

Effects of Postpartum Family Planning Counselling on Contraceptives Knowledge, Attitude and Intention Among Women Attending a General Hospital in The Gambia: A Randomized Controlled Trial

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Purpose: This study aimed to evaluate the effectiveness of PPFP counselling on contraceptives knowledge, attitudes and intention among women attending a general hospital in The Gambia.

Materials and Methods: A quasi-experimental design with an intervention and comparison group was used. The intervention was PPFP counselling using the GATHER approach. A sample size of 674 participants was determined by a formula for comparison between the two groups. The questionnaire was developed based on a literature review and was pre-tested on 10% of the total study sample size (68). A reliability of 0.731 was obtained. A systematic random sampling method was employed to select study participants who met the inclusion criteria. Data were collected during face-to-face interviews in local languages with a 100% response rate at baseline and 96% at post-test. Data were analysed using the SPSS version 21.00 and the statistical analysis included both descriptive and inferential methods. An ethical approval was obtained from the Research and Ethics Committee, School of Basic Medical Sciences, College of Medicine, University of Benin (CMS/REC/2017/017) and the Gambia Government/Medical Research Council Laboratories Joint Ethics Committee (R017016Av1.1).

Results: Baseline respondents' socio-demographic characteristics revealed that the two groups had similar characteristics. A statistically significant difference existed on knowledge, attitude, and intention to use contraceptive methods between the intervention and comparison groups at post-intervention ($p < 0.05$) while no significant difference was observed at baseline. Significant gains were achieved in the intervention group in terms of knowledge, attitude, and intention post-intervention.

Conclusion: PPFP counselling during the postpartum period and before the discharge of women from the hospital may improve knowledge, attitude and intention to use contraceptives and, therefore, increase the likelihood of contraceptive uptake and thus prevent unwanted and closely spaced pregnancies.

Keywords: interventional, post-delivery, research, The Gambia

Introduction

PPFP counselling is a critical component of maternal health care that may meet women's desire for contraception and thus improves contraceptive uptake. PPFP is defined as the prevention of unintended pregnancy and closely spaced pregnancies through the first 12 months following childbirth.¹ Globally, nearly 65% of the women in their first postpartum year have an unmet need for family planning services,² with more than 220 million women in developing countries, mainly in South Asia and sub-Saharan Africa.³ In India, 65% of the women in the first-year postpartum have an unmet need for family planning.⁴ A high unmet need for family planning contributes to low contraceptive use. PPFP usage varies in sub-Saharan countries: 40% in Zambia, 25% in Kenya, 20% in Tanzania, 15% in Nigeria and less than 10% in Ethiopia.⁵

In The Gambia, West Africa, the unmet needs stand at 24% for currently married women and 45% for sexually active unmarried women.⁶ The prevalence of contraceptive use among married women is 19%. However, the prevalence, quality and content of PPFPP counselling are unknown.

The goals of contraceptive counselling are to educate women about contraception, discuss current and future contraceptive needs and, if needed, select a contraceptive modality thereby avoiding the risks of unintended pregnancies.⁷ Evidence indicates that structured counselling protects women's rights to an informed and voluntary decision regarding their reproductive choices and improves the use of modern contraception methods.^{8,9}

Furthermore, the level of women's knowledge has a significant effect on the future use and non-use of postpartum contraception. Evidence from a systematic review reveals that facility- and community-based interventions can have a significantly positive effect on knowledge and intention to use contraceptives as outcomes.¹⁰

Researchers found that knowledge and awareness on contraceptives are high among the Nigerian population. However, this awareness has not been translated into increased contraceptive use, and so contraceptive prevalence has remained low.¹¹ Furthermore, a cross-sectional observational study conducted among postpartum women in Nepal revealed that contraceptive awareness and knowledge among the postpartum women was high, but their usage was low.¹²

Attitude is the most difficult part to measure as it is characterized in a very abstract way. A published work from Ebonyi State, Nigeria, indicated that postpartum women have a favourable attitude towards contraception.¹³ Similarly, a study in India revealed that postpartum women have a favourable attitude towards contraception.¹⁴

