Standardized Contraceptive Prevalence Rate (sCPR): A New Indicator Adjusted for Use-Effectiveness and Continuation Rate

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Extended Abstract

The most common key indicator used to track progress in family planning is the contraceptive prevalence rate (CPR). However, it is difficult to compare progress in family planning achievements by CPR alone. Contraceptive methods vary in use-effectiveness in terms of pregnancy prevention. Moreover, irregular use and early discontinuation increase the risk of accidental and unwanted pregnancies among the users. In the current practice, CPR is based on the point estimate of the percent of women or men using a method and does not consider these key effectiveness factors that determine the level of protection. We propose a standardized CPR that is adjusted for the length of use and use-effectiveness. The analysis of data from 116 Demographic and Health Survey (DHS) rounds in 54 countries suggest that on average sCPR is 6.9% lower (range 1.8% to 15.0%) than the CPR suggesting that many countries rely on short-term, low-effective methods.

The duration of contraceptive use during the last 12 months are derived from the calendar data in the DHS. All the countries that have collected contraceptive use history in calendar are included in this analysis.

The use-effectiveness of each contraceptive method (modern and traditional) is derived from the WHO Contraceptive Effectiveness Chart.

We estimated sCPR = \( \frac{\sum (\text{method}_{i}, \text{inmonth}_{j} \times \text{use}_{-\text{effectiveness}_{i}})}{12} \).

Figure 1 shows the relationship between CPR and sCPR, and Figure 2 shows the absolute difference between the two indicators. Countries having high prevalence of traditional methods show the largest differences.

One of our key interests is to examine the relationship between sCPR and fertility, in comparison to the relationship between CPR and fertility. We hypothesize that sCPR is a better predictor of fertility than the CPR.
Table 1: Comparison of different CPR indicators

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Figure 1: Concurrency between CPR and sCPR in 116 DHS surveys
Figure 1: Difference between CPR and sCPR in 116 DHS surveys