Familial correlates of unmet need for contraception among currently married women: a comparative study of three Sub-Saharan African Countries

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Abstract

Using data from the 2010 Malawi, 2013-14 Togo and 2011 Uganda DHS, the study explored the relationship between unmet need for contraception (unmet need) and family factors. The analysis was based on data for 15,528 currently married women aged 15-49 in Malawi, 6,282 in Togo and 5,417 in Uganda. Multinomial regression models were used to analyse the data. Results show that Malawian and Togolese women in female headed households have a higher risk ($p<0.001$) of having unmet need for spacing over no unmet need. Spousal agreement on fertility desire significantly reduced unmet need among Malawian women. Therefore family factors to some extent do influence unmet need in these countries. The findings indicate the importance of coming up with strategies which will encourage spousal communication in order to aid males and females to be equal partners in family planning.

Keywords: currently married women, Malawi, Togo, Uganda, unmet need for contraception.

Introduction

Despite the global commitment to family planning, the level of unmet need for contraception in developing countries still remains high. More than 200 women (17%) of reproductive age in these countries have unmet need for contraception (Singh and Darroch 2012). These women do not want to have any more children or want to wait for at least two years before having another child but are not using any contraceptives. Stover and Ross (2010); Kent (2010); Ahmed, Li, Liu *et al.* (2012) established that non-use of contraceptives is associated with adverse reproductive outcomes such as maternal mortality and infant and child mortality. These adverse reproductive health outcomes pose a serious public health concern.

Whereas a large amount of existing studies have established that unmet need for contraception is influenced by various socio-economic and demographic factors, studies addressing the influence of family factors on unmet need for contraception are lacking. In most cases only household wealth is included. However, there exists a big number of empirical works showing the influence of family factors on other reproductive health issues. Family factors play a significant role in one's life because the family is the closest tie that individuals have. Family factors are classified into three categories namely the contextual and structural features of families; family processes, relationships and practices; and biologic or hereditary influences (Miller, Benson and Galbraith 2001; Miller 2002). However, the last class does not apply to the current study. Contextual and structural features include couples' education, type of union and sex composition of children among others whereas family processes, relationships and practices include inter-spousal communication and agreement.

Many studies have assessed the effect of family structure on various reproductive health issues (Peres, Rutherford, Borgesa*, et al.* 2008; Stark, Tan, Muldoon *et al.* 2015). Concerning contraceptive use, Makatjane (1997) found that women in male-headed households were more likely to use modern contraceptives than their counterparts in female-headed households. In addition, studies such as Audu, Yahya, Geidama *et al.,* (2008); Baschieri, Cleland, Floyd *et al.* (2013) reveal that women in polygamous marriages have lower odds of using contraceptives than those in monogamous marriages.

Inter-spousal communication and agreement are said to be significant elements for the proper functioning of the family in that couples who communicate are able to share information, ideas, and feelings as well as make decisions concerning important issues such contraceptive use (Hajason, Piña and Raveloharimisy 2013). Research has shown a significant association between inter-spousal communication and contraceptive use. For example Islam, Padmadas, and Smith (2010), established that inter-spousal communication was high among couples who used contraceptives. Another study indicated that inter-spousal communication was 1.9 times and 2.7 times likely to increase the odds of using modern

and traditional contraceptives, respectively (Isam, Alam and Hasan 2014).

Therefore, this study's aim was to determine the family factors associated with unmet need for contraception among currently married women in Malawi, Togo and Uganda.

Context

Malawi, Togo and Uganda were chosen because the recent Demographic and Health Surveys of the three countries reveal that they have high levels of unmet need for contraception. The levels are 26.2%, 33.6% and 34.3% for Malawi, Togo and Uganda, respectively. Each of these countries has the highest level in the sub-region it belongs to. With this similarity, the study intends to find out if there are differences or not in the manner in which family factors influence unmet need for contraception among currently married women in the three countries.

Data and methods

The study utilised cross-sectional data from the 2010 Malawi Demographic and Health Survey (DHS), 2013-2014 Togo DHS and 2011 Uganda DHS. The surveys are nationally representative and population-based. In all the three countries, the primary sampling unit was regarded as a cluster which was defined on the basis of enumeration areas (EAs). The samples for all the surveys were selected using stratified two-stage cluster design. EAs were the sampling units for the first stage whereas households were the second stage of sampling. Representative samples of 27,345; 9,549 and 10,086 households were selected for the surveys in Malawi, Togo and Uganda, respectively. The surveys collected information on demographic and health indicators from 23,020; 9,480 and 8,674 women aged 15-49 years in Malawi, Togo and Uganda, respectively. For more details on the methods refer to MS/Togo and ICF International (2015), National Statistical Office (NSO) and ICF Macro (2011) and Uganda Bureau of Statistics (UBOS) and ICF International Inc. (2012). Analysis for this study is based on data for currently married women aged 15-49 years. They were 15,528 of them in Malawi, 6,282 in Togo and 5,417 in Uganda.

