Community based study on married couples' family planning knowledge, attitude and practice in rural and urban Gambia

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Abstract:

Background: Family planning services have been free of charge and available in all the health facilities in the Gambia since 1975 yet contraceptive prevalence is only 17.5% and even 6% in some areas. Since the last census in 2003, there existed no available data on married couples' contraception status.

Objectives:To explore married couples' family planning knowledge, attitudes, and practices in rural and urban Gambia and to analyze what factors may affect such knowledge, attitudes and practices.

Methods: Quantitative cross-sectional study design was used. Through convenience sampling, 176 men and 235 women representing a total of 176 couples participated. A structured questionnaire was used for data collection.

Results: The mean scores of the married couples family planning knowledge, attitudes, and practices were 19.00±6.11(ranging from 0 to 64), 6.90±3.08 (0 to 14) and 4.69±3.3 (0 to 19) respectively. Urban residents had higher scores on family planning practice than rural residents ($p<.05$). Attitude is the strongest predictor of practice (accounted for 34.6% of variance).

Conclusions: These findings offer a descriptive answer to "what are married couples' family planning knowledge, attitude and practice in Gambia", as well as suggesting broader health intervention programs in health education and promotion.

Key Words: Family planning, knowledge, attitude, practice, married couples, The Gambia

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Introduction

Gambia, a West African nation, shares cultural, socioeconomic, and demographic characteristics with other African countries, including rapid population growth mainly characterized by high levels of fertility, generally attributed to low contraceptive prevalence rates. From 1963 to 2003, Gambia's population increased from 315,486 to 1,360,681. Over half of the population is female and 49% of the females are of reproductive age (15 to 49 years), with fertility rate of 3.9 (1). Since 1975, family planning technologies and information have been free of charge to Gambians, yet the national contraceptive prevalence rate in 2003 was 17.5% (2).

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In some rural areas (Janjanbureh) it is a mere 6% (2). In comparison, the contraceptive prevalence rate in Ghana is 10.7%; in Tanzania 11.7%, while in Zimbabwe it is 31% (3). South Africa had the highest contraceptive use and awareness in sub-Saharan Africa, with more than half of sexually active women currently using a method of contraception (4). Low contraceptive prevalence is more pronounced in western and eastern Africa than in southern Africa which has better socioeconomic resources, a more positive attitude toward contraceptives, and better awareness among couples of family planning (1).

There was no known published study of married couples' family planning knowledge, attitudes and practice in The Gambia. Therefore, the purposes of this study were to explore married couples' family planning knowledge, attitudes, and practices in rural and urban Gambia and to analyze what factors may affect such knowledge, attitudes and practices.

Methods and materials

This study was conducted in the Greater Banjul Area, Western Region, and Central River Region of The Gambia. One of the regions was rural, the other, urban. A descriptive quantitative cross-sectional study design

was used for this study. Since there was no known study of married couples' family planning knowledge, attitudes and practice in The Gambia, the sample size was estimated on the basis of an assumed small effective size (d ≈0.25), which was based on Cohen's (1988) rule to detect a difference between 2 matched groups of the primary outcome. Other parameters considered for estimation of sample size are type I error (α=0.05, this error results in our concluding a difference when none exists), type II error (β=0.2, this error is failing to conclude a difference exists when it does) and was calculated to provide 80% power at a significance level of 0.05 to detect the above effect size value of primary outcome. Hence, a minimum sample size of 130 married couples was required (5). Thus a minimum of 65 couples were surveyed in each region. To ensure sufficient valid samples, using convenience sampling, 176 married men and 235 women representing a total of 176 families participated.

A questionnaire was developed by the researchers to explore the knowledge, attitudes and practices of contraceptives among married couple in the Gambia. The questionnaire was reviewed by five experts to establish content validity (Content Validity Index: .96). The questionnaire included three subscales: knowledge (18 questions with 64 items), attitudes (14 questions with16 items), and practices (14 questions with 19 items). One point was given for any correct answer to each item and zero points were given for any wrong or unknown answer. Thus, the scores for married couples' knowledge, attitudes, and practices ranged from 0 to 64, 0 to 16 and 0 to 19, respectively. The developed questionnaire was used to investigate the married couples' knowledge, attitudes, and practices. The Cronbach's α for the three subscales were .829, .793, and .696 for knowledge, attitude and practice respectively.

