630)	-0.0936** (0.0365)	178.2613 (168.3526)	0.0861 (0.0634)	0.0492 (0.0497)
$R^2$	0.084	0.829	0.754	0.077	0.819	0.743
N	935	1025	1,076	1,057	1,074	1,119
Mean Human Loss	0.183	0.183	0.183	0.183	0.183	0.183

Notes: Table shows the effects of exposure to conflicts, measured as human losses from (START, 2022) for the mother's generation on health and birth outcomes of the second generation from the DHS, accounting for differential trends and the province and region levels. HFA and WFA stand for height-for-age and weight-for-age, respectively. Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with the province, mother's birth year and child's age fixed effects, urban dummy and survey year indicators.

**Table A12: Conflict, Migration, and Second Generation Health**

	Birth Weight (1)	Girls HFA z-score (2)	WFA z-score (3)	Birth Weight (4)	Boys HFA z-score (5)	WFA z-score (6)
<b>Panel A: Mother Never Moved</b>						
Human Loss	-75.8340 (87.8722)	-0.1056 (0.0703)	-0.0054 (0.0634)	-102.6299 (150.4609)	0.0226 (0.0924)	-0.0545 (0.0927)
$R^2$	0.051	0.819	0.651	0.065	0.839	0.721
N	3,033	2,650	2,809	3246	2,868	2,977
Mean Dependent Variable	3116.893	-0.161	-0.075	3239.170	-0.027	0.094
Mean Human Loss	0.094	0.094	0.094	0.068	0.083	0.081
<b>Panel B: Mother Moved</b>						
Human Loss	-337.0754** (163.2349)	-0.2654** (0.1103)	-0.3605*** (0.1076)	230.4310 (185.9510)	-0.0718 (0.1028)	-0.2066 (0.1601)
$R^2$	0.181	0.858	0.768	0.149	0.872	0.765
N	953	816	848	1,032	878	906
Mean Dependent Variable	3116.893	-0.161	-0.075	3229.613	-0.036	0.085
Mean Human Loss	0.094	0.094	0.094	0.084	0.101	0.103

Notes: Table shows how the effects of exposure to conflicts, measured as human losses from (START, 2022) for the mother's generation on health and birth outcomes of the second generation from the DHS, vary by migration histories. HFA and WFA stand for height-for-age and weight-for-age, respectively. Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with the province, mother's birth year and child's age fixed effects, urban dummy and survey year indicators.

**Table A13: Conflict and Second Generation Health: IV Estimates**

	Birth Weight (1)	Girls HFA z-score (2)	WFA z-score (3)	Birth Weight (4)	Boys HFA z-score (5)	WFA z-score (6)
	<b>Panel A: Full Sample</b>					
Human Loss	-351.4453 (396.3666)	-0.5264 (0.3357)	-1.2044 (0.9803)	799.9946 (670.3824)	-0.1777 (0.2934)	-0.0227 (0.2906)
N	3,986	3,466	3,657	4,278	3,746	3,883
First-stage	-0.0176*** (0.0013)	-0.0200*** (0.0015)	-0.0192*** (0.0014)	-0.0179*** (0.0012)	-0.0200*** (0.0014)	-0.0205*** (0.0014)
F-stat for first-stage	32.68	41.60	43.10	29.49	35.88	37.20
	<b>Panel B: Drop Coastal Regions (NUTS1&gt;6)</b>					
Human Loss	-455.7955 (345.1791)	-0.1647 (0.2311)	-0.4210** (0.1610)	-68.2566 (331.2653)	0.165 (0.1953)	0.3308 (0.2214)
N	2,170	2,068	2,171	2,305	2,125	2,216
First-stage	-0.0555*** (0.0039)	-0.0650*** (0.0044)	-0.0640*** (0.0043)	-0.0448*** (0.0036)	-0.0505*** (0.0041)	-0.0514*** (0.0040)
F-stat for first-stage	36.83	44.92	46.38	34.15	43.83	45.38
	<b>Panel C: Restricted to Kurdish Regions (NUTS1&gt;9)</b>					
Human Loss	-856.4156* (432.2016)	-0.1181 (0.2945)	-0.2811 (0.1678)	25.1853 (357.9295)	0.0903 (0.2225)	0.0273 (0.2027)
N	1,341	1,401	1,462	1,399	1,402	1,462
First-stage	-0.0682*** (0.0060)	-0.0769*** (0.0064)	-0.0769*** (0.0063)	-0.0532*** (0.0060)	-0.0570*** (0.0065)	-0.0590*** (0.0064)
F-stat for first-stage	31.06	40.36	41.19	30.11	41.60	43.12
	<b>Panel D: Restricted to OHAL Regions (NUTS1&gt;10)</b>					
Human Loss	-790.8528* (437.1015)	0.076 (0.3006)	-0.2903* (0.1657)	137.3236 (367.7083)	0.0509 (0.2145)	-0.0305 (0.2196)
N	935	1025	1,076	1,057	1,074	1,119
First-stage	-0.0860*** (0.0081)	-0.0967*** (0.0085)	-0.0956*** (0.0083)	-0.0689*** (0.0080)	-0.0740*** (0.0086)	-0.0775*** (0.0085)
F-stat for first-stage	25.61	33.82	34.64	26.62	36.72	38.14