In Uganda, 71.4% of the women in the control group and 87% in the intervention group intended to use a modern contraceptive method following counselling on PPFPP.¹⁵ Similarly, studies from Nigeria showed that most women intended to use a method of postpartum contraception,¹⁶ while in Ohio, USA, the majority of postpartum women (91%) intended to use contraception before their discharge following delivery at a large university hospital.¹⁷

In The Gambia, family planning services have been free of charge and available in all public health facilities since 1975, yet the contraceptive prevalence rate (CPR) shows a downward trend in married women aged 15–49 years for various reasons, such as low educational level and religious barrier.⁶ Contraceptive counselling during the postpartum period may improve knowledge, attitude and intention regarding the use of modern contraception methods and may help to prevent or delay a subsequent pregnancy after a live birth. No published study on PPFPP counselling has been undertaken in The Gambia. The aim of this study was to evaluate the effects of PPFPP counselling on knowledge, attitude and intention regarding contraceptives in women attending health facilities in The Gambia.

Materials and Methods

This was a hospital-based study where women delivering in one hospital received the intervention and women receiving standard care in another hospital served as the comparison group (Figure 1).

Study Setting

The two study sites were randomly selected based on their ability to provide the following; comprehensive emergency obstetrics care, postnatal care services and family planning services. All the health facilities in the country that met the inclusion criteria above were listed, put in a ballot box and randomly selected by replacement. BGH located in the Central River Region in rural Gambia, about 300 km from the capital city Banjul, served as the intervention site. BGH was selected as the intervention site. In order to prevent contamination, SHC, located in the Lower River Region, about 180 km from the capital, served as the comparison site. Therefore, the distance between the two study sites is about 120 km.

The Intervention

Counselling regarding the role and usage of contraceptives was provided three times using the GATHER (Greet, Ask, Tell, Help, Explain and Return) approach.¹⁸ Counselling sessions used a poster and sample contraceptive methods currently offered in The Gambia including male and female condoms, contraceptive pills, emergency contraceptives, Depo Provera, implants (Jadelle and Implanon), intra-uterine devices, and female sterilization.

The first counselling was provided before or immediately after the medical ward rounds on the first day before hospital discharge. The second counselling was conducted on the 9th day after delivery at the post-natal clinic, before or

