Couple's decision-making about contraception in Ghana: What do different contraception classifications suggest?

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INTRODUCTION

Contraceptive use in sub-Saharan Africa, is framed with many restrictions, mostly socio-cultural rather than access barriers (Caldwell & Caldwell, 1987; Pacqué-margolis, Cox, Puckett, & Schaefer, 2013). Hence, the contraceptive prevalence rate (CPR) is low at 30% in the sub-region and this is similar to the CPR in Ghana which stands at 31% (Kaneda & Dupuis, 2017). It has been proven that, the CPR of a nation is an important indicator of development – giving a clue to the fertility rates, to women's status and on to even socioeconomic development of the nation and status of individuals. Studies continue to consider contraceptive use looking at determinants of use, and method types (REFS). From the literature we know that women with higher socio-economic statuses are more likely to use contraception than their lower SES counterparts (REFS). However, for Ghana, especially, we also understand that dynamics are now changing, with traditional, coitally dependent methods now being used more by urban, educated, higher SES women (Machiyama & Cleland, 2014). We attempt, in this paper, to investigate which partner in the dyad decides on what method of contraception is used as this has implications for choice and uptake. Do these attitudinal shifts reflect women's or men's decisions about contraception?

Contraceptive classification has several facets and implications. The WHO has recognised this, and according to Festin et al. (2016) have looked at classification of modern versus traditional, and the implications for calculating unmet need and CPR, amongst others. We extend this argument, that practically, for a couple to adopt a method, it might actually go beyond the modern/traditional classification as often used to other types. Most studies generally look at determinants of use of traditional versus modern or long acting versus short acting methods. We focus on three classification types that are essentially how Ghanaian women and men may conceptualize contraception – traditional versus modern, female versus male controlled, and coitally dependent versus not coitally dependent. With these conceptualizations, who mainly decides which methods should be used?

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We test to what extent different classification systems are associated with the decision to use contraceptive, thus, in an attempt to extend the contraception classification argument to see how the decision to use contraception is influenced by classification. This will, hopefully, give more insight as to how to promote and market contraceptives, especially in developing country settings like Ghana, to make contraceptive uptake by couples better/higher.

This study has both theoretical/conceptual and practical/policy implications. First, understanding who the decision maker for contraceptive use is helps to target contraception education and advertising, depending on how country programs classify methods, for programs to be more effective. Second, understanding which classification of contraception 'fits the data better' gives us clues as to again, how to target contraception education and advertising in order to get the most people to use contraception and thus, increase the country's CPR. Further, knowing decision maker distribution for more and less effective methods helps to inform plans to encourage more decision making for the category that supports more effective methods. For example, if we find that it is when women decide that more modern methods are used (and modern methods are more effective than traditional) and we find that the proportion of women deciding is low, steps can be put in place to encourage more women to decide, so that the modern methods are used more.

Finally, understanding the link between the main decision maker for contraception and the different classification types will give clues as to how the nuances of decision maker-contraceptive type /classification determinations work out, so that, even in places where particular restrictions mean that only some types of contraceptives can be promoted, the 'packaging' of messaging can be positioned so as to derive maximum possible benefit from contraception usage.

METHODS

Data

The dataset used for the study was the couples' file from the 2014 Ghana Demographic and Health Survey (GDHS). The GDHS is a nationally representative survey measuring demographic and health issues in developing countries and has been conducted in five[1] year intervals since 1988. The most recent survey conducted in 2014 interviewed household heads

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[1] There have been 6 rounds of the GDHS, the first five were at five year intervals but the latest survey was conducted after 6 years.

or members with the household questionnaire and also men and women the reproductive ages of 15 to 59 and 15 to 49 years respectively. Questions ranged from issues on reproduction, to maternal and child health, nutrition, contraception, women's empowerment, to name a few. Respondents that were married or living together and were interviewed with either them men's or women's questionnaires were matched and this resulted in a dataset consisting of 1832 couples.

