

## **The power of social influence: a social network perspective on men's and women's attitudes toward contraceptive use**

In Sub-Saharan Africa, significant resources have been allocated for family planning programs with activities ranging from improving services to advocating for policy changes, from conducting media campaigns to organizing peer education sessions, and from strengthening contraceptive supply chains to pioneering contraceptive technologies. Yet unmet need for contraception remains high and sustained family planning use remains elusive. Nearly 20 years of family planning programming efforts in Mali have led to the majority of sexually active men and women knowing about both modern and traditional methods and where they can obtain them. Nevertheless unmet need has increased from 26% in 1996 to 31% in 2006, and the modern contraceptive prevalence rate (CPR) has remained around 6% (Mali DHS, 2006). Evidently, unmet need does not represent demand for contraceptive methods, nor do standard family planning program approaches translate into increased contraceptive use.

Many efforts to reduce unmet need have focused primarily on women and, in some cases, their partners without taking into consideration the social networks in which reproductive health decisions are made. This study was designed to better understand the social factors that shape men's and women's attitudes toward contraceptive use and contribute to unmet need for family planning. Following ethnographic work that helped shape our social network study instruments, we conducted a full household census and social network mapping exercises in two Malian villages.

We identified and interviewed all women of reproductive age and all men married to women of reproductive age in each village. The interviews included questions about the respondent's background, followed by current and previous contraceptive use, as well as attitudes and behaviors related to decisions of how many children to have, when to have another child, and whether or not to use contraception. The crux of the interview was identifying the respondents' social networks. Each respondent was first asked to name up to three people who provided him/her material support (i.e., money loans, gifts of food or clothes); up to three people who provided him/her with practical assistance (i.e., child care, help with chores); up to three people who provided him/her with cognitive support (people they could learn from); and up to three people who provided him/her with emotional support. Then respondents were asked several questions about each of the individuals they named—their relationship with them (i.e., relative, friend, community leader, etc.), whether the individual lived in the village or not, how close they felt, and the respondents' perception of the named individual's attitude toward family planning. This resulted in a complete map of each village's social network.

These data were analyzed using the software UCINET to evaluate the relative influence of each individual in the village. InDegree scores were calculated to identify individuals who were *stars* (those named by more people); betweenness scores were calculated to identify individuals who were *connectors* (those who connect individuals and segments of the network). NetDraw was used to create illustrative maps of the village networks.

## **Results**

The villages were nearly identical in size—594 individuals in Village 1 and 595 in Village 2. Given that older women and unmarried people were not interviewed, this resulted in interviews with 366 and 360 individuals in the two villages, respectively, with a response rate of around 90%. The mean age of women was 27.3 in Village 1 and 30.9 in Village 2. About half of women

and one-third of men in both villages were polygamous. Mean parity was about 3.5 for women and 5 for men.

Only 12% and 10% of women in the two villages (9% and 7% of men) were using a modern contraceptive method at the time of the survey. Few village residents were using a traditional method. We estimate unmet need for family planning to be about 30% of women and 34% of men, in both villages. These are individuals who did not wish to become pregnant in the next year, perceived themselves to be fertile, yet were not using any modern or traditional contraceptive method.

We asked respondents if they agreed or disagreed with a range of positive and negative statements about contraceptive use, and created an index from their response (ranging 0-1). The following table shows the mean index score for women and men in the two villages. For respondents with unmet need, the table also shows the reason they gave when asked why they were not using a family planning method, despite not wishing to become pregnant.

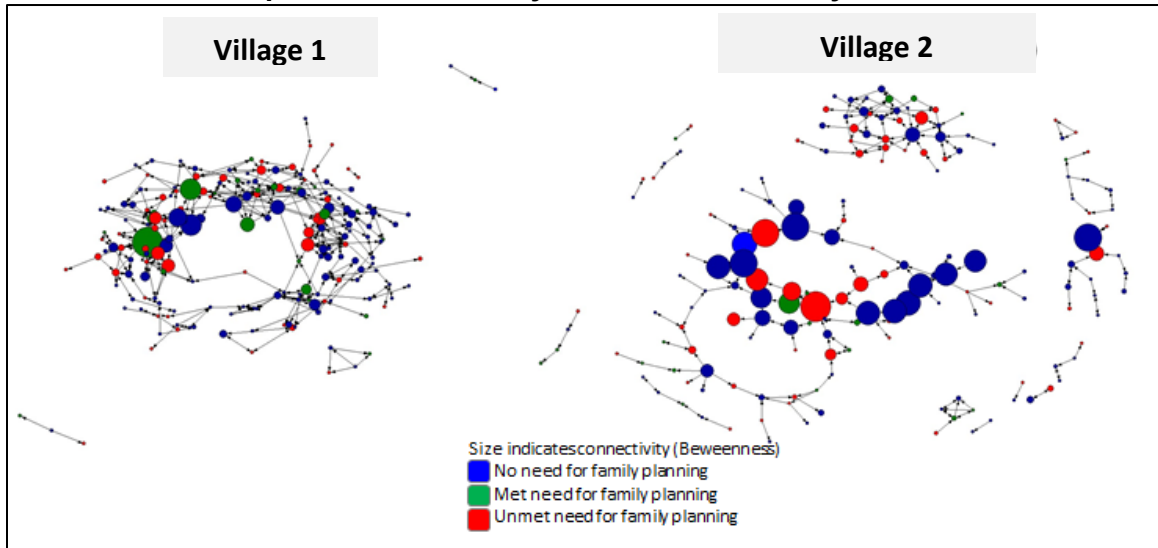
Attitudes toward family planning use	Village 1		Village 2	
	Women N=217	Men N=149	Women N=208	Men N=152
<b>Attitudes</b>				
Mean attitude index	0.415	0.557	0.353	0.439
<b>For respondents with unmet need, the reason they are not using anything<sup>2</sup></b>	(N=64)	(N=52)	(N=56)	(N=52)
God's will	45.3%	75.0%	57.1%	71.2%
Respondent opposed to family planning	1.6%	5.8%	0	1.9%
Spouse opposed to family planning	9.4%	0	5.4%	5.8%
Others opposed to family planning	3.1%	0	0	0
Religious/moral issues	0	1.9%	1.8%	0
family planning is outsider influence	1.6%	1.9%	0	0
Knows no method	14.1%	7.7%	3.6%	3.8%
Knows no source of method	25.0%	3.8%	10.7%	0
family planning expensive	18.8%	1.9%	5.4%	0
No access to family planning	9.4%	0	5.4%	7.7%
Health risk or side effects	7.8%	17.3%	10.7%	11.5%