Variables

The outcome variable is unmet need for contraception. This refers to the non-use of contraception by fecund women who do not want to be pregnant, do not want any more children (unmet need for limiting) or want to wait for at least two years before having another child (unmet need for spacing). Included among these are pregnant or postpartum amenorrheic women whose pregnancy or current births are unwanted or mistimed. Those who are not using contraception and report that they are not sure whether they want another child or who want another child but are not sure when to have the birth are also considered to have unmet need for spacing. The variable was categorized as unmet need or contraception (no unmet need, unmet need for spacing and unmet need for limiting).

Family factors were the explanatory variables. These included type of marital union, sex of household head, sex composition of living children, household wealth, spousal age difference, number of children ever born and spousal agreement on fertility desire.

Four control variables were included. These were age, education, place of residence and exposure to family planning messages on media.

Statistical analysis

Data was analysed at the univariate, bivariate and multivariate levels. The first level involved describing the demographic and socio-economic characteristics of the study sample. At the bivariate level, the Pearson chi square test was used to determine whether unmet need for contraception was significantly associated with each of the explanatory variables. The multivariate level involved the use of multinomial regression models to explore the relationship between unmet need for spacing and limiting and selected explanatory variables respectively. This was because the dependent variable was polychotomous (no unmet need, unmet need for spacing, and unmet need for limiting).

Three models were fitted per country. The first model included the familial factors only whereas the second model added on the four control factors. The final model consisted of just those factors which were significant in the stepwise regression.

The analysis accounted for the complex DHS survey design to come up with efficient regression coefficients and robust standard errors while controlling for intra-cluster correlation. Sampling weights were used to ensure the representativeness of the sample. Individual sampling weights were used. Measures of association between the outcome and explanatory variables were expressed as relative risk ratios (RRR) with 95% level of confidence intervals (CI) and significance (p-values).

Results

Background profile of the sample

Table 1 provides background characteristics for the study sample. The majority of the women in all countries were aged between 25 and 34 years. More than half of these women were in monogamous unions and male headed households. Most (40%) of

these women had more sons than daughters. A higher proportion of these women were between 1-5 years younger than their spouses. In Malawi more than half (55.9%) of the women had the same desired number of children with their spouses whereas more than half of their Togo and Uganda counterparts had different desired number of children. There were more women belonging to rich households than poor ones in all the countries. Moreover, most of the women in Malawi and Uganda had primary education whereas most of the women in Togo had no education. The majority of the women in all the countries resided in rural areas.

Background profile of currently married women aged 15-49 in Malawi, Togo and Uganda

Selected characteristics	Malawi n	Malawi %	Togo n	Togo %	Uganda n	Uganda %
Age						
15-24	4,639	29.9	1,107	17.63	1,505	27.78
25-34	6,354	40.9	2,620	41.70	2,176	40.16
35-49	4,534	29.2	2,555	40.67	1,737	32.06
Type of marriage						
Monogamous	13,180	84.9	4,211	67.09	3,890	71.80
Polygynous	2,348	15.1	2,065	32.91	1,528	28.20
Sex of head of house hold						
Male	13,456	86.7	5,283	84.10	4,487	82.82
Female	2,072	13.3	999	15.90	931	17.18
Sex composition of living children						
Same	3,848	24.8	1,524	24.26	1,229	22.68
Fewer sons	5,503	35.4	2,143	34.11	1,986	36.66
More sons	6,177	39.8	2,615	41.63	2,203	40.66
Spousal age difference						
0	956	6.2	409	6.51	521	9.61
1-5	8,152	52.5	2,427	38.65	2,367	43.70
6-10	4,370	28.1	1,889	30.07	1,545	28.52
>10	2,050	13.2	1,556	24.77	985	18.17
Spousal agreement on fertility desire						
No	6,181	44.1	4,094	65.50	3,697	70.35
Yes	7,830	55.9	2,156	34.50	1,559	29.65
CEB						
0	773	4.98	350	5.57	302	5.58
1-2	4,921	31.69	2,145	34.15	1,356	25.04
3-4	4,499	28.97	1,861	29.63	1,334	24.63
5+	5,334	34.35	1,925	30.65	2,425	44.76
Wealth						
Poor	5,759	37.1	2,435	38.76	2,164	39.94
Middle	3,307	21.3	1,203	19.16	1,042	19.23
Rich	6,465	41.6	2,644	42.08	2,212	40.84
Highest education						
No education	2,826	18.2	2,544	40.50	878	16.20
Primary	10,231	65.9	2,253	35.86	3,313	61.15
Secondary/Higher	2,470	15.9	1,485	23.64	1,227	22.66
Residence						
Rural	12,841	82.7	3,839	61.12	4,526	83.53
Urban	2,686	17.3	2,443	38.88	892	16.47
Exposure to family planning messages through media						
No	5,757	37.2	4,984	79.40	1,370	25.30
Yes	9,756	62.8	1,293	20.60	4,046	74.70