The GDHS used a multistage cluster sampling strategy; first, enumeration areas (EA) across the nation were identified and randomly sampled and were stratified by region and place of residence. Subsequent to the sampling of the 432 EAs, households within these EAs were listed and 30 households were randomly sampled from each EA. These households were administered the household questionnaire. In addition, men and women in the reproductive age groups residing in the sampled households were interviewed.

The original matched sample in the dataset was 1832 couples; however, for this study the sample was restricted to 507 couples that were currently using some form of contraception.

Measures

Dependent variables: Three ways were used to classify the contraception used by couples. The methods were taken from the female partner's response on methods she is currently using to prevent pregnancy (see Table 1). A frequency of the male's response on contraceptive use showed some discrepancies between some couples' responses. It was decided that the female's account would more accurately reflect what was being used. Responses were categorized into three dichotomous variables based on Festin et al. (2016) classification types.

1. ***Female and male-controlled methods***. This resulted in contraception being classified based on whether they were controlled by the female, or male or both males and females. Those controlled by both were merged with male controlled methods.
2. ***Coitally and non-coitally dependent methods***. This includes methods that are applied during sex and those that are not.
3. ***Traditional and modern methods***. These include methods classified as modern and those as traditional.

Independent variable: The independent variable under study was ***'main decision maker for contraception'***. This question was only found in the women's questionnaire and it asked who the main decider was on the use of their contraception. Responses were female respondent only, partner/husband only, both jointly, other person only, jointly with other person. These were then categorized into respondent only, partner/husband/other only, and both jointly for this study. These categorizations indicate that either the woman alone, she and her partner jointly or someone else (her partner or other person) are the main deciders which all have implications for her health and type of contraception used.

Table 1: Classifications of different methods

Traditional vs. Modern Methods		Coital vs. Non-Coital Methods		Female vs. Male/Both Controlled Methods	
Traditional	**Modern**	**Coital**	**Non-coital**	**Female**	**Male/Both**
Withdrawal	Sterilization	Withdrawal	Sterilization	Rhythm/Calendar	Withdrawal
Rhythm/Calendar	Implants	Male condom	Pill	Pill	Male condom
	Injectables	Female condom	Injectables	Injectables	Female condom
	Pill	Diaphragm	Implants	Implants	Diaphragm
	IUD		Rhythm/Calendar	IUD	MS[2]
	Diaphragm		IUD	FS[3]	
	Male condom		LAM	LAM	
	Female condom				
	LAM[4]				

Covariates: Covariates included in the model were deemed as possible influencers of the relationship between the contraception decision-maker and contraceptive use. They were either couple socio-demographic, socio-economic or place characteristics. The ***age difference*** between the respondents was calculated and categorized into four categories 'husband younger/same age', husband older by 1 to 4 years', husband older by '5-9 years', and husband older by 10+ years. The ***difference in their years of schooling*** was also calculated and categorized into 'wife has more years of schooling', 'same years', 'husband has 1 to 4 years more' and 'husband has 5+ years more'. ***Religious affiliations*** were also measured as 'both Christian', 'both Moslem', 'both other religions', and 'different religions'.

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[2] Male Sterilization
[3] Female Sterilization
[4] Lactational amenorrheic method

The couple's ***desire for another child*** was coded as 'both want more or are undecided', 'both want no more or cannot have any more', 'man wants more – woman does not', women wants more – man does not'. The ***number of living children*** used was reported only by the woman although men were also asked about the number of children they had fathered. ***Duration of marriage/ cohabitation*** was categorized into '0-4 years', '5-9 years', '10-19 years', '20 or more years' and 'discrepant responses'. ***Bridewealth payment*** was also classified as 'none paid', 'some/all paid', 'woman says paid man says has not paid', and 'man says paid woman says has not paid'.

Finally, ***household wealth quintile*** was used to measure socio-economic status of the household and was categorized into 'poorest', 'poorer', 'middle', 'richer' and 'richest' households; while their ***place of residence*** was either 'rural' or 'urban'.