Ethical approval was obtained from the National Taipei University of Nursing and Health Sciences IRB committee and the director of Health Services in The Gambia. Informed verbal and written consent was obtained from the participants. Two research assistants (community health nurse midwives, one female and one male) were recruited locally and trained by the primary researcher for data collection in a one day training session which included an introduction to the questionnaire and the objectives of the study along with training in interview skills for the data collection. After clarification of misunderstandings and questions after the pilot study, the primary researcher and two trained research assistants collected data using door to door, face to face interviews in both urban and rural areas. The data collectors revisited residents where interviews had not been completed due to the absence of either the husband or the wife. The interview was planned in such a way that both husband and wife would be interviewed at the same time in different rooms in their home. In this way, each participant would not be able to hear what their spouse was saying. The wives were interviewed by the female research assistant while the husbands were interviewed by the male, whenever possible. At the end of each day, the primary researcher collected the returned questionnaires from the research assistants and checked them for validity. If a questionnaire was not completed, the following morning the research assistants went back and completed the interview. The completed questionnaires were kept by the primary researcher to preserve confidentiality. Data was collected from June to September of 2010.

Descriptive and inferential statistics generated by Statistical Package for Social Sciences version 18 were used to analyze the data. Mean and standard deviation were used to display continuous variables. Number of cases and percentage (%) were used to display categorical variables. Independent t-test and one-way ANOVA were used to compare different levels of continuous variables. Multiple and stepwise regressions were used for determining the influence of variables on the practice of family planning among married couples in The Gambia.

Results

Of the total of 411 participants, 176 (42.8%) were males and 235 (57.2%) females. The participants mean age was 34.4±10.1, ranging between 16-65 years. There were significant differences between urban and rural areas in age at the time of marriage ($p < .001$) and in illiteracy ($p < .001$). Most polygamous participants were rural residents ($p < .001$). Table 1 shows a summary of the demographic characteristics of rural and urban participants.

Our results showed that the mean scores of the family planning knowledge, attitudes, and practices among study participants, were 19.0±6.1 (ranging from 0 to 64), 6.9±3.1(0 to 14), and 4.7±3.3 (0 to 19) respectively (Table 2). Over half of the respondents (222 or 54%) had never used contraceptives. Among the remainder, 189 (46%) of participants confirmed previous use of contraceptive methods, while only 87 (21.2%) said they were currently using them (Table 3). Condoms, injectable

contraceptives, and pills are the most commonly used contraception methods, with rates of 23.6%, 15.6%, and 11.9%, respectively.

A comparison of family planning knowledge, attitudes, and practices between participants from rural and urban areas is shown in Table 4. Urban residents were found to have higher scores on family planning attitudes ($p<.001$) and practices ($p<.05$) than their rural counterparts. Males had higher scores on knowledge and attitudes than females ($p<.05$). Participants who completed secondary and higher education had higher scores on knowledge ($p<.01$) and attitudes ($p<.01$) and were more likely to use contraceptives ($p<.01$) than individuals with primary or below educational levels. Civil servants had higher scores on knowledge ($p<.001$), attitudes ($p<.001$) and practices ($p<.05$) than farmers and housewives. Participants who married after age 24 had higher scores on knowledge ($p<.01$) and attitudes ($p<.01$) than those who married earlier. Participants who were in polygamous unions had less scores on knowledge ($p<.01$), attitudes ($p<.001$) and practices ($p<.01$).