Differentials in unmet need for contraception among currently married women in Malawi, Togo and Uganda

The distribution of currently married women in Malawi, Togo and Uganda by their unmet need for contraception status is presented in Table 2. The highest proportion of women with unmet need for spacing in all the countries were those aged 25-34 whereas for unmet need for limiting it was those aged 35-49. In all countries women in monogamous

unions and male headed households had higher contraception. The percentage of women with unmet need for spacing in Malawi was highest among those with fewer sons whereas in Togo and Uganda it was among those with more sons. Malawian women who had the same desired number of children with their spouses had a higher percentage of unmet need for spacing whereas the opposite was the case for their Togo and Ugandan counterparts. In percentages of all components of unmet need for all countries, the majority of the women with unmet need for contraception belonged to poor households. Additionally, more than half of the women with unmet need for contraception in Malawi and Uganda had primary education whereas in Togo it was those with no education. A higher proportion of the women in all countries resided in rural areas.

Table 2: Distribution of currently married women aged 15-49 in Malawi, Togo and Uganda according to their unmet need for contraception status

	Malawi			Togo			Uganda		
Selected characteristics	**Sp %**	**Lim %**	**P-value**	**Sp %**	**Lim %**	**P-value**	**Sp %**	**Lim %**	**P-value**
Age			0.000			0.000			0.000
15-24	43.6	16.2		30.5	2.7		41.67	5.07	
25-34	45.1	36.7		51.3	26.4		46.38	33.77	
35-49	11.3	47.1		18.2	70.9		11.96	61.16	
Type of marriage			0.0081			0.0039			0.010
Monogamous	85.4	81.0		70.9	63.3		73.46	67.68	
Polygynous	14.6	19.0		29.1	36.7		26.54	32.32	
Sex of head of house hold			0.0000			0.1721			0.044
Male	80.0	85.6		83.7	81.7		83.61	80.29	
Female	20.0	14.4		16.3	18.3		16.39	19.71	
Sex composition of living children			0.0000			0.0015			0.0000
Same	25.6	21.7		23.0	19.4		19.84	16.09	
Fewer sons	38.2	36.8		36.1	33.0		39.86	35.65	
More sons	36.2	41.6		40.9	47.7		40.31	48.26	
Spousal age difference			0.0903			0.3056			0.002
0	6.2	7.7		5.7	7.4		8.15	11.01	
1-5	54.0	49.3		39.7	35.0		45.29	38.70	
6-10	27.6	28.0		30.2	29.5		28.80	27.97	
>10	12.2	15.0		24.5	28.1		17.75	22.32	
Spousal agreement on fertility desire			0.000			0.578			0.000
No	44.3	52.5		66.1	69.4		68.66	80.14	
Yes	55.7	47.5		33.9	30.6		31.34	19.86	
CEB			0.000			0.000			0.000
0	5.3	2.3		2.9	0.1		3.80	0.15	
1-2	42.5	16.4		47.7	8.5		33.70	3.91	
3-4	33.4	27.6		30.6	32.9		30.71	11.74	
5+	18.8	53.7		18.8	58.5		31.79	84.20	
Wealth			0.000			0.149			0.000
Poor	41.8	40.3		41.8	35.0		46.92	48.26	
Middle	24.6	19.3		20.2	18.2		17.66	18.41	
Rich	33.6	40.4		37.9	46.8		35.42	33.33	
Highest education			0.000			0.000			0.000
No education	14.5	24.9		38.6	48.0		11.96	25.65	
Primary	69.9	65.6		36.0	35.4		66.85	62.75	
Secondary/Higher	15.7	9.5		25.4	16.6		21.20	11.59	
Residence			0.0110			0.0004			0.000
Rural	86.7	83.2		65.3	55.4		80.07	84.49	
Urban	13.3	16.8		34.7	44.6		19.93	15.51	
Exposure to family planning messages through media			0.0004			0.0001			0.013
No	40.9	40.7		65.3	55.4	0.0004	26.00	32.46	
Yes	59.1	59.3		34.7	44.6		74.00	67.54	

