The relationship between shared-decision making in contraceptive counseling and satisfaction in Accra and Kumasi, Ghana [version 1; peer review: awaiting peer review]

Sarah Compton1, Adom Manu2, Ernest Maya2, Emmanuel Morhe3, Vanessa Dalton1

1Obstetrics and Gynecology, University of Michigan, Ann Arbor, MI, 48109, USA
2University of Ghana, Accra, Ghana
3Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

Abstract

Background: Current use of modern methods of contraception remain low in many parts of sub-Saharan Africa, including Ghana. One way to improve both satisfaction with and continuation of contraceptive usage is to increase the level of shared decision-making around method choice. In this study, we sought to evaluate the extent to which patients in urban Ghana experienced shared decision-making and if this was associated with method chosen, satisfaction, or continuation of the method at three-months post-visit.

Methods: We conducted a longitudinal survey. Women were recruited when they were starting a new method of contraception and followed-up with at three-months post-initiation from five family planning clinics in Accra and Kumasi, Ghana. Participants were asked who made the decision about their method choice, the patient herself, the provider, or the patient and provider together. Our outcomes included measures of satisfaction and three months' continuation.

Results: Fifty-eight percent of our participants reported making the decision of which method to use themselves, and eighty percent reported being satisfied to be leaving with their chosen method. At three months, those who reported they engaged in shared decision-making were more likely to report they would choose the same method again (p=.003), a measure of satisfaction. Patients who reported they made the decision of which method to use (p=.002) and those who left with an injection or pill (p=.019) rated their provider less favorably, while participants who had used a method before (p=.024) and those who reported they received their method of choice (p=.000) rated their providers more favorably.

Conclusions: Measured in multiple ways, women who made the decision of which method to use were less satisfied. These results show the importance of providers engaging with patients during the
contraceptive decision-making process.

**Keywords**
Contraceptive counseling, Ghana, Shared decision-making
Introduction

Despite concerted efforts by the government of Ghana and its development partners to increase contraceptive access and use, current use of modern contraception remained below targets in both the 2008 and 2014 Ghana Demographic and Health Surveys (GSS, 2009; GSS, 2015). In the 2017 Maternal Health Survey, 25% of women of reproductive age were using a modern method of contraception (GSS, 2018). Unmet need for contraception in the country is currently estimated to be 35% for married women and 42% for sexually active unmarried women (Staveteig, 2016). This is in spite of nearly universal knowledge of contraception, and very few cost and access barriers to use. Further, ever-use of contraception is much higher, suggesting that women may have low levels of satisfaction with available methods.

One way that has been explored in the United States to improve patient satisfaction with the medical services they receive is to adopt shared decision making techniques (Shay & Lafata, 2015). Shared decision making is a form of health communication that emphasizes that there are multiple courses of care that would be appropriate to solve the problem. The provider offers his or her medical knowledge while the patient contributes his or her preferences and a decision is reached together (Charles et al., 1997). In this way, the patient and the provider work together to choose a course of action which is medically sound and which meets the patient’s preferences.

Contraceptive decision-making is one which is perfectly suited to utilize a shared decision making framework, as the majority of women have multiple methods which are medically appropriate available to them (Elwyn et al., 2014). Also, since methods have very different modes of action, efficacy, characteristics, and side effects, methods are not universally preferred by women (Lessard et al., 2012). While shared decision making has begun to be described and studied in the US (Dehlendorf et al., 2014a), and has been identified by the World Health Organization as an integral part of family planning counseling (WHO, 2005), it has not been investigated in low- and middle-income countries (LMIC). In LMIC settings, providers are encouraged to use tools such as flip charts to help engage patients in contraceptive decision-making (WHO, 2005), although it is not clear the extent to which providers use this or other tools, or to what extent these tools encourage shared decision-making.

In this study, we aimed to explore the extent to which patients in Ghana’s two largest cities (Accra and Kumasi) experienced shared decision-making and if this was associated with method chosen, satisfaction, or continuation of the method at three-months post-visit.