Notes: Table shows the effects of exposure to conflicts, measured as human losses from (START, 2022) for the mother's generation on health and birth outcomes of the second generation from the DHS, using the IV approach described in the text. HFA and WFA stand for height-for-age and weight-for-age, respectively. Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with the province, mother's birth year and child's age fixed effects, urban dummy and survey year indicators.

**Table A14: Conflict and Second Generation Health Using Alternate Data**

	Birth Weight (1)	Girls HFA z-score (2)	WFA z-score (3)	Birth Weight (4)	Boys HFA z-score (5)	WFA z-score (6)
<b>Panel A: All Fatalities</b>						
Total Fatalities	-11.5630* (6.8718)	-0.0139** (0.0066)	-0.0119* (0.0063)	2.7779 (15.2340)	0.001 (0.0089)	-0.0087 (0.0108)
$R^2$	0.047	0.823	0.667	0.049	0.841	0.721
N	3,986	3,466	3,657	4,278	3,746	3,883
Mean Total Fatalities	0.320	0.448	0.438	0.312	0.391	0.387
<b>Panel B: TSF Fatalities</b>						
TSF Fatalities	-34.8786 (21.4695)	-0.0628** (0.0261)	-0.0520** (0.0234)	23.9346 (60.5389)	-0.009 (0.0298)	-0.0439 (0.0344)
$R^2$	0.047	0.823	0.667	0.049	0.841	0.721
N	3,986	3,466	3,657	4,278	3,746	3,883
Mean TSF Fatalities	0.089	0.126	0.124	0.087	0.111	0.110
<b>Panel C: PKK Fatalities</b>						
PKK Fatalities	-16.4107 (9.9350)	-0.0170** (0.0085)	-0.0148* (0.0083)	1.6823 (19.5244)	0.0031 (0.0121)	-0.0098 (0.0151)
$R^2$	0.047	0.823	0.667	0.049	0.841	0.72
N	3,986	3,466	3,657	4,278	3,746	3,883
Mean PKK Fatalities	0.231	0.321	0.314	0.225	0.280	0.276

Notes: Table shows the effect of conflicts, measured as fatalities from [Kibris \(2020\)](#) per thousand people, on health outcomes for the second generation from the DHS. Panel B measures conflict intensity as fatalities of members of the Turkish Armed Forces (TSF), and Panel C as fatalities for members of the PKK. Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with the province, birth year fixed effects, survey year indicators and urban dummy.

**Table A15: Conflict and Education in the Second Generation, Controlling for the “Off to School” Program**

	Progress	Still in School	Dropout	Primary School	Secondary School Att.
	(1)	(2)	(3)	(4)	(5)
<b>Panel A: Full Sample</b>					
Human Loss	-0.0243 (0.0268)	-0.0088 (0.0138)	0.0104 (0.0126)	-0.0089 (0.0280)	-0.0072 (0.0448)
Program	-0.0665*** (0.0129)	-0.0914*** (0.0161)	0.0057 (0.0076)	-0.1044*** (0.0339)	-0.0580* (0.0298)
$R^2$	0.046	0.061	0.048	0.082	0.762
N	15,225	15,848	15,818	5,857	5,857
Mean Dependent Variable	0.941	0.961	0.013	0.949	0.656
Mean Human Loss	0.079	0.079	0.079	0.079	0.079
<b>Panel B: Girls Only</b>					
Human Loss	-0.0407 (0.0490)	-0.0028 (0.0207)	0.0104 (0.0108)	-0.0425 (0.0506)	-0.069 (0.0588)
Program	-0.0935*** (0.0147)	-0.0635*** (0.0179)	-0.0016 (0.0095)	-0.1210*** (0.0366)	-0.0764* (0.0447)
$R^2$	0.05	0.088	0.06	0.107	0.752
N	7,406	7,803	7,787	2,912	2,912
Mean Dependent Variable	1.115	0.951	0.016	0.946	0.655
Mean Human Loss	0.081	0.081	0.081	0.081	0.081

Notes: Table shows the effects of exposure to conflicts, measured as human losses from (START, 2022) for the mother’s generation on educational outcomes of the second generation from the DHS, controlling for a large scale program that encouraged girls to return to school (Somuncu, 2006). Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with the province, mother’s birth year and child’s age fixed effects, survey year indicators and urban dummy. Education outcomes are defined in the text.