Familial factors associated with unmet need for contraception among currently married women in Malawi, Togo and Uganda

Results of the multinomial logistic regression analysis presented in Tables 3, 4 and 5 reveal that when family factors are unadjusted, the relative risk ratio for Togolese women in polygynous unions to have unmet need for spacing over no unmet need was 0.78 ($p<0.01$). Malawian women in female headed households were 80% ($p<0.001$) more likely to have unmet need for spacing over no unmet need. Sex composition of living children was significantly associated with unmet need for spacing in Uganda. Togolese women whose fertility desire was the same as their spouses were 14% ($p<0.05$) less likely to have unmet need for spacing over no unmet need. The number of children ever born (1-2 and 3-4) was positively associated with unmet need for spacing over no unmet need in Togo and Uganda. Women belonging to rich households in all countries had reduced risks of having unmet need for spacing over no unmet need.

After including the control variables, the relationship between type of union and unmet need for spacing among women in Togo and sex composition of living children ceased being significant. The association between sex composition of living children and unmet need for spacing among Ugandan women and the relationship between spousal agreement on fertility desire among women in Togo also lost their significance. The association between number of children ever born (1-2 and 3-4) and unmet need for spacing among Malawian women became significant. Among the added variables, age was inversely associated with unmet need for spacing among women in all countries. Additionally, women residing in urban areas in Uganda were 28% ($p<0.05$) less likely to have unmet need for spacing over no unmet need.

Table 3: Relative risk ratios from multinomial logistic regressions predicting unmet need for spacing and limiting among currently married women, MDHS 2010

Base outcome: Met need			
Unmet need for spacing	**Model 1**	**Model 2**	**Model 3**
Selected characteristics	**RRR (CI 95%)**	**RRR (CI 95%)**	**RRR (CI 95%)**
Age			
15-24		1.00	1.00
25-34		0.77 (0.65-0.92)**	0.78 (0.65-0.92)**
35-49		0.39 (0.30-0.50)***	0.39 (0.31-0.50)***
Type of marriage			
Monogamous	1.00	1.00	
Polygynous	1.02 (0.85-1.23)	1.08 (0.90-1.30)	
Sex of head of house hold			
Male	1.00	1.00	1.00
Female	1.80 (1.53-2.13)***	1.79 (1.52-2.11)***	1.79 (1.52-2.11)***
Sex composition of living children			
Same	1.00	1.00	1.00
Fewer sons	1.13 (0.95-1.35)	1.09 (0.92-1.31)	1.10 (0.92-1.31)
More sons	0.95 (0.79-1.13)	0.93 (0.78-1.12)	0.94 (0.78-1.12)
Spousal age difference (man's age – woman's)			
0	1.00	1.00	
1-5	0.91 (0.68-1.20)	0.80 (0.60-1.06)	
6-10	0.89 (0.67-1.20)	0.79 (0.59-1.06)	
>10	0.93 (0.67-1.29)	0.85 (0.62-1.19)	
Spousal agreement on fertility desire			
No	1.00	1.00	1.00
Yes	0.89 (0.79-1.02)	0.88 (0.77-1.00)	0.87 (0.77-1.00)*
CEB			
0	1.00	1.00	1.00
1-2	1.34 (0.97-1.85)	1.41 (1.02-1.94)*	1.42 (1.03-1.97)*
3-4	1.31 (0.94-1.82)	1.59 (1.12-2.26)**	1.61 (1.14-2.29)**
5+	0.82 (0.58-1.15)	1.38 (0.95-2.01)	1.40 (0.96-2.03)
Wealth			
Poor	1.00	1.00	
Middle	1.04 (0.89-1.22)	1.09 (0.93-1.28)	
Rich	0.71 (0.61-0.83)***	0.84 (0.71-0.99)*	
Highest education			
No education		1.00	1.00
Primary		1.01 (0.84-1.22)	0.98 (0.82-1.18)
Secondary/Higher		0.93 (0.72-1.21)	0.86 (0.67-1.10)