Methods

Sample and procedures

We used data from the Identifying Method-Related Factors Associated with Contraceptive Discontinuation in Ghana study, which has been described in other published work (Rominski et al., 2018). The inclusion criteria for this study included women over the age of 18 who were starting a new method of contraception. They were recruited at the time of their counseling session, and interviewed both immediately before and after their contraceptive counselling in a private room adjacent to the family planning clinic. Women who met the inclusion criteria were identified to trained research assistants by clinic staff and were approached and invited to participate in the study. Those who said they were interested were taken through a comprehensive verbal consent process. As many women in this setting do not read well, it was determined by the ethics board that a comprehensive verbal consent process would ensure proper consent was obtained. All data were collected via interview-administered survey, using a tablet computer with Qualtrics (Provo, UT) offline software, but could be collected using Open Data Kit (ODK), an open-source software for collecting, managing and using data in resource-constrained environments.

Pre- and post-visit, as well as three-month survey records were matched using phone numbers, either the participant’s, or that of another family member, including her husband. As phone calls were the means of follow-up over the study period, no participants were enrolled who did not have a phone number.

Data from participants who left their initial visit with a method and were able to followed up with at three-months were included in the analysis.

Measures

In the pre-visit survey, participants were asked about their age, level of education, marital status, previous pregnancies, previous use of contraception, and preferences for contraception, including, “at this time, which method do you most prefer?”.

During the post-visit session, participants were asked, “during this visit, who made the decision about which method of contraception you would use?”, with the response options of, the provider, mostly the provider, the provider and me together, mostly me, me. These were collapsed into three responses for analysis; provider-driven (“the provider” and “mostly the provider”), shared decision (“the provider and me together”), and patient-driven (“mostly me”, and “me”).

In order to understand patient satisfaction with both the method of contraception with which they were leaving, and the process of counseling, patients were asked during the post-counseling both, “how satisfied are you to be leaving with this method?” as well as to rate the provider they saw on a series of 11 statements including, “respecting me as a person”, “considering my personal situation when advising me about birth control”, and “telling me the risks and benefits of the birth control method I chose”. The full set of questions can be seen in the appendix. These were initially collected from 1, for poor, to 5 for excellent. These were each dichotomized with those answering very good or excellent coded as 1, and those answering poor, fair, and good coded as 0. These were then summed to create a single patient assessment of their
provider score, which would theoretically range from 0 to 11, and used as the outcome variable in a linear regression.

To further examine levels of satisfaction with their method, during the three-month phone call, participants were asked if they would choose this method again, and if they would recommend this method to a friend. Also in the three-month phone call, participants were asked if they were still using the method they had adopted at their visit, and those who answered no were asked the reason or reasons why they had stopped using it.

Analysis
We used cross-tabs with Chi Square analysis to identify associated factors. Linear regression was used to determine factors associated with patient assessment of their provider. All analyses were conducted in Stata (Version 13.1, StataCorp, College Station, Texas) but could be conducted in R, a free-to-use analysis software.

All study procedures and documents were reviewed and approved by the Ethical Review Committee of the Ghana Health Service and the Institutional Review Board of the University of Michigan (HUM00129703).

Patient and Public Involvement: Patients and the public were not involved in the design, conduct, reporting, or dissemination of this research. Healthcare providers at study sites were involved in the design and conduct of the surveys and the results have been reported back to them.

Results
A total of 405 participants, of the initial 537 who were enrolled, met the inclusion criteria for this analysis; leaving their counseling session with a method, and being followed-up with at three months (response rate: 75.4%). The average age of our participants was 28.5 years, with a standard deviation of 6.4 years. The majority reached junior secondary school or less (n=254, 62.7%), were married (n=224, 55.3%), and almost all (96.8%) have been pregnant at least once. Choice of method was dominated by long-acting reversible (LARC) methods (implants and IUDs) and the injection. Most participants reported making the decision of which method to use themselves, and most reported being satisfied to be leaving with their method. For more information on the sample, see Table 1.

Of the total 405 participants from the five study clinics who were able to be followed-up with at three months, 350 (86.4%) were still using their method, and this differed by method.

