

# Missing children: A demographic analysis of child disappearances in Guatemala

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May 15, 2021

## Abstract

Demographers have long neglected the population of ‘disappeared’ - individuals reported as missing by family or friends. As a result, little is known about the composition of this population by sex and age. However, the prevalence of disappeared people can be high in regions experiencing high levels of violence. Here, we offer the first detailed picture of the demographic composition and dynamics of the population of disappeared children (0-17 yo) in Guatemala. For this, we use individual-level data on disappearances collected from Twitter and official data from the Guatemalan National Police. In our ongoing analysis, we investigate the impact of disappearances on age- and sex-specific mortality rates under different scenarios. Preliminary results reveal a high concentration of disappeared individual below age 18. Adolescent women are the most likely group to be reported as missing. This paper shows the need for more studies on the population of disappeared. The results also have policy implications. Initially, we advocate for much-needed protection to children in general and young women in particular. We also highlight the need to provide support to individuals who experienced the disappearance of a loved one and inhabit, as a result, a liminal space somewhere between grief and loss.

## 1 Introduction

Disappeared people, individuals reported as ‘missing’ and whose status as dead or alive is unknown, have received surprisingly little attention in the demographic literature. Nevertheless, disappearances are relatively common in some settings. In Guatemala, for example, almost 40,000 individuals were reported as missing between 2003 and 2019, half of whom were children under 18 years of age. We argue that demographers

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should give more attention to the population of disappeared. Disappeared individuals are not registered as a death in vital statistics systems in spite of the fact that many never ‘reappear’ (Citroni, 2014). This may affect the estimations of age- and sex-specific demographic rates, particularly if disappearances are clustered within population subgroups. In addition to this, disappearances may have profound implications for the individuals who lose a relative or acquaintance. The disappearance of a family member is a highly stressful event linked to severe mental health consequences for relatives, who inhabit a space somewhere between grief and loss (Lenferink et al., 2018; Parr et al., 2016).

In this paper, we provide the first systematic description of the population of disappeared minors (0-17 yo) in Guatemala during the 2018-2020 period. The only available data on disappeared individuals in Guatemala are aggregated records from the National Civilian Police. We obtain individual-level data on disappeared minors from the official Twitter account of the *Alerta Alba-Keneth*, a governmental warning system tasked with disseminating information about disappeared minors in Guatemala. Combining these two data sources, we ask: (1) What is the composition of the population of disappeared minors by age and sex and how has this varied over time? (2) What is the potential impact of disappeared minors on age- and sex-specific mortality rates in Guatemala? This is the first project to study the population of disappeared minors using demographic methods in Guatemala or, to be best of our knowledge in any other setting.

## 2 Data and Analysis

We extract individual-level data on disappeared minors (individuals aged 0-17) from the Twitter account of *Alerta Alba-Keneth*, (@alba\_keneth), an inter-governmental agency tasked with the search, location, and protection of disappeared or abducted minors. This agency collects reports on missing children made to any governmental agency in addition to those made directly to Alba-Keneth through their website and hotline, making it the most comprehensive source of data on disappeared children in the country. We collected tweets covering the 2019-2020 period and extracted information on the minors’ demographic attributes (date and place of disappearance, age and sex) using optical character recognition techniques (OCR).

In addition to this, we obtained data on disappeared persons from the National Civilian Police. The data includes the aggregated number of disappearances reported to the police by wider age groups (0-17, 18-35, 36-55, and 56+) and month of the event. It covers the period from January 2003 to August 2019, but we only used data after 2010 given data quality concerns for the earlier records. These data only includes disappearances reported to the police and we expect it to under-represent the total number of disappeared individuals, particularly among those below age 18.