Residence			
Rural		1.00	1.00
Urban		0.85 (0.67-1.09)	0.77 (0.61-0.97)*
Exposure to family planning messages through media			
No		1.00	1.00
Yes		0.89 (0.77-1.02)	0.87 (0.76-1-00)*
Unmet need for limiting	**Model 1**	**Model 2**	**Model 3**
Selected characteristics	**RRR (CI 95%)**	**RRR (CI 95%)**	**RRR (CI 95%)**
Age			
15-24		1.00	1.00
25-34		0.96 (0.77-1.19)	0.97
35-49		1.60 (1.25-2.05)***	1.63***
Type of marriage			
Monogamous	1.00	1.00	
Polygynous	1.08 (0.93-1.27)	1.07 (0.91-1.26)	
Sex of head of house hold			
Male	1.00	1.00	1.00
Female	1.35 (1.13-1.60)**	1.36 (1.14-1.62)**	1.37 (1.15-1.63)***
Sex composition of living children			
Same	1.00	1.00	1.00
Less sons	0.91 (0.77-1.08)	0.92 (0.78-1.10)	0.92 (0.77-1.09)
More sons	0.88 (0.74-1.04)	0.87 (0.74-1.03)	0.86 (0.73-1.03)
Spousal age difference (man's age – woman's)			
0	1.00	1.00	
1-5	0.86 (0.68-1.09)	0.93 (0.74-1.18)	
6-10	0.79 (0.62-1.01)	0.84 (0.66-1.07)	
>10	0.82 (0.63-1.07)	0.85 (0.65-1.11)	
Spousal agreement on fertility desire			
No	1.00	1.00	1.00
Yes	0.78 (0.69-0.89) ***	0.81 (0.72-0.92)**	0.81 (0.71-0.91)**
CEB			
0	1.00	1.00	1.00
1-2	1.37 (0.90-2.10)	1.41 (0.93-2.16)	1.42 (0.93-2.16)
3-4	2.92 (1.92-4.45)***	2.89 (1.87-4.45)***	2.87 (1.87-4.42)***
5+	6.37 (4.21-9.64)***	4.88 (3.15-7.56)***	4.83 (3.13-7.48)***
Wealth			
Poor	1.00	1.00	
Middle	0.89 (0.76-1.04)	0.90 (0.77-1.05)	
Rich	1.06 (0.93-1.22)	1.00 (0.87-1.17)	
Highest education			
No education		1.00	1.00
Primary		1.01 (0.87-1.18)	1.02 (0.88-1.18)
Secondary/Higher		0.79 (0.60-1.04)	0.81 (0.61-1.05)
Residence			
Rural		1.00	1.00
Urban		1.40 (1.13-1.73)**	1.41 (1.14-1.73)**
Exposure to family planning messages through media			
No		1.00	1.00
Yes		0.88 (0.77-1.00)	0.88 (0.77-1.00)*

[R] = Reference category, *= p<0.05, **=p<0.01, ***=p<0.001

Table 4: Relative risk ratios from multinomial logistic regressions predicting unmet need for spacing and limiting among currently married women, TDHS 2013-14

Base outcome: No unmet need			
Unmet need for spacing	**Model 1**	**Model 2**	**Model 3**
Selected characteristics	**RRR (CI 95%)**	**RRR (CI 95%)**	**RRR (CI 95%)**
Age			
15-24		1.00	1.00
25-34		0.57 (0.47-0.69)***	0.57 (0.47-0.69)***
35-49		0.19 (0.15-0.25)***	0.19 (0.15-0.24)***
Type of marriage			
Monogamous	1.00	1.00	
Polygynous	0.78 (0.67-0.91)**	0.86 (0.73-1.01)	