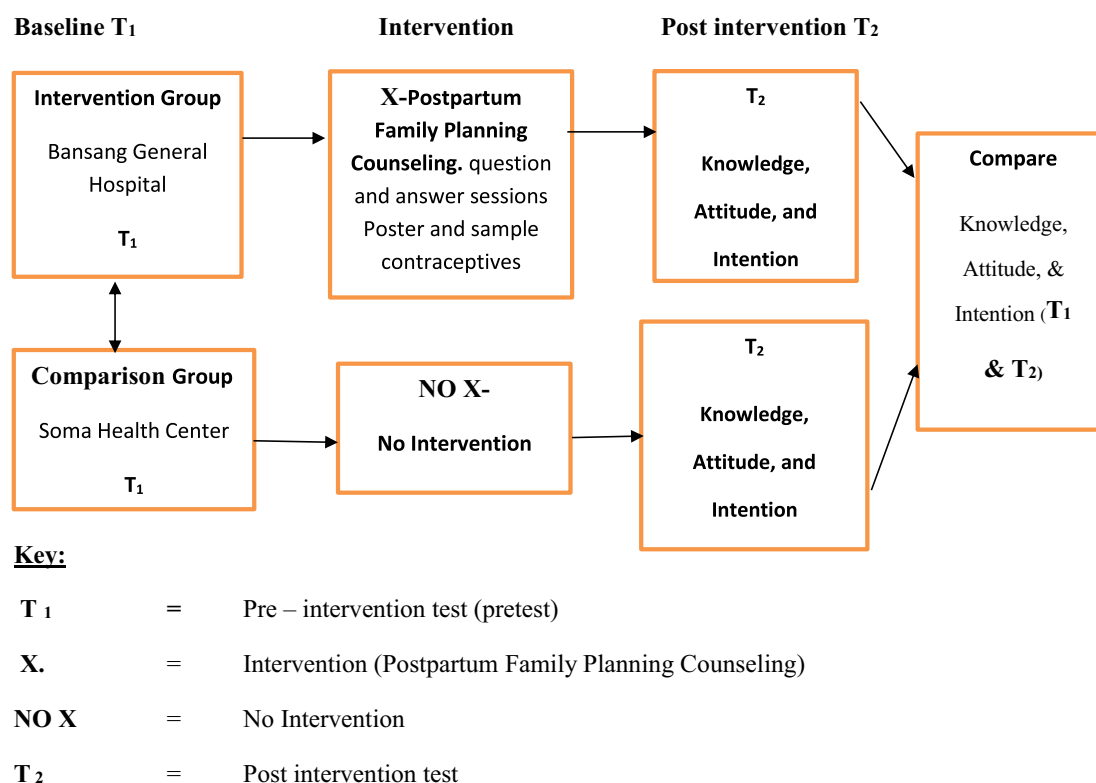


Figure 1 Study design.

after the change of card. It is a cultural practice that during the first week postpartum, women stay indoors and only go to the hospital if the child is ill. The child is given a name on the 8th day and women then attend clinics to change their card from the antenatal to an infant welfare card. The third counselling session was carried on the 40th day at the Infant Welfare Clinic while the woman was waiting for, or immediately after, the baby received immunization.

Study Tool

A questionnaire was developed based on a literature review of women's knowledge, attitude, and intention towards PFP methods. The questionnaire consisted of 37 close-ended questions divided into four sections. Section A recorded socio-demographic characteristics of the respondents. Section B assessed knowledge of family planning; two points were given for a correct answer, and zero for a wrong or unknown answer. Some of the questions had multiple answers. The total possible score was 54, 0–36 was considered poor knowledge, and 37–54 good knowledge. Section C addressed postpartum women's attitudes to family size and planning were assessed by nine items on a five-point Likert scale with a maximum score of 45. Scores from 9 to 27 were considered negative and 28 to 45 positive. Finally, Section D assessed intention to utilize contraceptives and had eight items on a five-point Likert scale with a maximum score of 40. Scores from 8 to 24 were considered as low and 25–40 high (additional File 1). The same questionnaire was administered at baseline (pre-test) and at 6 weeks after delivery (post-test).

Reliability

The questionnaire was pre-tested using 10% of the planned sample size (68), from two health facilities not utilized in this study (34 from each facility), on participants that had similar inclusion criteria as those that participated in the study. The reliability was 0.731. The questionnaire was modified based on the pre-test results.

Sample Size and Sampling Technique

The sample size estimation of this study was determined by using a formula for sample size calculation for comparison between two groups when endpoint is quantitative data. Based on a prevalence of 57% and 49% of the women who accepted contraceptives following PPFP counselling in Rwanda,¹⁹ the calculated sample size (n) was 612.²⁰ With provision for 10% loss to follow-up rate, the final sample size was 674. A systematic sampling technique (every second woman starting from the first participant) was employed where in every eligible participant had equal chances to take part in the study. This was done by using the admission book in the labour ward. Each group consisted of 337 participants.

Inclusion and Exclusion Criteria

Women aged 18–49 years who gave birth to a live infant between November 2017 and May 2018 and were scheduled to receive postnatal care and attend the infant welfare clinic were invited to join the study. Women with postpartum haemorrhage, infection, fever $>38.0^{\circ}\text{C}$ or severe chronic illness (mental illness, cancer, cardiac, liver or kidney diseases) were excluded.

Data Collection and Analysis

Data were collected using face-to-face interviewer-administered questionnaires by eight trained practicing nurse-midwives and contraceptive counsellors. These practitioners were trained as research assistants and were fluent in at least two of the three languages (Mandinka, Fula and Wolof) spoken in the study sites. The questionnaire was retrieved immediately resulting in a 100% return rate. Data collected from November to December 2017 were used as baseline data, and from December 2017 to February 2018 as post-test data. Analysis included both descriptive and inferential statistics using SPSS version 21 IBM. Data were presented using frequency tables, and summary statistics. Statistical tests were done using chi-squared tests, *t*-tests, difference-in-difference analysis (DID), single difference (SD) and binary logistic regression. Statistical significance was set at $P < 0.05$.