Multiple stepwise regressions were used to analyze factors influencing family planning practice. Knowledge, attitudes, gender, age, levels of education and regions were included to predict family planning practice. As presented in the multiple stepwise regression model in Table 5, attitude accounted for 34.6% of the variance (adjusted $R^2 = .344$, $\beta = .497$, $p < .001$). The inclusion of knowledge into model resulted in an additional 2.8% of variance being explained (R^2 Change $=0.028$), adjusted ($R^2 = .371$, $\beta = .190$, $p < .001$). Gender, age, regions and levels of education were excluded from the model. These results suggest that a positive attitude towards family planning is the strongest predictor of practice.

The results indicated socioeconomic and demographic factors such as region, educational level; age, employment, attitudes, knowledge and types of marriages had a significant direct and indirect effect on family planning practice ($p < .001$).

Discussion

This study explored and analyzed married couples' family planning knowledge, attitudes, and practices, in rural and urban Gambia. Results indicated socioeconomic and demographic factors like region, educational level, employment, attitudes, knowledge, and type of marriage had a significant effect on family planning practice, consistent with previous studies in sub-Saharan African countries and the Middle East (2; 6; 7; 8). Though Gambians have access to free family planning services at all public health facilities, contraceptive prevalence appears to be relatively low, nationally.

Great disparity exists in educational levels between the rural and urban couples in this study. Over two-third of the 226 individuals of lower educational levels resided in rural areas. Rural residents generally live in farming communities with higher rates of leaving school early, especially among females. This is typically due to preferences for educating boys or early marriage out of fear of pregnancy outside marriage. Employment opportunities in the civil service for rural residents are fewer than for urban residents due to their low educational attainment. Rural participants are more likely to be in polygamous relationships and have low incomes as well. Similar results were found in a study conducted in Mali where 80% of female participants had no formal education, 43% of the participants were in polygamous marriages, and the majority of the participants were rural residents (9).

Early marriage is common among females in The Gambia. Of the 173 participants who married before the age 20, 163 were female. Most of the participants involved in early marriage resided in the rural region. Those who married between the ages 25 to 29 have significantly greater family planning knowledge than those who married under age 25. By ages 25 to 29 most

Table 2 Mean Score of family planning knowledge, attitude and practice (N=411)

Subject	No. of Items	Mean	SD
Knowledge	64	18.96	6.105
Attitude	16	6.85	3.078
Practice	19	4.69	3.298

Table 1 Demographic characteristics of participants from rural and urban areas (N=411)

Variables	N=411 n(%)/M±SD	Regions					t/x²
		n=214 (52.1%)			n=197 (47.9%)		
		Male	Female		Male	Female	
Gender							
Male	176 (42.8%)	88 (41.1%)			88 (44.7%)		.528
Female	235 (57.2%)	126 (58.9%)			109 (55.3%)		
Age	34.358±10.08	33.16±10.536			35.65±9.421		-2.530*
Age at the time of marriage							
≤19yrs	173 (42.2%)	4 (4.5%)	104(82.5%)	6 (6.8%)		59 (54.2%)	236.968***
20-24yrs	114 (27.7%)	35 (39.9%)	19(15.1%)	23 (26.1%)		37 (33.9%)	
25-29yrs	86 (20.9%)	37 (42.0%)	2 (1.6%)	34 (38.6%)		13 (11.9%)	
≥30yrs	38 (9.2%)	12 (13.6%)	1 (.8%)	25 (28.5%)		0 (0%)	
Educational level							
None	226 (55.0%)	48 (54.5%)	94 (74.6%)		26 (29.5%)	58 (53.3%)	82.768***
Primary	64 (15.6%)	13 (14.8%)	20 (15.9%)		11 (12.5%)	20 (18.3%)	
Secondary	86 (20.9%)	15 (17.0%)	11 (8.7%)		30 (34.1%)	30 (27.5%)	
College/Univ	35 (8.5%)	12 (13.7%)	1 (.8%)		21 (23.9%)	1 (.9%)	
Employment							
Civil servant	87 (21.2%)	23 (26.2%)	6 (4.8%)		46 (52.3%)	12 (11.0%)	310.353***
Trader	21 (5.1%)	9 (10.2%)	1 (.8%)		5 (5.7%)	6 (5.5%)	
Farmer	108 (26.3%)	56 (63.6%)	7 (5.5%)		37 (42.0%)	8 (7.3%)	
Housewife	195 (47.4%)	0 (.0%)	112 (88.9%)		0 (.0%)	83 (76.2%)	
Ethnicity							
Mandinka	172 (41.8%)	42 (47.7%)	60 (47.6%)		32 (36.4%)	38 (34.9%)	86.152***
Wolof	75 (18.2%)	20 (22.7%)	34 (27.0%)		6 (6.8%)	15 (13.8%)	
Fula	70 (17.0%)	22 (25.0%)	24 (19.0%)		11 (12.5%)	13 (11.9%)	
Jola	60 (14.7%)	2 (2.3%)	2 (1.6%)		25 (28.4%)	31 (28.4%)	
Other	34 (8.3%)	2 (2.3%)	6 (4.8%)		14 (15.9%)	12 (11.0%)	
Type of marriage							
Monogamous	228 (55.5%)	51 (58.0%)	51 (40.5%)		63 (71.6%)	63 (57.8%)	21.186***
Polygamous	183 (44.5%)	37 (42.0%)	75 (59.5%)		25 (28.4%)	46 (42.2%)	
Economic status							
Low income family [a]	314 (76.4%)	61 (69.3%)	122 (96.8%)		33 (37.5%)	98 (89.9%)	116.485***
High income family [b]	97 (23.6%)	27 (30.7%)	4 (3.2%)		55 (62.5%)	11 (10.1%)	

