

# Worldwide Changes in Unintended Pregnancies

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## Keywords

Unintended pregnancy, unplanned pregnancy, cross-national

## Introduction

Approximately 23% of all births worldwide are unintended (Bearak, Popinchalk, Alkema, & Sedgh, 2018). This number is worrying given that unintended births are associated with adverse outcomes. Women who experience an unintended pregnancy tend to delay seeking antenatal care and are less likely to make behavioral changes which are beneficial (Stern et al., 2016; Weller, Eberstein, & Bailey, 1987). In addition, unintended pregnancies often happen soon after a previous pregnancy, which give women less time to physically recuperate (Tsui, McDonald-Mosley, & Burke, 2010). Moreover, they are more likely to occur early in a relationship to people who are less emotionally and financially prepared (Miller, 2012; Sessler, Miller, & Favinger, 2009). Taken together, these mechanism accumulate to a higher risk of preterm deliveries, low pregnancy weight, and negative social, psychological and health consequences (Crissey, 2005; Mohllajee, Curtis, Morrow, & Marchbanks, 2007).

Globally, fertility rates have continuously declined, from an average of 4.7 births per woman in 1960 to an average of 2.3 in 2020 (The World Bank, n.d.). Given the increasing availability and use of family planning methods, one might expect that unintended pregnancy rates have decreased more rapidly than intended pregnancy rates, resulting in a reduction in the percentage of unintended pregnancies over time. Interestingly, scholars suggest that this is probably not the case (Baird et al., 2018; Bearak et al., 2018; Klijzing, 2000). The reason is that a country's improved use of family planning methods tends to coincide with a preference for smaller families (Bearak et al., 2018; Klijzing, 2000). During the transition to a preference for smaller families, women are for a larger part of their lives exposed to the risk of an unintended pregnancies, which increases their demand for family planning methods (Klijzing, 2000). It is assumed that in the early stages of this transition, this demand is not yet satisfied, which results in an increase in the percentage of unintended pregnancies (Baird et al., 2018). It is expected that the percentage of unintended pregnancies will reduce once family planning methods are universally available in a country (Klijzing, 2000).

According to this theory, the percentage of unintended pregnancies over time would follow an inverted u-shape pattern similar to the pattern shown in Figure 1. However, this

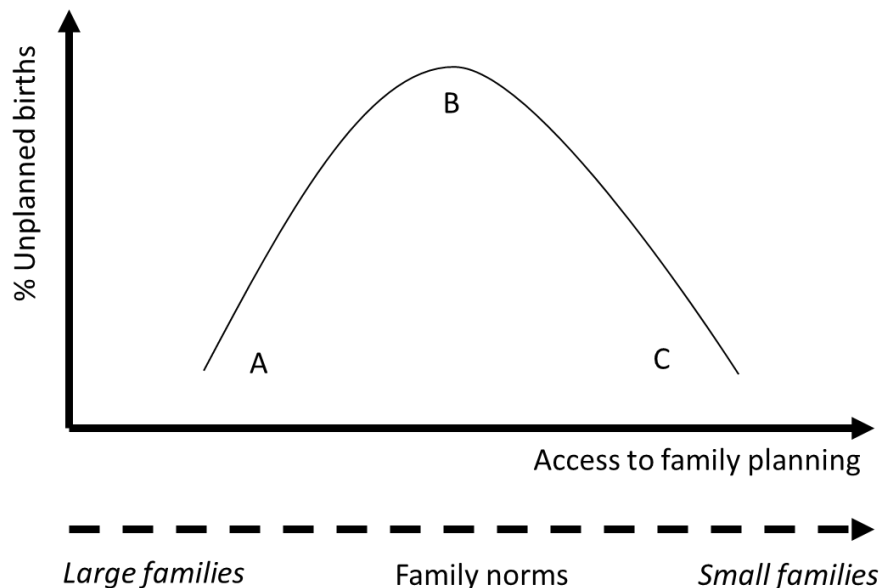
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theoretical model has yet to be empirically proved. Therefore, the aim of the current study is to examine how the percentage of unintended pregnancies has developed within different countries over time. More specifically I want to answer the following research question: *Is the reduction in number of births accompanied by a similar reduction in the proportion of unintended pregnancies?* The current study builds upon previous research which examined changes in unintended pregnancies across regions from 1990-2014 (Bearak et al., 2018). This study found some support for an inverted u-shaped pattern. In regions where populations changed to a preference for smaller families but access to family planning lacked behind - which was the case in Eastern Europe in the 1990s and Latin America in the 2000s - the percentage of unintended pregnancies increased (Bearak et al., 2018). However, because the estimates in the paper of Bearak et al. (2018) are based on different collections of countries at different points in time, the authors are not able to rule out that these observed patterns are an artifact of their methodological approach (Bearak et al., 2018).