Ethical Approval and Consent to Participate

Ethical approval was granted by the Research and Ethics Committee, School of Basic Medical Sciences, College of Medicine, University of Benin (CMS/REC/2017/017); The Gambia Government/Medical Research Council Laboratories Joint Ethics Committee (R017016Av1.1). The majority of the participants could neither read nor write in English. Therefore, the participant information sheet was read to participants in their identified local languages. Participants were assured that participation was voluntary and they had the right to withdraw from the study at any time. Withdrawal would not affect the care or services offered. Participants signified their consent by appending their thumbprint to the consent form, this was approved by both ethics committees mentioned above. Furthermore, the study complies with the Declaration of Helsinki. Data were pooled and used only for the study.

Results

At baseline, the intervention and comparison groups were similar in terms of their socio-demographic characteristics except for ethnicity, marital status and employment. Regarding ethnicity, most of the respondents in the intervention group were from the Fulla tribe while Mandinkas form the majority in the comparison group. Similarly, there were more married and unemployed women in the intervention group than in the comparison group. Furthermore, more than a third of the participants in both the intervention and comparison groups had no formal education. About 27 (8%) women were lost to follow-up in the intervention group and none in the comparison group (Table 1).

Regarding contraceptives knowledge, at baseline, mean knowledge score was similar in both groups ($P > 0.05$) although a greater proportion of women in the comparison than the intervention group had good knowledge of types of contraceptives ($P < 0.05$; Table 2). At the post-intervention assessment, there was an increase in knowledge in the intervention group, whereas there was little change in the comparison group (Table 2). The proportion of women with

Table I Socio-Demographic Characteristics of Participants (n=647)

Variables	Intervention (n=310)	Comparison (n=337)	p-value
	n (%)	n (%)	
Age group (years)			
≤20	91 (29.4)	92 (27.3)	0.71
21–25	81 (26.1)	80 (23.7)	
26–30	81 (26.1)	97 (28.8)	
31–35	35 (11.3)	46 (13.6)	
36–40	19 (6.1)	21 (6.2)	
41+	3 (1.0)	1 (0.3)	
Mean (±SD)	25.4 (±6.3)	25.8 (±6.1)	0.51
Parity			
1	82 (26.5)	100 (29.7)	0.51
2–5	164 (52.9)	170 (50.4)	
6–10	64 (20.6)	65 (19.3)	
11+	0 (0.0)	2 (0.6)	
Mean (±SD)	3.5 (±2.2)	3.4 (±2.4)	0.61
Age at marriage[†]			
≤15	73 (23.9)	54 (16.5)	0.089
16–20	199 (65.0)	236 (72.2)	
21–25	28 (9.2)	34 (10.4)	
26–30	5 (1.6)	3 (0.9)	
31+	1 (0.3)	0 (0.0)	
Mean (±SD)	17.7 (±2.9)	17.8 (±2.5)	0.46
Ethnicity			
Fulla	102 (32.9)	135 (40.1)	<0.001*
Mandinka	99 (31.9)	162 (48.1)	
Wolof	96 (31.0)	23 (6.8)	
Others	7 (2.3)	4 (1.2)	
Sarahule	5 (1.6)	10 (3.0)	
Jolla	1 (0.3)	3 (0.9)	
Marital status			
Married	306 (98.7)	321 (95.3)	0.035*
Single	4 (1.3)	10 (3.0)	
Divorced	0 (0.0)	3 (0.9)	
Widow	0 (0.0)	3 (0.9)	
Cohabiting	0 (0.0)	0 (0.0)	
Educational level			
None	114 (36.8)	141 (41.8)	0.059
Elementary	121 (39.0)	99 (29.4)	
Junior secondary	47 (15.2)	52 (15.4)	
Senior secondary	21 (6.8)	38 (11.3)	
Tertiary	7 (2.3)	7 (2.1)	
Religion			
Islam	309 (99.7)	334 (99.1)	1.00
Christianity	1 (0.3)	2 (0.6)	
African tradition	0 (0.0)	1 (0.3)	
Employment status			
Unemployed	297 (95.8)	301 (89.3)	0.002*
Employed	13 (4.2)	36 (10.7)	

Notes: [†]Age at marriage intervention (n=306), Comparison group (n=327). *Fisher's exact test.