Note: *** p<.001 level, * p<.05, [a] = Depending on others or monthly earning < D2000, [b] = Monthly earning> D2000.

individuals have completed their college education and may have acquired accurate knowledge about their reproductive system. These individuals are more career conscious than those who married at young age and have more opportunities to interact with co-workers and other friends who may have different experiences of family planning. Overall, this study found that lower the educational level are correlated with lower knowledge of family planning. This finding is consistent with studies in Kenya and Ethiopia (7; 10). This further supports the notion that an obstacle to rapid change in contraceptive behavior is a low level of education (8).

As indicated earlier, polygamous marriages were more prevalent among rural residents, farmers, less educated, and low income earners. In addition, a lower level of family planning knowledge was found among polygamous couples than monogamous couples. Such observation has a greater impact on the females in the polygamous marriage due to the vulnerable status among females. Low income status prevents many females from completing or attending schools since they may not be able to pay fees or transportation fare. This predisposes girls to early marriage and parenthood due to little exposure to family planning knowledge.

As in Duze and Mohammed (8), education has a strong influence on contraceptive use through attitude. The urban residents in the current study had higher education levels compared to the rural residents, which may explain why urban residents have more positive family planning attitudes than rural residents. The married individuals aged 20 and under were primarily females who strived hard to have their first child to secure their marriages. Family planning was at a lower priority for these young females. Such situation and priority setting prevented the females from acquiring higher education. That education levels affect contraceptive prevalence

Table 3 Contraceptive use among married couples in The Gambia (N=411)

Items	N=411	Yes		No	
		n	%	n	%
Have you ever used contraceptive methods		189	(46.0)	222	(54.0)
Condom		97	(23.6)	314	(76.4)
Injectable (Depo)		64	(15.6)	347	(84.4)
Pills		49	(11.9)	362	(88.1)
Periodic Abstinence		4	(1.0)	407	(99.0)
Intrauterine Contraceptive Device (IUCD)		2	(0.5)	409	(99.5)
Prolonged Breast Feeding		2	(0.5)	409	(99.5)
Spermicidal		1	(0.2)	410	(99.8)
Bilateral Tubal Ligation (BTL)		1	(0.2)	410	(99.8)
Norplant		0	(0.0)	411	(100.0)
Vasectomy		0	(0.0)	411	(100.0)
Are you currently using contraceptive methods		87	(21.2)	324	(78.8)
Condom		41	(10.0)	370	(90.0)
Injectable (Depo)		30	(7.3)	381	(92.7)
Pills		12	(2.9)	399	(97.1)
Periodic Abstinence		5	(1.2)	406	(98.8)
Intrauterine Contraceptive Device (IUCD)		1	(0.2)	410	(99.8)
Prolonged Breast Feeding		1	(0.2)	410	(99.8)
Bilateral Tubal Ligation (BTL)		1	(0.2)	410	(99.8)
Norplant		0	(0.0)	411	(100.0)
Vasectomy		0	(0.0)	411	(100.0)
Spermicidal		0	(0.0)	411	(100.0)
Discus contraceptive use with your partner		160	(38.9)	251	(61.1)