Sex of head of house hold			
Male	1.00	1.00	1.00
Female	1.11 (0.91-1.35)	1.26 (1.03-1.54)*	1.22 (1.00-1.49)***
Sex composition of living children			
Same	1.00	1.00	1.00
Fewer sons	1.04 (0.85-1.26)	0.93 (0.76-1.14)	0.93 (0.76-1.13)
More sons	0.99 (0.82-1.20)	0.91 (0.75-1.11)	0.91 (0.75-1.11)
Spousal age difference (man's age – woman's)			
0	1.00	1.00	
1-5	1.09 (0.79-1.50)	0.87 (0.62-1.22)	
6-10	1.16 (0.83-1.61)	0.88 (0.62-1.23)	
>10	1.21 (0.86-1.69)	0.93 (0.66-1.32)	
Spousal agreement on fertility desire			
No	1.00	1.00	
Yes	0.86 (0.75-1.00)*	0.86 (0.74-1.00)	
CEB			
0	1.00	1.00	1.00
1-2	3.67 (2.45-5.49)***	4.36 (2.91-6.53)***	4.33 (2.90-6.48)***
3-4	2.76 (1.83-4.17)***	4.99 (3.28-7.59)***	4.94 (3.24-7.52)***
5+	1.48 (0.96-2.27)	4.29 (2.73-6.75)***	4.32 (2.75-6.79)***
Wealth			
Poor	1.00	1.00	1.00
Middle	0.85 (0.70-1.02)	0.90 (0.74-1.09)	0.90 (0.74-1.09)
Rich	0.62 (0.53-0.73)***	0.81 (0.59-1.09)	0.80 (0.59-1.07)
Highest education			
No education		1.00	
Primary		0.93 (0.79-1.10)	
Secondary/Higher		0.94 (0.77-1.16)	
Residence			
Rural		1.00	1.00
Urban		0.95 (0.70-1.27)	0.95 (0.71-1.28)
Exposure to family planning messages through media			
No		1.00	
Yes		0.97 (0.82-1.16)	
Unmet need for limiting	**Model 1**	**Model 2**	**Model 3**
Selected characteristics	**RRR (CI 95%)**	**RRR (CI 95%)**	**RRR (CI 95%)**
Age			
15-24		1.00	1.00
25-34		1.29 (0.75-2.20)	1.28 (0.74-2.19)
35-49		2.05 (1.19-3.54)*	1.99 (1.15-3.43)*
Type of marriage			
Monogamous	1.00	1.00	
Polygynous	0.87 (0.71-1.06)	0.84 (0.68-1.03)	
Sex of head of house hold			
Male	1.00	1.00	1.00
Female	1.60 (1.24-2.06)***	1.49 (1.15-1.94)**	1.44 (1.11-1.86)***
Sex composition of living children			
Same	1.00	1.00	1.00
Less sons	0.69 (0.53-0.89)**	0.69 (0.53-0.90)**	0.70 (0.54-0.91)**
More sons	0.82 (0.64-1.05)	0.81 (0.63-1.03)	0.82 (0.64-1.05)
Spousal age difference (man's age – woman's)			
0	1.00	1.00	
1-5	0.92 (0.64-1.33)	0.97 (0.67-1.40)	
6-10	0.91 (0.63-1.32)	0.98 (0.68-1.41)	
>10	1.11 (0.76-1.63)	1.18 (0.81-1.73)	
Spousal agreement on fertility desire			
No	1.00	1.00	
Yes	0.96 (0.78-1.17)	0.96 (0.78-1.18)	
CEB			
0	1.00	1.00	1.00
1-2	22 (3.00-163.23)**	21 (2.88-154..42)**	20 (2.79-149.14)**
3-4	126 (17.33-923.35)***	103 (14.16-742.00)***	97 (13.42-696.51)***
5+	297 (40.56-2180.74)***	206 (28.21-1503.36)***	197 (27.09-1425.39)***
Wealth			

Poor	1.00	1.00	1.00
Middle	1.27 (0.99-1.64)	1.26 (0.98-1.63)	1.25 (0.97-1.61)
Rich	2.52 (2.03-3.12)***	1.99 (1.34-2.97)**	1.96 (1.33-2.89)*
Highest education			
No education		1.00	
Primary		0.95 (0.77-1.18)	
Secondary/Higher		1.00 (0.75-1.35)	
Residence			
Rural		1.00	1.00
Urban		1.29 (0.89-1.86)	1.29 (0.90-1.86)
Exposure to family planning messages through media			
No		1.00	
Yes		0.92 (0.73-1.16)	

[R] = Reference category, *= p<0.05, **=p<0.01, ***=p<0.001

In the second model, the pattern of association between the familial factors and unmet need for spacing in all the countries was the same as that in the previous model except that in Malawi spousal agreement on fertility and place of residence became significantly associated with unmet need for spacing.

Tables 3, 4 and 5 also reveal the influences of familial factors on unmet need for limiting in Malawi, Togo and Uganda. The unadjusted effects of familial factors on unmet need for limiting in Malawi are as follows. Women in female headed households had higher risks (RRR=1.35, p<0.01) of having unmet need for limiting over no unmet need. Spousal agreement on fertility desire was negatively associated with unmet need for limiting (RRR=0.78, P<0.000 whereas the number of children born was positively associated with unmet need for limiting over no unmet need.