The current study will not focus on regional changes, but instead on changes at the national level. The paper will provide important insights for policy development. Often, once a country's fertility rates drop and total fertility rates are close or below replacement levels, attention at the national level shifts from prevention of unintended pregnancies to prevention of unfulfilled family intentions. Understanding the development of unintended pregnancies is important to discern if this strategy is justified or if both issues should receive equal attention. Keeping this in mind, it is particularly important to understand if the percentage of unintended pregnancies remain high, or if they indeed reduce after a transition period.

**Figure 1.** Schematic overview of trend in percentage of unintended pregnancies over time.



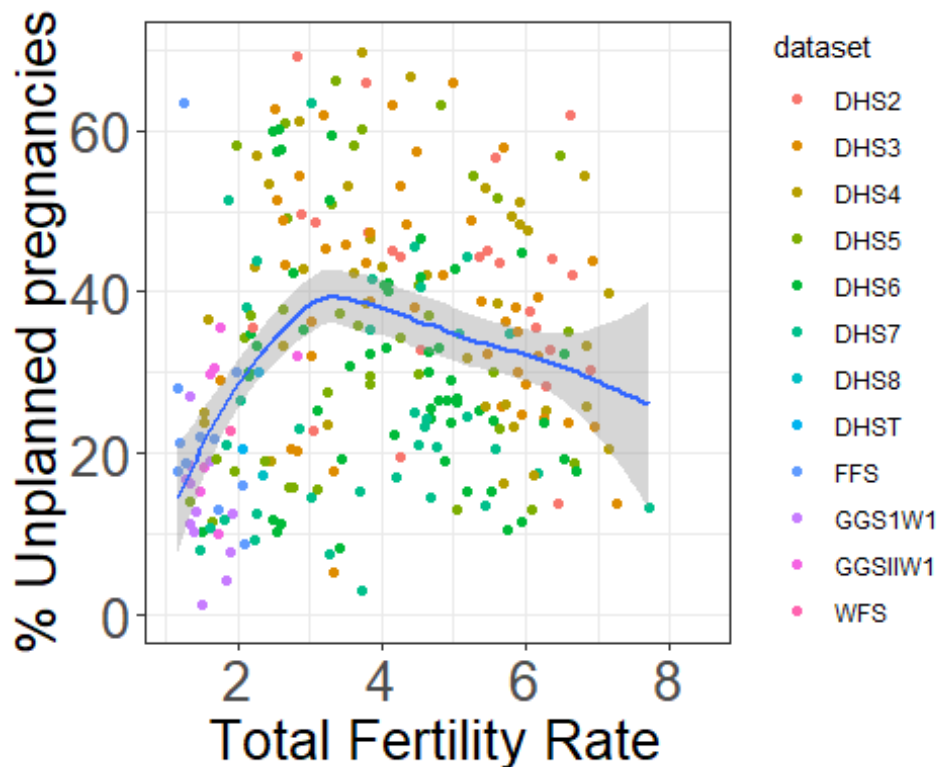
## Data and methods

Thus far information of the Generations and Gender Survey Round I (12 countries), Round II (8 countries), Family and Fertility Surveys (12 countries), and the Demographic and Health Surveys Round 2-8 (N=267) is included. Of each dataset, information of women aged 20-49 was selected. Using information of current pregnancy status (pregnant or not) and the level of intentness of this pregnancy, the percentage of unintended pregnancies is calculated. Information of the fertility rate was obtained from of the World Bank (The World Bank, n.d.). The data of the World Bank and of the survey data was matched on the basis of country name and year of data collection.

## Preliminary results

Preliminary results (Figure 2) suggest that the percentage of unintended pregnancies does follow an inverted u-shaped pattern while fertility rates decline. The peak lies around a TFR of 3 children per woman. In these countries about 40% of women report on having an unintended pregnancy. In countries with lower and higher TFR's, the percentage of unintended pregnancies tends to be lower. In countries where women have on average 6 children over the life course, about 30% of women report on having an unintended pregnancy. The same is true for countries in which women have on average 2 children.

**Figure 2.** Scatterplot showing the relationship between unintended pregnancies (y-axis) and total fertility rate (x-axis).



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