**Table A16: Conflict, Migration, and Education in the Second Generation**

	Progress	Still in School	Dropout	Primary School	Secondary School Att.
	(1)	(2)	(3)	(4)	(5)
<b>Panel A: Full Sample</b>					
Human Loss	-0.0248 (0.0297)	-0.0173 (0.0170)	0.0136 (0.0141)	-0.0257 (0.0353)	-0.0238 (0.0538)
x Moved	-0.0003 (0.0239)	0.0288 (0.0236)	-0.0115 (0.0114)	0.0551 (0.0425)	0.0532 (0.0440)
$R^2$	0.046	0.061	0.048	0.083	0.763
N	15,225	15,848	15,818	5,857	5,857
<b>Panel B: Girls Only</b>					
Human Loss	-0.0274 (0.0576)	-0.0218 (0.0242)	0.0166 (0.0125)	-0.0586 (0.0668)	-0.0769 (0.0787)
x Moved	-0.0448 (0.0429)	0.0655 (0.0401)	-0.0216 (0.0216)	0.0576 (0.0774)	0.0315 (0.0838)
$R^2$	0.05	0.089	0.06	0.108	0.752
N	7,406	7,803	7,787	2,912	2,912
<b>Panel C: Boys Only</b>					
Human Loss	-0.0175 (0.0313)	-0.0154 (0.0198)	0.0108 (0.0196)	0.0064 (0.0320)	0.0140 (0.0469)
Moved	0.0385 (0.0307)	-0.0089 (0.0356)	-0.002 (0.0075)	0.0538** (0.0236)	0.0824** (0.0348)
$R^2$	0.062	0.046	0.052	0.09	0.786
N	7,819	8,045	8,031	2,945	2,945

Notes: Table shows how the effects of exposure to conflicts, measured as human losses from (START, 2022) for the mother's generation on educational outcomes of the second generation from the DHS, varies by migration history. Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with the province, mother's birth year and child's age fixed effects, and survey year indicators. Each column also controls for the urban dummy. Education outcomes are defined in the text.

**Table A17: Conflict and Second Generation Education: IV Estimates**

	Progress (1)	Still in School (2)	Dropout (3)	Primary School (4)	Secondary School Att. (5)
	<b>Panel A: Full Sample</b>				
Human Loss	-0.1902 (0.1249)	-0.1303* (0.0737)	0.0809 (0.0500)	-0.0828 (0.0670)	-0.2101** (0.0922)
N	15,225	15,848	15,818	5,857	5,857
First-stage	-0.0257*** (0.0007)	-0.0258*** (0.0007)	-0.0258*** (0.0007)	-0.0292*** (0.0007)	-0.0292*** (0.0007)
F-stat for first-stage	170.44	168.99	169.12	66.96	66.96
	<b>Panel B: Drop Coastal Regions (NUTS1&gt;6)</b>				
Human Loss	-0.1057 (0.0736)	-0.0508 (0.0665)	0.0032 (0.0245)	-0.1277 (0.1544)	-0.2072 (0.1789)
N	8,657	9,099	9,079	3,348	3,348
First-stage	-0.0722*** (0.0021)	-0.0722*** (0.0021)	-0.0722*** (0.0021)	-0.0784*** (0.0035)	-0.0784*** (0.0035)
F-stat for first-stage	178.57	175.30	175.62	73.39	73.39
	<b>Panel C: Restricted to Kurdish Regions (NUTS1&gt;9)</b>				
Human Loss	-0.0842 (0.0749)	-0.1404 (0.0931)	0.0057 (0.0250)	-0.3545 (0.2329)	-0.2698 (0.2339)
N	5,550	5,932	5,917	2,160	2,160
First-stage	-0.0992*** (0.0038)	-0.0992*** (0.0038)	-0.0992*** (0.0038)	-0.1091*** (0.0067)	-0.1091*** (0.0067)
F-stat for first-stage	156.50	151.74	151.97	65.42	65.42
	<b>Panel D: Restricted to OHAL Regions (NUTS1&gt;10)</b>				
Human Loss	-0.0976 (0.0766)	-0.1549 (0.0988)	0.0004 (0.0272)	-0.3756 (0.2554)	-0.3038 (0.2517)
N	4,043	4,323	4,310	1,552	1,552
First-stage	-0.1157*** (0.0048)	-0.1157*** (0.0048)	-0.1157*** (0.0048)	-0.1235*** (0.0085)	-0.1235*** (0.0085)
F-stat for first-stage	130.43	124.86	125.02	53.64	53.64

Notes: Table shows the effects of exposure to conflicts, measured as human losses from (START, 2022) for the mother's generation on education outcomes of the second generation from the DHS, using the IV approach described in the text. Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with the province, mother's birth year and child's age fixed effects, urban and gender dummies and survey year indicators.