In Togo, Women in female headed households had higher risks (RRR=1.60, p<0.001) of having unmet need for limiting over no unmet need. Women with fewer sons than daughters were less likely to have unmet need for limiting over no unmet need. The number of children ever born was positively associated with unmet need for limiting over no unmet need whereas women belonging to rich households had higher risks (RRR=2.52, P<0.001) of unmet need for limiting over no unmet need.

The number of children ever born was positively associated with unmet need for limiting over no unmet need among Ugandan women. On the contrary, wealth was negatively associated with unmet need for limiting.

After controlling for age, education, place of residence and exposure to family planning message on media, the pattern of association between the familial factors and unmet need for limiting in all the countries was the same as that in the previous model. Among the added variables, results for all countries reveal that the risk of having unmet need for limiting over no unmet need was higher among women aged 35-49 years. Additionally, Malawian women residing in urban areas were more likely (RRR=1.40, P=0.01) to have unmet need for limiting over no unmet need.

Table 5: Relative risk ratios from multinomial logistic regressions predicting unmet need for spacing and limiting among currently married women, UDHS 2011

Base outcome: No unmet need			
Unmet need for spacing	**Model 1**	**Model 2**	**Model 3**
Selected characteristics	**RRR (CI 95%)**	**RRR (CI 95%)**	**RRR (CI 95%)**
Age			
15-24		1.00	1.00
25-34		0.59 (0.47-0.75)***	0.57 (0.46-0.73)***
35-49		0.18 (0.13-0.25)***	0.15 (0.11-0.21)***
Type of marriage			
Monogamous	1.00	1.00	
Polygynous	0.94 (0.78-1.14)	0.98 (0.81-1.19)	
Sex of head of house hold			
Male	1.00	1.00	
Female	0.83 (0.66-1.05)	0.90 (0.71-1.15)	
Sex composition of living children			
Same	1.00	1.00	1.00
Fewer sons	1.28 (1.02-1.62)*	1.19 (0.94-1.51)	1.20 (0.95-1.51)
More sons	1.31 (1.05-1.65)*	1.26 (1.00-1.58)	1.24 (0.98-1.56)
Spousal age difference (man's age – woman's)			
0	1.00	1.00	

1-5	1.17 (0.87-1.57)	0.95 (0.70-1.30)	
6-10	1.20 (0.88-1.63)	0.96 (0.69-1.33)	
>10	1.29 (0.92-1.81)	1.06 (0.75-1.51)	
Spousal agreement on fertility desire			
No	1.00	1.00	
Yes	1.01 (0.85-1.20)	0.97 (0.82-1.16)	
CEB			
0	1.00	1.00	1.00
1-2	1.95 (1.20-3.16)**	2.26 (1.39-3.67)**	2.30 (1.42-3.76)
3-4	2.00 (1.22-3.26)**	3.00 (1.79-5.01)***	3.05 (1.82-5.10)
5+	1.28 (0.78-2.09)	3.44 (2.01-5.89)***	3.39 (1.97-5.82)***
Wealth			
Poor	1.00	1.00	
Middle	0.77 (0.62-0.96)**	0.78 (0.62-0.98)*	
Rich	0.59 (0.50-0.71)**	0.75 (0.60-0.94)*	
Highest education			
No education		1.00	1.00
Primary		1.50 (1.16-1.96)**	1.42 (1.10-1.83)**
Secondary/Higher		1.19 (0.85-1.67)	1.05 (078-1.43)
Residence			
Rural		1.00	1.00
Urban		0.72 (0.56-0.93)*	0.65 (0.52-0.82)***
Exposure to family planning messages through media			
No		1.00	
Yes		1.10 (0.90-1.33)	
Unmet need for limiting	**Model 1**	**Model 2**	**Model 3**
Selected characteristics	**RRR (CI 95%)**	**RRR (CI 95%)**	**RRR (CI 95%)**
Age			
15-24		1.00	1.00
25-34		1.46 (0.86-2.48)	1.39 (0.82-2.35)
35-49		2.01 (1.16-3.48)*	1.68 (0.97-2.89)
Type of marriage			
Monogamous	1.00	1.00	
Polygynous	0.81 (0.65-1.02)	0.81 (0.64-1.02)	
Sex of head of house hold			
Male	1.00	1.00	
Female	1.20 (0.92-1.59)	1.23 (0.94-1.62)	
Sex composition of living children			
Same	1.00	1.00	1.00
Less sons	0.90 (0.67-1.23)	0.91 (0.67-1.23)	0.89 (0.66-1.21)
More sons	1.07 (0.80-1.44)	1.06 (0.79-1.42)	1.02 (0.76-1.37)
Spousal age difference (man's age – woman's)			
0	1.00	1.00	
1-5	0.98 (0.69-1.39)	1.02 (0.72-1.44)	
6-10	1.05 (0.73-1.52)	1.12 (0.77-1.61)	
>10	1.22 (0.84-1.79)	1.28 (0.87-1.88)	
Spousal agreement on fertility desire			
No	1.00	1.00	
Yes	0.83 (0.64-1.07)	0.85 (0.66-1.10)	
CEB			
0	1.00	1.00	1.00
1-2	5.27 (0.69-40.23)	5.12 (0.68-38.62)	5.30 (0.70-39.96)
3-4	15.58 (2.10-115.40)**	12.35 (1.66-91.89)*	12.72 (1.71-94.50)*
5+	79.38 (10.89-578.72)***	47.84 (6.42-356.48)***	47.97 (6.46-356.28)***
Wealth			
Poor	1.00	1.00	
Middle	0.73 (0.56-0.95)*	0.73 (0.56-0.95)*	
Rich	0.67 (0.53-0.4)**	0.76 (0.57-1.01)	
Highest education			
No education		1.00	1.00
Primary		1.20 (0.94-1.53)	1.03 (0.81-1.30)
Secondary/Higher		0.86 (0.57-1.28)	0.69 (0.48-0.99)*
Residence			
Rural		1.00	1.00