Table 2 Pre- and Post-Test Knowledge Between the Study Groups

Variables	Pre-Test			Post-Test		
	Intervention (n=310)	Comparison (n=337)	P-value	Intervention (n=310)	Comparison (n=337)	P-value
	n (%)	n (%)		n (%)	n (%)	
Definition*						
Correct	262 (84.5)	269 (79.8)	0.12	297 (95.8)	271 (80.4)	<0.001**
Incorrect	48 (15.5)	68 (20.2)		13 (4.2)	66 (19.6)	
Benefits of FP*						
Correct	252 (81.2)	269 (79.8)	0.64	293 (94.5)	269 (79.8)	<0.001**
Incorrect	58 (18.8)	68 (20.2)		17 (5.5)	68 (20.2)	
Importance of FP						
Correct	249 (80.3)	273 (81.1)	0.83	288 (92.9)	277 (82.2)	<0.001**
Incorrect	61 (19.7)	64 (18.9)		22 (7.1%)	60 (17.8)	
Types of FP*						
Correct	232 (74.8)	282 (83.7)	0.005*	307 (99.0)	284 (84.3)	<0.001**
Incorrect	78 (25.2)	55 (16.3)		3 (1.0)	53 (15.7)	
Location to obtain contraceptives						
Correct	233 (75.2)	271 (80.4)	0.11	273 (88.1)	271 (80.4)	0.008*
Incorrect	77 (24.8)	66 (19.6)		37 (11.9)	66 (19.6)	
Appropriate place to obtain contraceptives						
Correct	224 (72.3)	252 (74.7)	0.47	246 (79.4)	238 (70.6)	0.011*
Incorrect	86 (27.7)	85 (25.2)		64 (20.6)	99 (29.4)	
Mean (SD) Knowledge score	12.4 (5.8)	12.5 (5.4)	0.86	19.0 (5.3)	13.6 (6.4)	<0.001**

good knowledge for each of the knowledge variables and the mean knowledge score were greater in the intervention than the comparison group ($P < 0.05$) (Table 2).

In the intervention group, a lesser proportion of the respondents (18.4%) had good knowledge at baseline and a higher proportion (61.3%) had a good knowledge post-intervention, thus a difference of 42.9% was gained. This compares with a difference of 10.4% in the comparison group. Therefore, the difference between the two study groups was 32.5% (Table 3). Respondents from the intervention group were 4.694 (95% CI: 3.356–6.566) times more likely to have a good knowledge of contraceptives than their counterparts in the comparison group ($P < 0.05$; Table 4).

On attitude, at baseline, mean attitude score was similar in both groups ($P > 0.05$). At the post-intervention assessment, there was an increase from baseline in attitude in the intervention group, whereas there was no positive change in the comparison group (Table 5). The proportion of women with positive attitude for each of the attitude variables and the mean attitude score were greater in the intervention than the comparison group ($P < 0.05$) (Table 5).

In the intervention group, a lesser proportion of the respondents (57.1%) had positive attitude at baseline and a higher proportion (79%) had positive attitude at post-intervention, thus a difference of 21.9% was gained. This

Table 3 Difference in Differences (DID) Analysis on Knowledge

	Pretest (%)	Posttest (%)	Change (%)
Intervention group (Good Knowledge)	18.4	61.3	42.9
Comparison group (Good Knowledge)	14.8	25.2	10.4
DID	3.6	36.1	32.5

Table 4 Binary Logistic Regression for Knowledge Between Study Groups, Post Intervention (n=647)

Variables	B (Regression Coefficient)	Adjusted Odds Ratio	95% CI for OR		p-value
			Lower	Upper	
Study group Intervention Comparison Ref	1.55	4.69	3.356	6.566	<0.001*