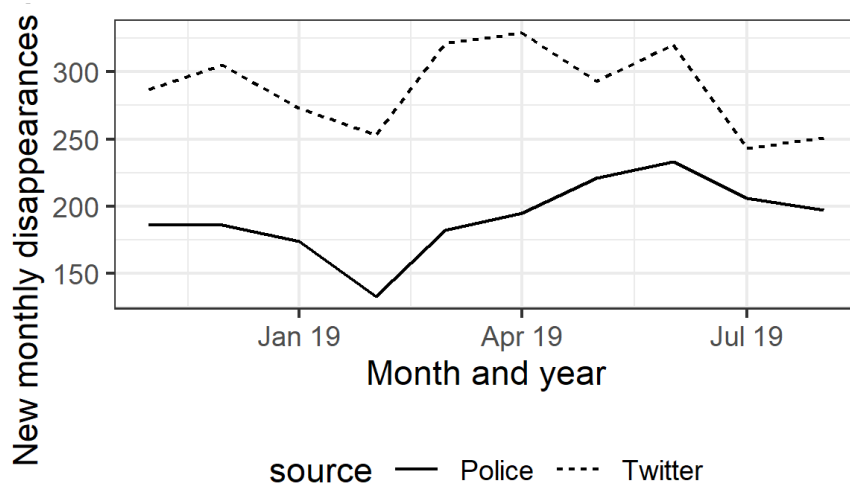


Figure 1: Monthly disappeared minors: a comparative overview of data from the Guatemalan National Police and Alerta Alba-Keneth.

### 3 Preliminary results

Around 40,000 individuals have been reported in Guatemala as missing since 2003, more than half of whom were minors. Figure 1 shows the number of monthly disappearances from the Twitter and police data in the period in 2019 for which they overlap. Although both series show similar fluctuations over time, the Twitter estimates are higher because the Alerta Alba Keneth system incorporates reports from multiple government agencies, including the police.

Next, we evaluate the distribution of disappeared minors by age and sex. We obtained this from the Twitter data since the police data does not include information on the distribution of disappeared minors by age or sex. Figure 2 shows monthly disappearances by minor’s age group: infants (0-4), children (4-12), and adolescents (13-17). The most striking finding is that adolescent women are the largest sub-population of disappeared minors and were almost twice as likely to be reported as missing as boys the same age.

### 4 Next steps

We are currently updating our estimates to include data for 2020. We plan to implement a scenario-based approach to estimate the effect of disappearances on under-18 mortality rates. The effect of disappearances on mortality rates depends on what we assume the ultimate fate of disappeared people to be. For instance, if the missing children die, that would increase the numerator of the rates. Alternatively, if missing children leave the country for any reason, this would reduce the denominator. Finally,

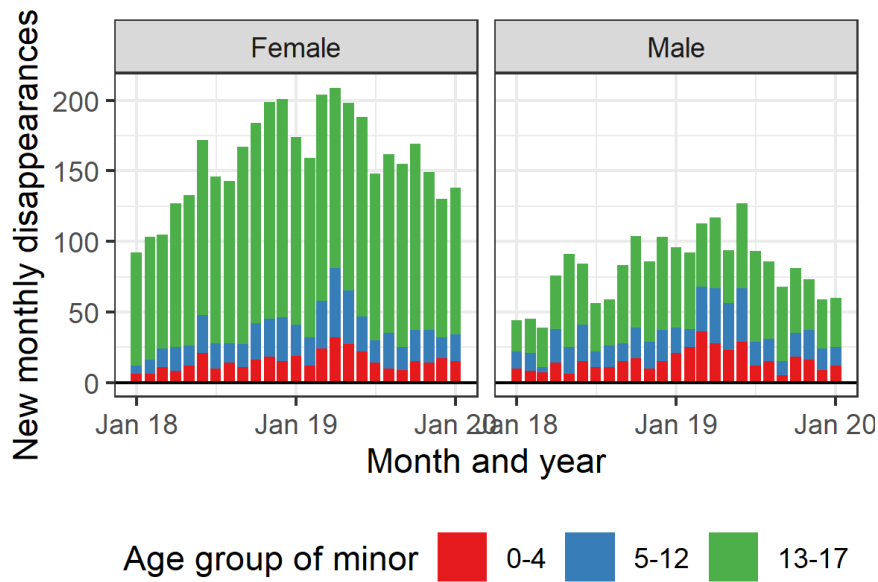


Figure 2: Age and sex distribution of the monthly disappeared youth (2018-2019) according to the Alerta Alba-Keneth Twitter data.

if they remain in the country, this would not affect the numerator or denominator. We are currently operationalizing this approach using official mortality data.

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