Urban		0.79 (0.56-1.12)	0.73 (0.53-0.99)*
Exposure to family planning messages through media			
No		1.00	
Yes		0.88 (0.70-1.11)	

[R] = Reference category, *= p<0.05, **=p<0.01, ***=p<0.001

In the final model, the only changes that occurred are that in Malawi and Uganda exposure to family planning messages through media and place of residence became significantly associated with unmet need for limiting.

Discussion

The study compared the familial correlates of unmet need for contraception among currently married women in Malawi, Togo and Uganda. After adjusting for control factors (age, educational attainment, place of residence and exposure to family planning messages on media) results of the study indicate that some of the familial factors are associated with unmet need for contraception in Malawi, Togo and Uganda. The major familial correlates of unmet need for spacing and limiting in Malawi are sex of the household head, spousal agreement on desired number of children and number of children ever born. In Togo the major familial correlates of unmet need for spacing and limiting are sex of the household head and number of children ever born. As for Uganda it is only the number of children ever born.

Findings of this study reveal that the number of children ever born was positively associated with unmet need for contraception in all the three countries. In other words women with high fertility had higher risks of having unmet need for contraception. This suggests that there is a culture of having many children in these countries and as such women are less likely to use contraceptives.

Malawian and Togolese women in female headed households are more likely to have unmet need for contraception than those in male headed households. This is consistent with earlier findings (Oginni, Ahonsi and Adebajo (2015). This suggests that such women have a lower likelihood of using contraceptives. The reason for the lower likelihood of using contraceptives could be poverty. Women from poor households lack access to better family planning. Actually, several studies attest to the fact that that female headed households tend to be poorer than male headed ones (Horrell and Krishnan 2007; Rahman, Matsui and Ikemoto 2013). It appears that males in these two countries have more control of resources than the females.

Another finding worth noting is the significant relationship between spousal agreement on fertility desire and unmet need for contraception. Malawian women whose fertility desire was same as that of their spouses have reduced odds of having unmet need for contraception. This finding is not surprising in that spousal agreement on fertility desire is an indication of such couples being able to discuss their fertility desires. This indicates that such spouses are able to share information as well as their feelings concerning reproductive health issues. Studies elsewhere reveal that women who reported discussion of family planning with spouses have reduced odds of experiencing unmet need for contraception (Wablembo, Notzi and Kwagala 2011; Ajong, Njotang, Yakum *et al.* 2016). It is therefore most likely that such couples agree on contraceptive use and thus decide to space or limit their births. Actually, the positive relationship between spousal communication and contraceptive use is highlighted by findings of several existing studies such as Sharan and Valente (2002); Lwelamira, Mnyamagola and Msaki (2012); Islam, Alam and Hasan (2014); Tilahun, Coene, Temmerman *et al.* (2014).

Conclusion

The study has established that familial factors are to some extent associated with unmet need for contraception among women in Malawi, Togo and Uganda. The fact that women whose fertility desire was the same as their spouses are less likely to have unmet need for contraception underscores the need to come up with strategies which will encourage spousal communication which in turn will aid males and females to be equal partners in family planning decisions.

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