Analysis

The data were analysed using the quantitative data analysis software STATA version 12. The couples file dataset was weighted with the men's weighting variable and took into account survey weighting procedures. Frequencies were run for the independent variable, dependent variables and covariates. Crosstabulations between the independent and dependent variables were carried out and then binary logistic regression models were conducted to examine the effect of the contraception decision-maker on all three classifications of contraception, controlling for the couple characteristics.

RESULTS

Descriptive Statistics

The decision to use the contraceptive method being used according to the female respondents was mostly jointly made as 67.2% stated this. Table 2 also indicates that approximately 24% stated it being solely the female respondent's decision and less than 10% reported it being solely the partner's decision. Thus, the majority of couples made decisions about contraception jointly. The three classifications of contraceptive use resulted in three groups and means of use. With the male/female/both controlled methods, 20% used male/both controlled methods while 80% used the female controlled ones. With the coital/non-coital dependent methods, about 82% used non-coitally dependent methods and 18% used the coitally dependent ones. Finally, about 14 used traditional methods while 86% used modern methods.

Table 2: Percentage distribution of couples by contraception decision-maker and classification types

Independent and Dependent Variables	Frequency	Percentage
Decision-maker for contraception		
Respondent	120	23.7
Partner[5]	46	9.1
Joint	341	67.2
Classification Types		
Male/both	101	20.0
Female	406	80.0
Not coitally dependent	417	82.2
Coitally dependent	90	17.9
Traditional	70	13.9
Modern	437	86.2
Total	**507**	**100.0**

As shown in Table 3, partner's age difference had the least proportion with younger husbands (8.4%) followed by husbands 10 or more years older (21.3%). The difference in years of schooling had higher proportions with the same (27.9%) or husbands with 1 to 4 years more years of schooling (27.8). About 20 percent of the wives had more education than their partners. While some had different religions, most of the respondents were both Christian with about 12% both being Moslem and about 15% both affiliating with Other religions.

About one-third of the couples jointly decided to have another child or were undecided about it while about 30% jointly decided not to have anymore or stated they couldn't have any more children. Similar proportions of about 12 percent each were had different desires either the husband wanted and the partner did not or the wife wanted and the husband did not. According to the female respondent, the highest proportion has between 2 and 3 children, then 4 to 5 children, followed by less than 2. Only 11.6% had 6 or more children.

In relation to the marital variables, although most mentioned discrepant durations of cohabitation, most couples had been together between 10 and 19 years. About four out of ten

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[5] One person in the other category was added to the partner category

also mentioned that some or all of their bridewealth had been paid. Discrepancies showed that close to 20% of women said bridewealth had not been paid while their partners said it had.

About one-quarter of the respondents were in the richest wealth quintile, the highest proportion. The proportion of respondents in the quintiles decreased as wealth quintile declined. The majority of these couples using contraception were in the rural place of residence (54%).

Table 3: Percentage distribution of couples by socio-demographic, -economic, -cultural, and place variables

Covariates	Frequency	Percentage
Age difference		
Husband younger/same	43	8.4
Husband older 1-4 years	172	33.9
Husband older 5-9 years	184	36.3
Husband older 10+ years	108	21.3
Years of schooling difference		
Wife has more (1-13 years)	97	19.1
Same	141	27.9
Husband has more 1-4 years	141	27.8
Husband has more 5+ years	128	25.2
Religious affiliation/denomination		
Both Catholic	28	5.6
Both Protestant	33	6.5
Both Pentecostal/Charismatic	112	22.0
Both Moslem	64	12.7
Both Other	77	15.2
Different religions	193	38.1
Desire for another child		
Both want/undecided	233	46.0
Both no more/can't have	148	29.3
Man wants - woman does not	60	11.9
Woman wants - man does not	65	12.8
Missing	*1*	*0.2*
Number of living children		
0 – 1	108	21.4
2 – 3	187	36.8
4 – 5	153	30.2
6+	59	11.6
Bridewealth status		
None paid	108	21.3
Some/all paid	222	43.8

woman paid - man none	76	15.0
woman none - man paid	101	19.9
Duration of cohabitation		
0 - 4 years	79	15.5
5 - 9 years	69	13.6
10 - 19 years	127	25.1
20 + years	73	14.5
Discrepant years	159	31.3
Household wealth quintile		
Poorest	84	16.6
Poorer	92	18.2
Middle	93	18.3
Richer	101	19.9
Richest	137	26.9
Place of residence		
Rural	274	54.1
Urban	233	45.9
Total	**507**	**100.0**