<p>| Table 1. Participant characteristics. |
|------------------|------------------|
| Variable                      | N (percentage)   |
| Age                           | 28.5 (6.4)       |
| Highest level of education    |                  |
| None                          | 52 (12.8)        |
| Primary school                | 47 (11.6)        |
| Junior secondary school       | 155 (38.3)       |
| Senior secondary school       | 97 (24.0)        |
| More than secondary school    | 53 (13.1)        |
| Missing                       | 1 (0.2)          |
| Married                       |                  |
| Yes                           | 224 (55.3)       |
| No                            | 171 (42.2)       |
| Missing                       | 10 (2.5)         |
| Number of previous pregnancies|                  |
| 0                             | 13 (3.2)         |
| 1                             | 81 (20.0)        |
| 2                             | 83 (20.5)        |
| 3                             | 66 (16.3)        |
| 4                             | 56 (13.8)        |
| 5                             | 45 (11.1)        |
| 6                             | 23 (5.7)         |
| 7 or more                     | 38 (9.7)         |</p>
<table>
<thead>
<tr>
<th>Variable</th>
<th>N (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of live births</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>19 (4.7)</td>
</tr>
<tr>
<td>1</td>
<td>99 (24.4)</td>
</tr>
<tr>
<td>2</td>
<td>107 (26.4)</td>
</tr>
<tr>
<td>3</td>
<td>68 (16.8)</td>
</tr>
<tr>
<td>4</td>
<td>53 (13.1)</td>
</tr>
<tr>
<td>5</td>
<td>21 (5.2)</td>
</tr>
<tr>
<td>6 or more</td>
<td>14 (3.5)</td>
</tr>
<tr>
<td>Number of abortions</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>88 (21.7)</td>
</tr>
<tr>
<td>2</td>
<td>37 (9.1)</td>
</tr>
<tr>
<td>3 or more</td>
<td>25 (6.2)</td>
</tr>
<tr>
<td>Ever used a method before</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>242 (59.8)</td>
</tr>
<tr>
<td>Contraceptive method chosen at this visit</td>
<td></td>
</tr>
<tr>
<td>Implant</td>
<td>173 (42.2)</td>
</tr>
<tr>
<td>IUD</td>
<td>37 (9.1)</td>
</tr>
<tr>
<td>Injection</td>
<td>147 (36.3)</td>
</tr>
<tr>
<td>Pill</td>
<td>12 (3.0)</td>
</tr>
<tr>
<td>Sterilization</td>
<td>3 (0.7)</td>
</tr>
<tr>
<td>None</td>
<td>21 (5.2)</td>
</tr>
<tr>
<td>During this visit, who made the decisions about what birth control method you would use?</td>
<td></td>
</tr>
<tr>
<td>Provider-driven</td>
<td>16 (4.0)</td>
</tr>
<tr>
<td>Shared decision-making</td>
<td>57 (14.1)</td>
</tr>
<tr>
<td>Patient-driven</td>
<td>236 (58.3)</td>
</tr>
<tr>
<td>Missing</td>
<td>96 (23.7)</td>
</tr>
<tr>
<td>How satisfied are you that you are leaving with this method?</td>
<td></td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>14 (3.6)</td>
</tr>
<tr>
<td>Neutral</td>
<td>58 (14.3)</td>
</tr>
<tr>
<td>Satisfied</td>
<td>321 (79.3)</td>
</tr>
<tr>
<td>Missing</td>
<td>12 (3.0)</td>
</tr>
<tr>
<td>My level of participation in the decision was...</td>
<td></td>
</tr>
<tr>
<td>Not enough</td>
<td>1 (.2)</td>
</tr>
<tr>
<td>Just right</td>
<td>212 (52.3)</td>
</tr>
<tr>
<td>Too much</td>
<td>181 (44.7)</td>
</tr>
<tr>
<td>Missing</td>
<td>11 (2.7)</td>
</tr>
<tr>
<td>Did you receive the method you wanted?</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>352 (86.9)</td>
</tr>
<tr>
<td>No</td>
<td>42 (10.4)</td>
</tr>
<tr>
<td>Missing</td>
<td>11 (2.7)</td>
</tr>
</tbody>
</table>

While all of the participants who chose female sterilization were still using this method at three months, as would be expected, 71.4% (n=105) of the participants who chose one of the injections, and 83.3% (n=10) of those who chose the pill, were still using their method at three months. Continuation rates were higher for the LARC methods with 94.3% (n=35) and 96.3 % (n=166) still using the IUD and implants respectively at three months. (Figure 1)

While 87.2% of participants who said they received their method of choice were still using it at three months, 76.2% of those who said they did not receive their method of choice were
Further, 92.2% of those who said they would choose the method again were still using it, while 72.7% who would not choose their method again were still using it (p<.001).

