

# How the Community Shapes Unmet Need for Modern Contraception: a Secondary Analysis of 44 DHS Surveys



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## Background

- Access to modern methods of contraception (such as pills, implants, IUDs, and condoms) and the resulting decline in fertility are associated with economic gains, improved health outcomes for women, and improved gender equality
- 191 million women in Low and Middle Income Countries (LMIC) have an unmet need for modern contraception, and fulfilling unmet need in LMICs could avert up to 30% of all pregnancy-related deaths in these countries
- Factors affecting contraceptive use exist at all levels of the social-ecological model: individual, household, and community
- Community-level factors focus on the prevailing socio-cultural and economic norms of contraceptive use
- While individual and household-level correlates are more widely studied, little is known about how a woman's community affects her unmet need for modern contraception

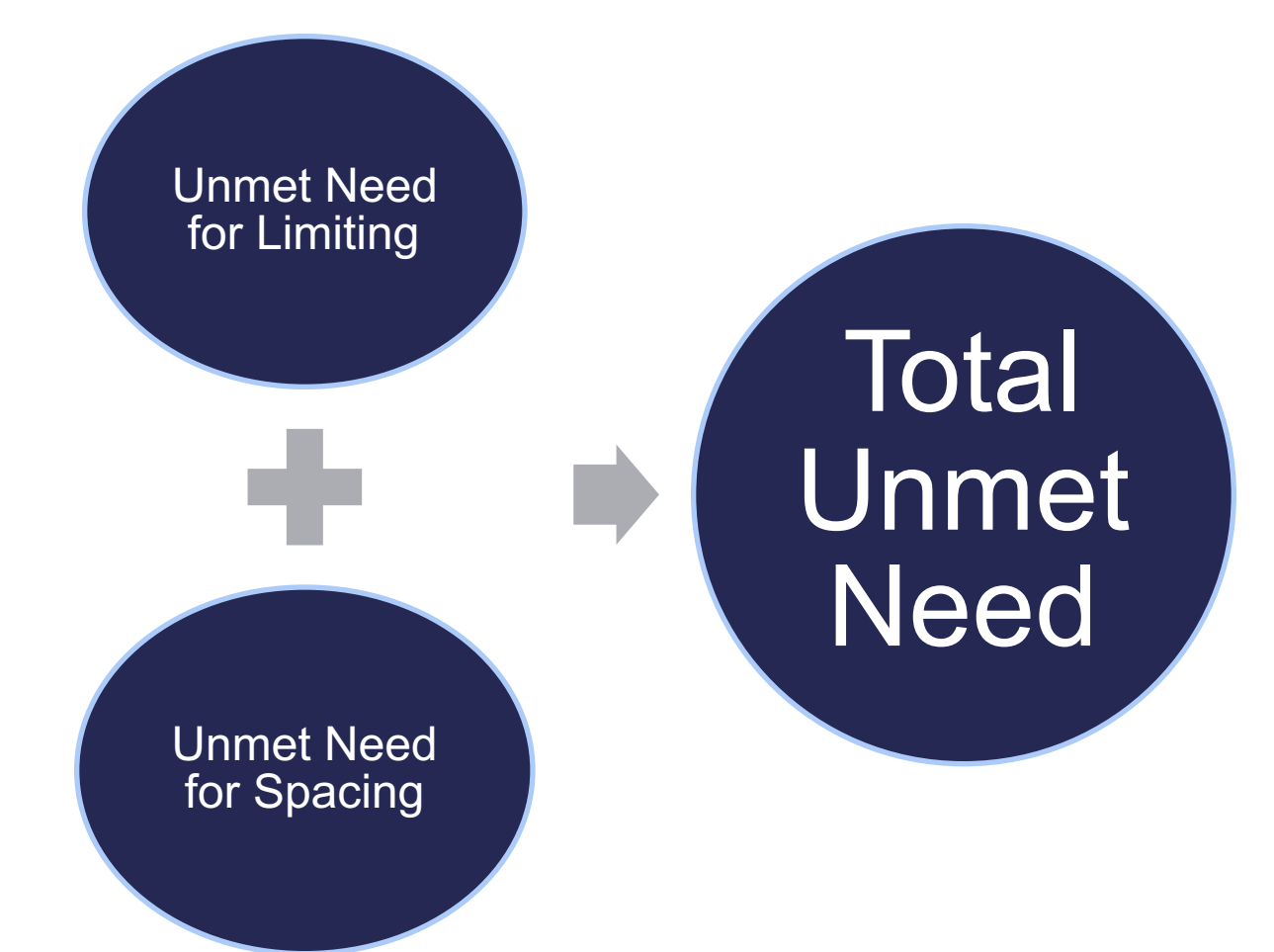
## Research Question, Data and Methods

- **Research Question:** are there community-level factors associated with unmet need for modern contraception in a global context?
- **Data:** was derived from all Demographic and Health Surveys (DHS) collected 2010-2015
- Surveys were combined to create a 44-country dataset of parous women (n=528,101) covering all six WHO regions
- Individual data was aggregated to the Primary Sampling Unit (PSU) to create community-level data
- **Methods:** a multilevel modeling approach was used to account for the hierarchical nature of the data and allow for the observation of community-level influences on unmet need for contraception. The PSU was included as the only random effect term.
- A second analysis was performed with countries stratified by Total Fertility Rate (TFR) into Low, Medium, and High Fertility countries to determine if the effects of community-level variables change based on fertility context
- All models included individual, household and community-level covariates



## Outcome Measures

- **Unmet Need:** Fecund women of reproductive age (ages 15-49) who want to stop or delay childbearing but are not currently using any modern method of contraception
- Unmet need is further delineated into:
  - Unmet Need for Limiting: a woman wants to stop having children altogether
  - Unmet Need for Spacing: a woman wants to increase intervals between births



### Community Demographics and Fertility Norms: The community's average:

- Age at first marriage
- Age at first intercourse
- Age at first birth
- Ideal number of children
- Ratio of boys to girls

### Community Economic Prosperity: The community's average:

- Wealth index factor score

### Community Gender Norms and Inequalities: The community's average:

- Score on Intimate partner violence justification index
