Title

Measuring Family Planning Provider Bias: A Discrete Choice Experiment Among Burkinabe, Pakistani, and Tanzanian Providers

Authors

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Motivation

Modern contraception allows women to control the timing and number of their pregnancies. Delayed childbirth and spaced pregnancies have well-established health, social and economic benefits.[i] However, nearly 25% of women in low-income countries who want to avoid pregnancy are not using modern contraception, with this figure being over 60% for adolescent girls.[ii] While some of the unmet need for family planning is driven by limited health infrastructure, many women who have access to providers still fail to receive methods that fit their needs.[iii] This suggests that understanding provider decision-making around contraception provision may be crucial to increasing access to modern methods.

The fact that young girls have the most egregious unmet need for contraception suggests that age could be a key driver of provider bias. However, adolescents are often both unmarried and/or nulliparous, and therefore it is difficult to separate the effect of age from the effect of marital status and parity. Prior literature has used a variety of approaches to measure provider bias, but none have been able to isolate the role of individual client attributes.[iv]

This study disentangles the effect of age, marital status, and parity through a discrete choice experiment (DCE) with providers in Burkina Faso, Tanzania and Pakistan.

Data

We use data from a provider survey and a DCE of 811 providers across three different countries: Burkina Faso (n=310), Tanzania (n=301), and Pakistan (n=200). The provider survey elicited self-reported information about how providers engage with youth in their practice as well as their attitudes about the appropriateness of providing family planning counseling to youth clients. The DCE asked about attitudes, beliefs and practices indirectly. The DCE approach presented client vignettes to providers that randomly varied the age, parity and marital status of the client. Providers were then asked about how they would counsel these hypothetical clients on family planning methods.

Methods

We used the DCE to isolate the effect of client age, marital status, and parity on provider decision-making around family planning counseling. For a given client profile, behaviors of interest are the decision to decline counseling altogether or to deny modern methods. Attitudes of interest are whether or not providers think IUDs are inappropriate and whether providers would hesitate to provide counseling on IUDs. We analyzed each binary outcome using logistic regression with standard errors clustered at the provider level. All analyses were stratified by country.

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Findings

We found that there is notable variation across countries in the characteristics that influence provider decisions to provide contraception and in the size of the effect. Table 2 provides country-level averages for all outcome variables. For instance, nearly all providers in Burkina Faso would provide some counseling, while half of Pakistani providers would decline counseling based on client characteristics. Bias is most visible in Pakistan where providers were more likely to exhibit biased behaviors and beliefs to both nulliparous and unmarried women. Bias was subtler in Tanzania and Burkina Faso and was mostly driven by attitudes towards nulliparous women.

Figure 1 shows the impact of age, marital status, and parity in a provider's decision of whether or not to provide counseling. Looking at the Pakistan panel, we see no differential decision-making based on client age. By contrast, Pakistani providers are 55 percentage points more likely to decline counseling to married women compared to unmarried women. As compared to clients with at least 2 children, Pakistani providers were 35 percentage points more likely to decline counseling to nulliparous women. Figures 2-4 show the impact of age, marital status, and parity on denial of modern methods, belief about inappropriateness of IUDs, and hesitation to counsel on modern methods across all three countries.

Table 2. Summary Statistics of Outcome Variables

	(1) Overall	(2) Burkina Faso	(3) Tanzania	(4) Pakistan
Outcome variables				
Provider declined to provide counseling to client	14.10%	0.11%	4.58%	50.00%
Provider denied client modern FP methods (or declined counseling)	22.58%	3.49%	22.11%	53.33%
Believes IUD is an appropriate method for this client	50.33%	59.68%	51.89%	33.33%
Provider hesitates to counsel on modern methods	34.12%	7.30%	56.13%	44.33%
Sample sizes				
Number of providers	790	302	288	200
Number of responses	1784	617	567	600