Similar differences in proportions were found in whether the participant would recommend their method to a friend (Figure 2).

Figure 1. Continuation at three-months by method.

Figure 2. Satisfaction and decision-making among participants still using their method at three-month continuation.
While there was no difference in continuation at three-months by who made the decision of which method to use, and the majority of participants reported at three-months post visit that they would choose their method again, this differed by who made the decision of which method to use. While 85.7% of the participants who engaged in shared-decision making would choose this method again, 75% of those who reported the provider made the decision, and 62.4% of those who made the decision themselves would choose the method again, and this difference is significant (p=.003) (Figure 3).

Finally, using the participant rating of their provider immediately post-counseling as the outcome variable in a linear regression, participants who reported they made the decision of which method to use rated their provider significantly lower than others. On average, all else equal, patients who reported they got the method they wanted scored their provider 2.88 points higher on the 11-point scale (p<.001), and those made the decision of which method to use themselves scored their provider 1.63 points lower (p=.002). Further, those who left with either the injection or the pill rated their provider 1.06 points lower on the scale (p=.019), and participants who have used a method before scored the provider .990 points higher (p=.024). There was no significant difference in those who were still using at three months, or by age (although these approached significance in bivariate analysis and so were retained in the multivariate model). (Table 2)

Discussion
Discussion. In this study of urban Ghanaian women who were adopting a new method of contraception, 86.5% reported they were satisfied to be leaving their counseling session with their method, and 83.8% said they were leaving with the method they wanted. The majority of participants reported making the decision themselves about which method to use, however, as measured in multiple ways, those who did so were less satisfied, and rated their provider lower than those who reported either making the decision with the provider, or when the provider made the decision. These results show the importance of providers engaging with patients during the contraceptive decision-making process. The fact that women who made the decision themselves were the least satisfied, as measured in multiple ways, is important given the current model of contraceptive counseling where the provider gives information

![Figure 3. Proportion of women still using their method and who would choose their method again at three months by who made the decision of which method to use.](image-url)
or education about each method, but leaves the decision up the patient (Dehlendorf et al., 2014b; Upadhyay, 2001). Counseling in contraception has been criticized in the past for being too directive and not respecting patient autonomy, and therefore, providers have perhaps been encouraged to be non-directive in their counseling. The findings presented here that patients who make a decision with their provider are more satisfied, and rate their provider more favorably, suggests that providers can engage more actively with their patients to elucidate their preferences and help match those preferences with a method.

While we did not find an association with continuation at three-months as has been found in other investigations (Dehlendorf et al., 2016), patient experience of the care they receive is an essential component of health care quality (Berwick et al., 2008), and three months may be too short of a follow-up time to see differences in adherence.

This study has a few limitations. The relatively small sample size, coupled with the fact that these are only urban women, limits our ability to generalize to the larger Ghanaian population. Relying on patient assessment of their provider, rather than observing and objectively rating the providers is also a limitation, although patient experience with their provider is inherently subjective, and is an important facet of their own experience. The fact that almost one-quarter of our participants did not answer “during this visit, who made the decisions about what birth control method you would use?” may bias our outcome.

**Conclusion**

Engaging in shared decision-making is associated with improved satisfaction among clients in urban Ghana. The women in this study were more satisfied with their contraceptive counseling session when their providers engaged in shared decision-making rather than making the decision for the patient, or allowing them to make the decision on their own. This study supports the development and implementation of shared decision making interventions for contraceptive counseling in this setting. Rather than shying away from engaging with patients and helping them decide which method of contraception to use, providers in this setting can be assured patients may be wanting this sort of counseling.

**Data availability**

**Underlying data**


Data are available under the terms of the Creative Commons Zero “No rights reserved” data waiver (CC0 1.0 Public domain dedication).

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**References**


Shay LA, Lafata JE: *Where is the evidence? A systematic review of shared