**Table A18: Conflict and Second Generation Education: Robustness to Specific Regions**

	Progress (1)	Still in School (2)	Dropout (3)	Primary School (4)	Secondary School Att. (5)
<b>Panel A: Drop Istanbul</b>					
Human Loss	-0.0113 (0.0263)	-0.0049 (0.0146)	-0.0013 (0.0075)	-0.0200 (0.0303)	-0.0094 (0.0498)
$R^2$	0.048	0.069	0.05	0.09	0.759
N	14,195	14,780	14,756	5,459	5,459
Mean Human Loss	0.075	0.075	0.075	0.075	0.075
<b>Panel B: Drop Istanbul, Ankara and Izmir</b>					
Human Loss	-0.0170 (0.0274)	-0.0026 (0.0141)	-0.0012 (0.0080)	-0.0107 (0.0306)	-0.0055 (0.0531)
$R^2$	0.050	0.071	0.050	0.092	0.766
N	13,389	13,959	13,937	5,153	5,153
Mean Human Loss	0.076	0.076	0.076	0.076	0.076
<b>Panel C: Drop Coastal Regions (NUTS1&gt;6)</b>					
Human Loss	-0.0159 (0.0257)	-0.0019 (0.0142)	0.0021 (0.0067)	-0.0074 (0.0347)	0.027 (0.0586)
$R^2$	0.079	0.087	0.052	0.106	0.738
N	8,657	9,099	9,079	3,348	3,348
Mean Human Loss	0.102	0.102	0.102	0.102	0.102
<b>Panel D: Restrict to Kurdish Regions (NUTS1&gt;9)</b>					
Human Loss	-0.0126 (0.0230)	-0.0076 (0.0160)	0.0023 (0.0071)	-0.0183 (0.0366)	0.0347 (0.0623)
$R^2$	0.084	0.093	0.051	0.115	0.706
N	5,550	5,932	5,917	2,160	2,160
Mean Human Loss	0.151	0.151	0.151	0.151	0.151
<b>Panel E: Restrict to OHAL Regions (NUTS1&gt;10)</b>					
Human Loss	-0.0174 (0.0226)	-0.0163 (0.0169)	0.0051 (0.0068)	-0.0221 (0.0374)	0.0209 (0.0657)
$R^2$	0.089	0.092	0.050	0.109	0.721
N	4,043	4,323	4,310	1,552	1,552
Mean Human Loss	0.167	0.167	0.167	0.167	0.167

Notes: Table shows how the effects of exposure to conflicts, measured as human losses from (START, 2022) for the mother's generation on the education outcomes of the second generation from the DHS, vary by region. Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with the province, mother's birth year and child's age fixed effects, child's gender, urban dummy and survey year indicators.



**Table A19: Conflict and Education in the Second Generation Using Alternative Conflict Measures**

	Progress (1)	Still in School (2)	Dropout (3)	Primary School (4)	Secondary School Att. (5)
<b>Panel A: All Fatalities</b>					
Total Fatalities	0.0007 (0.0035)	-0.0001 (0.0017)	-0.0003 (0.0012)	-0.0029 (0.0032)	-0.0051 (0.0060)
$R^2$	0.046	0.061	0.048	0.082	0.762
N	15,225	15,848	15,818	5,857	5,857
<b>Panel B: TSF Fatalities</b>					
TSF Fatalities	-0.002 (0.0117)	-0.002 (0.0065)	0.0009 (0.0053)	-0.0095 (0.0131)	-0.0144 (0.0241)
$R^2$	0.046	0.061	0.048	0.082	0.762
N	15,225	15,848	15,818	5,857	5,857
<b>Panel C: PKK Fatalities</b>					
PKK Fatalities	0.0016 (0.0049)	0.0001 (0.0022)	-0.0006 (0.0014)	-0.0040 (0.0040)	-0.0074 (0.0076)
$R^2$	0.046	0.061	0.048	0.082	0.763
N	15,225	15,848	15,818	5,857	5,857

Notes: Table shows the effect of conflicts, measured as fatalities from [Kibris \(2020\)](#) per thousand people, on education attainment of the second generation from the [Hacettepe University Institute of Population Studies \(2019\)](#). Standard errors clustered by province are shown in parentheses. Asterisks denote significance levels (\*=.10, \*\*=.05, \*\*\*=.01). Each column is from a separate regression with the province, mother's birth year and child's age fixed effects, child's gender, urban dummy and and survey year indicators. Education outcomes are defined in the text.