Men in both villages had a more positive attitude toward contraceptive use than women. About three-quarters of men with unmet need in both villages, but only about half of women thought that the timing of children is determined by God. Fewer men than women perceived no access to family planning, but fewer men than women had heard of no family planning method, in both villages. In other words, while women were more aware of available methods, they also perceived greater issues with access and believed the methods were expensive.

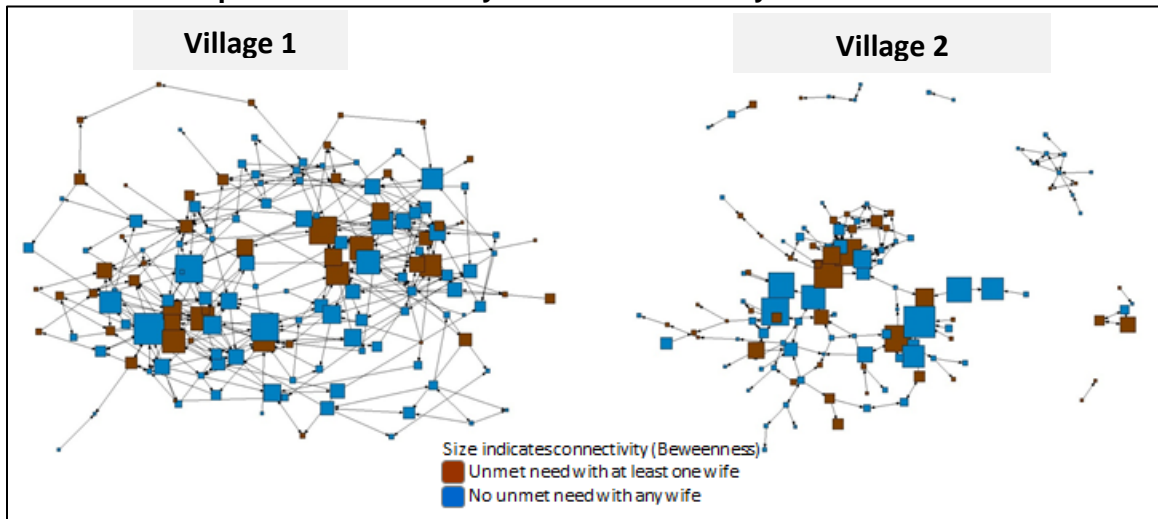
Turning our attention to the village networks, in all four network categories (material, practical, cognitive, emotional), the majority of women in both villages cited female relatives (mothers, sisters, co-wives, and other female relatives). The one exception was the material network, where one-quarter of women in both villages nominated a male relative (usually their husbands). Men in both villages nominated mostly male relatives and male friends or colleagues in all four network categories. Very few health providers, religious or other leaders were nominated in any network category.

The following two figures show family planning use status of women and men, respectively, in the two villages. Size denotes connectivity—the more connected the individual (a score based on how many, who nominated him/her, and who else the nominating individual is connected to), the larger the symbol. Men and women must be viewed separately, because they were calculated differently based on the different possibilities for unmet need. Women were assigned only one need status—no need, met need, or unmet need. Polygamous men, on the other hand, were sometimes assigned more than one need status if their wives had different unmet need status. Therefore, Figure 2 shows men who were had unmet need for family planning with at least one wife, and those with met or no need for all of their wives.

### Women’s contraceptive need status by network connectivity



### Men’s contraceptive need status by network connectivity



Visually, for both men and women in Village 1, there appears to be no correlation between having an unmet need and being a highly connected individual. In Village 2, however, the few women who were using a family planning method (modern or traditional) were less connected than other women.

In our social network analysis, we also compared people's perceptions of the attitudes of the individuals they nominated with the nominated individual's stated beliefs about contraceptive use. Results show no concordance between perception of people's approval of family planning, and their actual approval or disapproval. For example, about one-third of respondents in both villages who were nominated as approving of family planning, were in the top quartile of the family planning approval index (they approved), but a one-third were in the bottom quartile (they disapproved).

Concordance was additionally calculated between husbands and wives. This exercise revealed that men believed their wives approved of contraceptive use more often than women believed their husbands approved. Analyzing only the subset of respondents whose spouses perceived they approved of family planning, we see that while there is a general concordance, this is not universal.

The data from this study is rich. Our presentation will show these and additional results. These results have been used to design an intervention intended to reduce unmet need for contraception, that applies network theory and analysis to move beyond programs that address women as isolated individuals, taking a more nuanced approach that views them as members of formal and informal networks. Activities are implemented through existing social groups, such as women's savings and loans groups, and through informal opinion leaders and other influential people who are willing to initiate discussions about fertility and family planning. Because of the political unrest in Mali, these interventions are being tested in Benin.