is consistent with studies conducted in Kenya, South Africa and northern Nigeria (1; 7; 8; 11) and is similar to a 2001 report (12) in the Gambia which citied disparities observed in fertility level among urban and rural women which could be explained by the higher educational levels and better socioeconomic status of urban women. A study conducted in Rwanda (13) found that the proportion of women who wanted to limit their family size is higher in urban than rural areas.

Beekle and McCabe (10), investigating education and contraceptive use in Ethiopia, found that employment opportunities enabled individuals to attain economic independence, empowering them in decision making about their reproductive decisions. Civil servants displayed better attitudes towards family planning than housewives and farmers. Low economic status and low employment opportunities among females reduced their power over their own reproductive lives. Females who have the opportunity to be employed are less likely to have as many children as housewives because of their ability to negotiate their reproductive health issues and to participate in the decision making process of the family.

Other studies in Africa have produced the similar findings (13; 14; 15). These studies showed that urban residents utilized resources to educate their children whereas rural residents benefit from their children working on the farm. This leads them to have more children than employed females and high income urban families. Most rural residents are farmers. For

Table 4 Factors associated with family planning K.A.P. among married couples (N=411)

Variables (n)	Knowledge M±SD	t/ F/ Scheffe	Attitude M±SD	t/ F/ Scheffe	Practice M±SD	t/ F/ Scheffe
Region						
Rural (214)	19.16±6.411	.692	6.22±3.218	-4.45***	4.37±3.211	-2.00*
Urban (197)	18.75±5.763		7.54±2.767		5.03±3.366	
Gender						
Male (176)	19.72±6.770	2.17*	7.26±3.230	2.30*	4.74±3.580	.757
Female (235)	18.40±5.503		6.55±2.929		4.64±3.077	
❶Male in Rural Area (88)	20.08±7.306	1.814	6.70±3.461	8.266***	4.38±3.134	1.376
❷Female in Rural Area (126)	18.52±5.647		5.89±3.005	3,4>2	4.37±3.276	
❸Male in Urban Area (88)	19.35±6.209		7.81±2.896		5.11±3.961	
❹ Female in Urban Area (109)	18.26± 5.355		7.32±2.652		4.95±2.813	
Age at the time of marriage						
❶ ≤19yrs (173)	18.45±5.304	4.551 3>1,2	6.25±2.833	4.370** 3>1	4.57±3.048	2.184
❷ 20-24yrs (114)	17.96 ±6.151		7.04±3.035		4.47±3.205	
❸ 25-29yrs (86)	20.74 ±6.730		7.56±3.161		4.63±2.666	
❹ ≥30yrs (38)	20.26±7.016		7.42±3.644		5.97±5.268	
Educational Level						
❶None (226)	17.11±5.431	23.63** 3,4>1,2	5.99±3.005	17.209** 2,3,4>1	4.01±3.019	8.705**
❷ Primary (64)	19.23±4.930		7.22±2.640		5.02±2.723	
❸ Secondary (86)	21.56±5.440		8.03±2.880		5.52±3.101	
❹ College /Uni. (35)	24.06±8.282		8.86±2.819		6.37±5.018	
Employment						
❶ Civil servant (87)	22.32±6.829	13.315*** 1>3,4	8.47±2.832	11.526*** 1>3,4	5.68±4.062	4.430* 1>3
❷ Traders (21)	20.19±4.501		7.05±3.309		5.14±2.903	
❸ Farmer (108)	17.57±6.273		6.57±3.094		4.02±2.900	
❹ House wife (195)	18.10±5.515		6.27±2.913		4.56±3.073	
Ethnicity						
❶Mandinka (172)	19.46±7.055	.711	6.30±3.038	4>3,2,5,1	4.33±3.349	2.065
❷Wolof (75)	18.75±4.940		7.05±2.959		4.76±2.884	
❸ Fula (70)	18.93±4.298		7.26±3.382		5.36±3.72	
❹Jola (60)	18.52±6.440		7.75±2.488		5.23±4.010	
❺Other (34)	17.76±5.873		6.79±3.424		3.97±2.431	
Type of marriage						
Monogamous (228)	19.86±5.791	3.36**	7.46±2.872	4.57***	5.15±3.394	3.24**
Polygamous (183)	17.85±6.315		6.10±3.164		4.10±3.086	
Economic Status						
Low income family [a] (314)	18.36±5.806	-3.408**	6.57±3.119	-3.409**	4.53±3.044	-1.548
High income family [b] (97)	20.92±6.650		7.77±2.759		5.21±3.987	