Bivariate Analysis

Bivariate or crosstab results indicate significant associations between decisionmaker and the three contraception classifications at the 0.05 significance level. Higher proportions of partner/other controlled decisions were made to use female controlled methods, while decisions made solely by women were to use with male only or both controlled methods. Again, higher proportions of partner/others decided to use non-coitally dependent methods. More female respondents decided to use coitally dependent methods. Finally, more partner/other decisions were to use modern methods. (Table not shown)

Bivariate regression models were also run and results indicated joint and partner/other decisions were more likely to lead to use of use of female controlled methods, less likely to contribute to use of coitally dependent methods and more likely to use modern methods. (Table not shown)

Multivariate Analysis

Three binary logistic regression models were conducted and results (shown in Table 4) were similar to the bivariate ones as male involvement in decision making was significant throughout, whether jointly or alone. Male partner only or joint decisions were likely to result in use of modern, female controlled and non-coitally dependent methods. These include the injectables, pills, implants, long and short-lasting methods.

DISCUSSION

These findings have implications for current contraceptive use in Ghana. The CPR is low in Ghana and this paper was an attempt to help understand an aspect of contraceptive use among couples using contraception – what the role of decision-making is in informing the type of methods used. In addition, what classification types are associated with who decides on the choice of method?

Findings show that when men are involved either alone or jointly, women are more likely to use a modern, female controlled or non-coitally dependent method, with the majority of these being deemed as more effective. In addition, all three classification types are associated with a particular decision-maker suggesting that there is no one way of conceptualizing contraception. These findings suggest another dimension to the role of joint decision-making about contraception.

A policy implication is that there is some empirical evidence to advocate for more joint decision-making in unions. Further studies are needed to consider why women are opting for the less effective methods.

Table 4: Multivariate binary logistic regression models showing odds of female controlled, coitally dependent, and modern classification types, respectively, controlling for socio-demographic, -economic, -cultural and place covariates

Characteristics	Male/Both vs Female Controlled				Non-coitally vs Coitally Dependent				Traditional vs Modern			
	OR	P>t	[95% CI]		OR	P>t	[95% CI]		OR	P>t	[95% CI]	
Decision-maker for contraception												
Respondent (RC)	1.000				1.000				1.000			
Partner	7.859	0.004	1.975	31.282	0.160	0.008	0.041	0.624	8.916	0.007	1.813	43.845
Joint	2.659	0.006	1.336	5.290	0.412	0.011	0.208	0.814	4.032	0.001	1.840	8.835
Age difference												
Husband younger/same (RC)	1.000				1.000				1.000			
Husband older 1-4 years	0.276	0.048	0.077	0.986	2.356	0.164	0.704	7.887	0.274	0.072	0.067	1.124
Husband older 5-9 years	0.404	0.168	0.111	1.469	1.239	0.736	0.356	4.314	0.583	0.475	0.132	2.571
Husband older 10+ years	0.613	0.498	0.148	2.535	1.076	0.916	0.275	4.209	0.683	0.645	0.134	3.482
Years of schooling difference												
Wife has more [1-13 yrs] (RC)	1.000				1.000				1.000			
Same	0.676	0.383	0.280	1.634	1.156	0.750	0.472	2.830	0.488	0.213	0.157	1.512
Husband has more 1-4 years	0.497	0.113	0.208	1.183	2.088	0.127	0.809	5.391	0.327	0.073	0.096	1.111
Husband has more 5+ years	0.848	0.748	0.308	2.330	0.962	0.943	0.335	2.766	0.656	0.508	0.188	2.292
Religious affiliation												
Both Catholic (RC)	1.000				1.000				1.000			
Both Protestant	0.106	0.051	0.011	1.013	8.178	0.067	0.864	77.409	0.060	0.025	0.005	0.700
Both Pentecostal/Charismatic	0.141	0.054	0.019	1.037	6.129	0.071	0.857	43.821	0.177	0.131	0.019	1.679
Both Moslem	0.151	0.075	0.019	1.216	7.579	0.053	0.971	59.144	0.198	0.192	0.017	2.270
Both Other	0.138	0.068	0.016	1.155	7.613	0.058	0.930	62.322	0.238	0.255	0.020	2.844
Different religions	0.210	0.127	0.028	1.562	3.608	0.208	0.488	26.662	0.394	0.422	0.040	3.853
Desire for another child												
Both want/undecided (RC)	1.000				1.000				1.000			
Both no more/can't have	1.721	0.317	0.592	5.000	0.818	0.721	0.271	2.472	0.689	0.534	0.213	2.234
Man wants - woman does not	0.893	0.882	0.201	3.973	1.093	0.910	0.231	5.179	0.372	0.093	0.117	1.180
Woman wants - man does not	1.413	0.537	0.470	4.243	0.773	0.647	0.256	2.335	0.626	0.405	0.207	1.890