Figure 1. Provider declines to provide family planning counseling to client

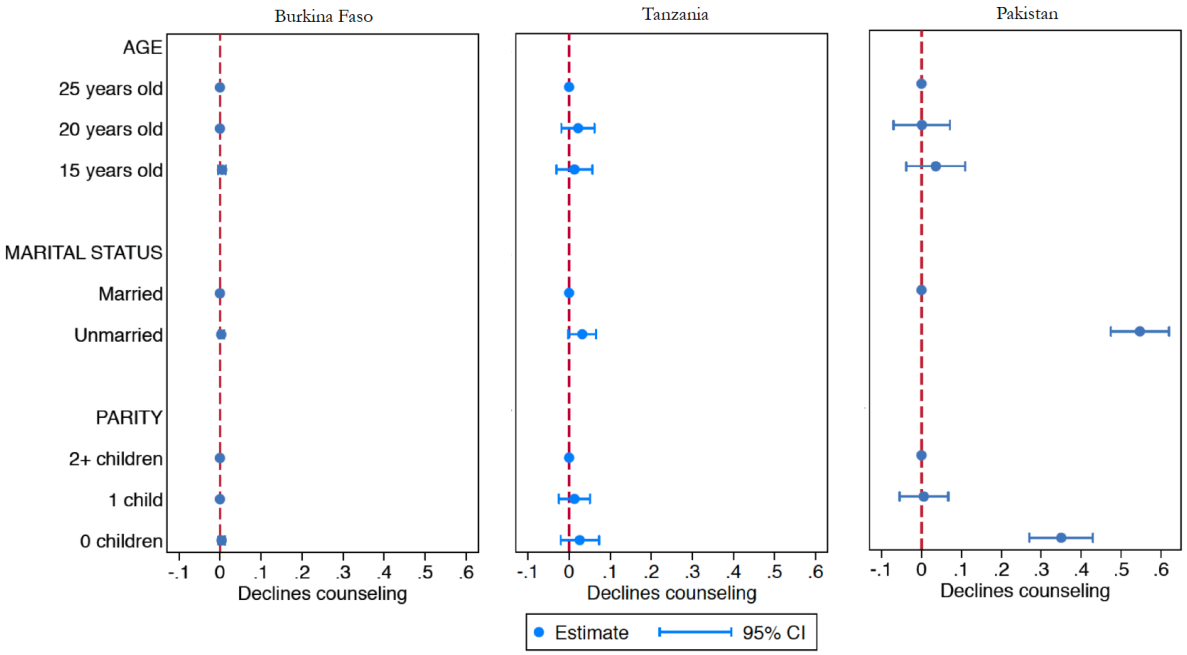


Figure 2. Provider denies modern family planning methods to client

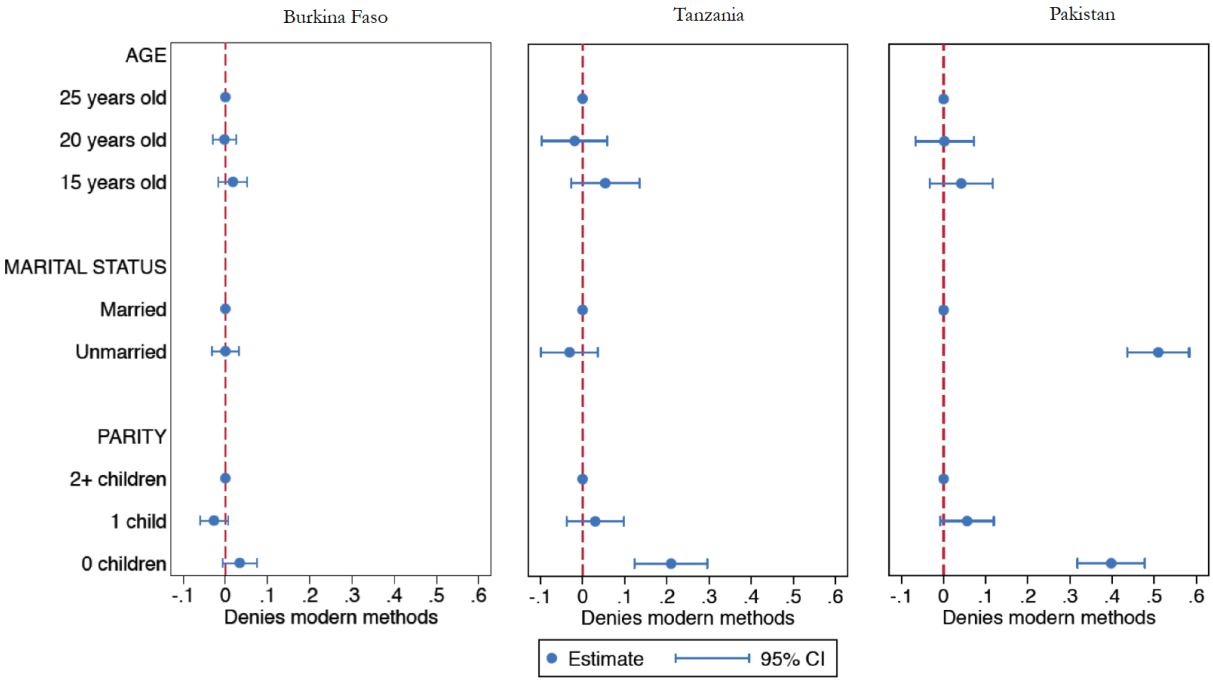


Figure 3. Provider thinks IUD is an inappropriate method for this client

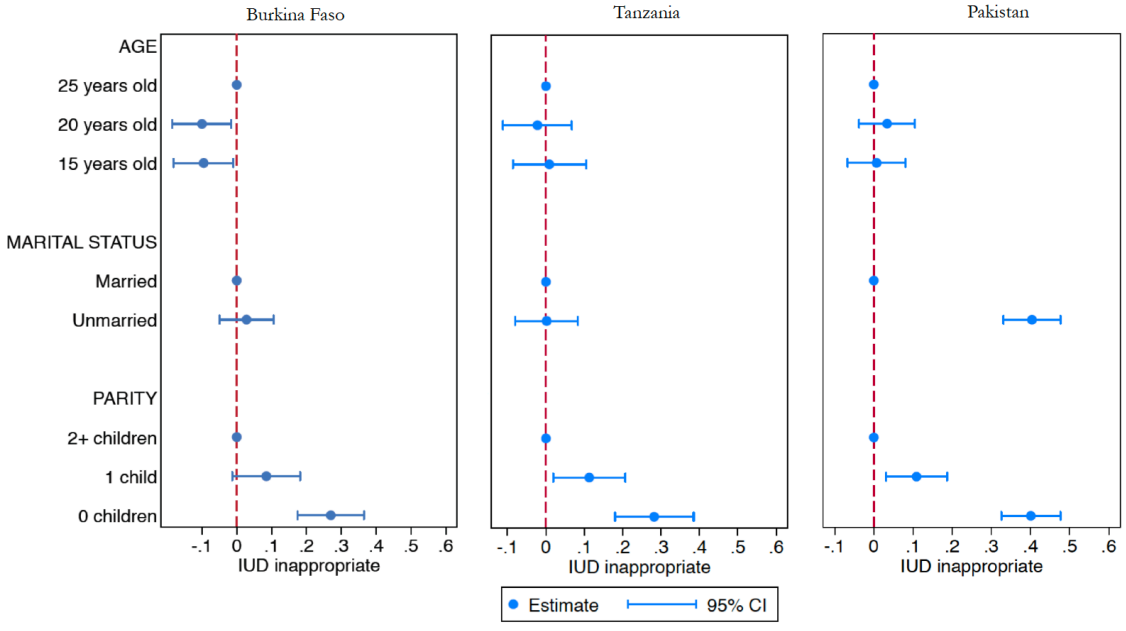
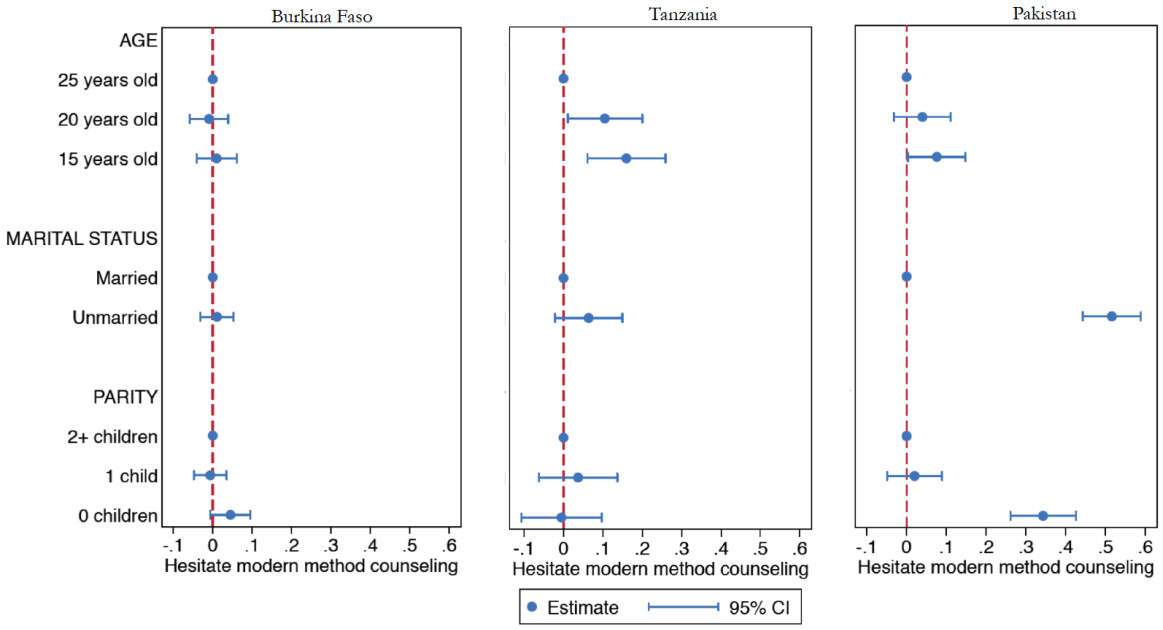


Figure 4. Provider would hesitate to provide counseling on modern methods to this client



References

[i] WHO, U., & Mathers, C. (2017). Global strategy for women's, children's and adolescents' health (2016-2030). *Organization*, *2016*(9).

[ii] Darroch, J., Audam, S., Biddlecom, A., Kopplin, G., Riley, T., Singh, S., & Sully, E. (2017). Adding it up: investing in contraception and maternal and newborn health, 2017. *Fact Sheet. New York: Guttmacher Institute*.

Darroch, J. E., Woog, V., Bankole, A., & Ashford, L. S. (2016). Adding it up: Costs and benefits of meeting the contraceptive needs of adolescents.

[iii] MacQuarrie, K. (2014). Unmet need for family planning among young women: levels and trends.

[iv] Alli, F., Maharaj, P., & Vawda, M. Y. (2013). Interpersonal relations between health care workers and young clients: barriers to accessing sexual and reproductive health care. *Journal of Community Health*, *38*(1), 150–155

Chapman, E. N., Kaatz, A., & Carnes, M. (2013). Physicians and implicit bias: how doctors may unwittingly perpetuate health care disparities. *Journal of General Internal Medicine*, *28*(11), 1504–1510.

Yinger, N., Peterson, A., Avni, M., Gay, J., & Firestone, R. (2002). A framework to identify gender indicators for reproductive health and nutrition programming.