Note: *** p<.001, **P < 0.01, *P<0.05 level, [a] = Depending on others or monthly earning < D2000, [b] = Monthly earning> D2000.

Table 5 Stepwise Regression analysis of factors predicting family planning practice (N =411)

Variable	β	S.E	R^2	Adjusted R^2	R^2 Change	F
1. Attitudes	.497	.048	.346	.344	.346	216.403***
2. Knowledge	.190	.024	.374	.371	.028	121.709***

Note. *** p<.001

farmers, the more children they have, the more respect they earn in the society and the more crops they can produce. Children are also perceived to provide security to the parents at their old age. This contributes to the preference for polygamy and large family sizes. Indeed, polygamy itself also appears to reduce contraceptive use. In a study of polygamy in Jordan (16) it was found that co-wives in polygamous marriages competed to produce male children as male children are seen to carry on the family name.

Family planning has been shown to be an effective means of slowing population growth, an essential step toward achieving a sustainable balance between socio-economic development and availability of resources. It helps couples avoid unwanted and high-risk pregnancies. It is also the most effective technology among the four major technologies (antenatal care, emergency obstetric care; skilled attendance at birth; and family planning) that can reduce maternal mortality and morbidity. It is considered by World Bank to be one of the most cost-effective programs for preventing maternal and infant death (17).

This study showed that the practice of family planning was declining among the participants. Previous users of contraceptive methods exceeded current users by 102 participants. Unlike a study conducted in Egypt (18) where condom use is rare, male condom use was 10% in the current study, followed by injectable-Depo Provera at 7.3%. Prolonged breast feeding, periodic abstinence and bilateral tubal ligation were less practiced. Vasectomy is not practiced. Use of contraceptives increased with age and reached its peak from ages 25 to 29. During married life after age 40 contraceptive use declined. Contraceptive use was absent in the groups under age 20 and over age 50 .

Despite the greater knowledge and better attitudes of men, their practice of family planning is not significantly different from females. This could be explained by the deep rooted culture of male dominance in the Gambia. In the Gambian culture, most males prefer a larger family size with male children and the reproductive decisions were left to the males. Similar findings were discovered in Petro-Nustas and Al-Qutob's study (18) which was conducted in Jordan.

Participants believed in several myths about family planning. Some participants stated that 'too much use of contraceptives can prevent you from having children later in life' or 'if I am living with my wife or husband I don't need contraceptives' or 'contraceptives caused prolong bleeding'. In Gambia open discussion or the practice of family planning was once a taboo. Women who practiced family planning at that time risked their marriage, while husbands associated practicing family planning with promiscuity. Some men divorced their wives for using contraceptives, or married another wife.

Conclusion

This study provided baseline information about the married couples' family planning knowledge, attitudes, and practices in both the rural and urban Gambia. A low level of knowledge of family planning among participants was found. A lack of education and early marriage for females appear to hinder the use of family planning methods in The Gambia. The low level of family planning practice by couples should be further explored in the context of reduction of poverty, mortality, and morbidity among Gambia's children.

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