	Model 1				Model 2				Model 3			
Number of living children												
0 – 1 (RC)	1.000				1.000				1.000			
2 - 3	2.295	0.066	0.946	5.564	0.546	0.134	0.247	1.206	2.419	0.078	0.906	6.456
4 - 5	1.548	0.454	0.491	4.882	0.650	0.461	0.206	2.049	1.445	0.557	0.421	4.957
6+	1.648	0.536	0.337	8.061	0.941	0.936	0.212	4.169	0.934	0.933	0.191	4.567
Duration of cohabitation												
0 - 4 years (RC)	1.000				1.000				1.000			
5 - 9 years	1.034	0.954	0.329	3.246	0.537	0.233	0.193	1.496	4.037	0.237	0.398	40.947
10 - 19 years	0.509	0.224	0.171	1.515	1.237	0.691	0.432	3.538	0.695	0.565	0.200	2.412
20 + years	0.320	0.085	0.088	1.172	1.306	0.671	0.380	4.491	0.820	0.786	0.195	3.447
Discrepant years	1.104	0.843	0.414	2.943	0.745	0.530	0.296	1.873	0.911	0.863	0.313	2.650
Bridewealth status												
None paid (RC)	1.000				1.000				1.000			
Some/all paid	2.427	0.067	0.940	6.264	0.564	0.250	0.212	1.501	2.218	0.156	0.736	6.680
woman paid - man none	0.839	0.727	0.311	2.262	1.658	0.339	0.587	4.685	1.042	0.944	0.327	3.321
woman none - man paid	2.287	0.123	0.797	6.559	0.545	0.278	0.181	1.639	1.964	0.277	0.580	6.650
Household wealth quintile												
Poorest (RC)	1.000				1.000				1.000			
Poorer	0.295	0.090	0.072	1.212	2.646	0.190	0.616	11.364	0.339	0.259	0.051	2.227
Middle	0.493	0.370	0.104	2.329	2.324	0.287	0.490	11.033	0.341	0.298	0.045	2.602
Richer	0.223	0.068	0.045	1.116	4.630	0.066	0.903	23.752	0.227	0.163	0.028	1.832
Richest	0.154	0.025	0.030	0.790	5.686	0.042	1.061	30.457	0.218	0.171	0.025	1.933
Place of residence												
Rural (RC)	1.000				1.000				1.000			
Urban	0.555	0.207	0.222	1.388	1.432	0.448	0.564	3.632	0.485	0.159	0.177	1.330
Constant	**87.333**	**0.003**	**4.599**	**1658.491**	**0.021**	**0.010**	**0.001**	**0.398**	**122.942**	**0.009**	**3.305**	**4573.968**

N=506; R^2=0.0129; $F_{(31,224)}$=1.73 | **N=506; R^2=0.0397; $F_{(31,224)}$=1.54** | **N=506; R^2=0.0477; $F_{(31,224)}$=1.51**

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