- Score on female decision-making autonomy index
- Proportion of women with primary education
- Proportion of men with primary education

### Community Health Service Availability: The community's average:

- Score on the HIV knowledge index
- Number of family-planning-related media messages per month

## Associations Between Community-Level Effects and Unmet Need in a Global Context

44-Nation Sample (n=528,101)	Total Unmet Need	Unmet Need for Limiting	Unmet Need for Spacing
<b>Community Demographics and Fertility Norms</b>			
Mean age at cohabitation	0.96, (0.93-0.99), p=0.007*	0.93, (0.90-0.96), p=0.000*	N/S
Mean age at sexual debut	N/S	1.05, (1.01-1.10), p=0.016*	N/S
Mean ideal number of children	0.93, (0.90-0.97), p=0.000*	0.90, (0.86-0.94), p=0.000*	N/S
Mean ratio of boys to girls	1.18, (1.07-1.31) p=0.001*	1.18, (1.05-1.33), p=0.006*	N/S
<b>Community Economic Prosperity</b>			
Mean community wealth	N/S	1.10, (1.05-1.15) p=0.000*	N/S

	Total Unmet Need	Unmet Need for Limiting	Unmet Need for Spacing
<b>Gender Norms and Inequalities</b>			
Mean violence justification index score	1.15, (1.09-1.20), p=0.000*		1.26, (1.19-1.34), p=0.000*
Mean decision-making autonomy index score	N/S	0.85, (0.77-0.94), p=0.001*	N/S
Mean primary education attainment (female)	0.30 (0.2-0.36), p=0.000*	0.19 (0.15-0.25), p=0.000*	0.73, (0.56-0.97), p=0.029*
Mean primary education attainment (male)	2.55 (2.07-3.15), p=0.000*	2.55, (1.98-3.30), p=0.000*	1.99, (1.49-2.66), p=0.000*
Mean ratio of men to women in employment	1.40 (1.23-1.60), p=0.000*	0.59, (1.35-1.86), p=0.000*	N/S
<b>Community Health Knowledge and Media Messaging</b>			
Mean HIV knowledge index score	1.10 (1.05-1.16), p=0.000*	1.12, (1.05-1.19), p=0.000	N/S
Mean family planning media message saturation	0.85 (0.79-0.91), p=0.000*	0.81, (0.74-0.89), p=0.000*	0.84, (0.76-0.93), p=0.000*

\*p<0.05

## Differences by Total Fertility Rate

Associated With	44-Country Sample	Low-Fertility Countries	Medium-Fertility Countries	High-Fertility Countries
Increased Unmet Need				
Decreased Unmet Need				

## Summary

Community-level factors can be nested into four broad domains that cover: community demographics and fertility norms, community economic prosperity, community gender norms and inequalities, and community health service availability

A woman's community can have a measurable and significant impact on her individual unmet need for modern contraception: where a woman lives matters for her ability to use desired contraception

Community-level factors vary depending on country-level fertility context

## Conclusions

This is the first large-scale analysis of how the socio-cultural and economic factors of a woman's community are associated with her unmet need for modern contraception

Interventions aimed at reducing unmet need can be tailored to target the community-level factors that are most strongly associated with unmet need in the study community