Table 5 Pre- and Post-Test Attitude Between the Study Groups

Variable	Pretest			Post-Test		
	Intervention (n=310)	Comparison (n=337)	P-value	Intervention (n=310)	Comparison (n=337)	P-value
	Mean (±SD)	Mean (±SD)		Mean (±SD)	Mean (±SD)	
The ideal interval between two consecutive pregnancies is 24 months	3.6 (1.3)	3.5 (1.4)	0.793	4.2 (1.2)	3.5 (1.5)	<0.001**
Intention to have any pregnancy within 1 year	2.8 (1.4)	2.8 (1.7)	0.886	2.1 (1.5)	2.8 (1.8)	<0.001**
Using postpartum contraceptive is shame	2.5 (1.5)	2.5 (1.3)	0.938	2.3 (1.4)	2.6 (1.3)	0.002*
PPFP use good for standards of living	3.5 (1.3)	3.3 (1.4)	0.110	4.0 (1.1)	3.3 (1.4)	<0.001**
Small family size makes family happy	3.5 (1.5)	3.5 (1.4)	0.480	4.2 (1.3)	3.4 (1.4)	<0.001**
Religion forbids contraceptive	3.1 (1.4)	3.2 (1.4)	0.129	2.7 (1.4)	3.2 (1.4)	<0.001**
FP is good for mother and child health	3.5 (1.4)	3.6 (1.5)	0.459	4.3 (1.2)	3.5 (1.5)	<0.001**
Discuss about FP with your partner	3.4 (1.4)	3.5 (1.3)	0.504	4.1 (1.2)	3.4 (1.4)	<0.001**
Unmarried women can use contraceptive	2.6 (1.5)	2.5 (1.3)	0.122	3.4 (1.2)	2.6 (1.3)	<0.001**
Attitude score	28.7 (3.9)	28.3 (5.1)	0.226	30.4 (4.3)	28.2 (4.6)	<0.001**

compares with a difference of 4.5% in the comparison group. Therefore, the difference between the two study groups was 17.4% (Table 6). Respondents from the intervention group were 2.712 (95% CI: 1.913–3.843) times more likely to have a positive attitude of contraceptives than their counterparts in the comparison group ($P<0.05$; Table 7).

Regarding intention, at baseline, mean attitude score was similar in both groups ($P > 0.05$). At the post-intervention assessment, there was an increase from baseline in intention to use contraceptives in the intervention group, whereas there was no positive change in the comparison group (Table 8). The proportion of women with high intention for each of the intention variables and the mean intention score were greater in the intervention than the comparison group ($P<0.05$) (Table 8).

In the intervention group, a lesser proportion of the respondents (29.0%) had high intention at baseline and a higher proportion (98.4) had high intention at post-intervention, thus a difference of 69.4% was gained. This compares with a difference of –8.3% in the comparison group. Therefore, the difference between the two study groups was 77.7% (Table 9). Further, the result shows that respondents from the intervention group were 36.419 times (95% CI: 22.305–59.464) more likely to have high intention to contraceptive use than their counterparts in the comparison group (Table 10).

Table 6 DID Analysis on Attitude

	Pretest (%)	Posttest (%)	Change (%)
Intervention group (Positive Attitude)	57.1	79.0	21.9
Comparison Group (Positive attitude)	53.7	58.2	4.5
DID	3.4	37.2	17.4

Table 7 Binary Logistic Regression for Attitude Between Study Groups, Post Intervention (n=647)

Variables	B (Regression Coefficient)	Adjusted Odds Ratio	95% C.I. for OR		p-value
			Lower	Upper	
Study group Intervention Comparison Ref.	0.998	2.712	1.913	3.843	<0.001**

Table 8 Pre- and Post-Test Intention Between the Study Groups

Variable	Pretest			Post-Test		
	Intervention (n=310) Mean (±SD)	Comparison (n=337) Mean (±SD)	P-value	Intervention (n=310) Mean (±SD)	Comparison (n=337) Mean (±SD)	P-value
Getting pregnant again at this time could cause health problem for me	2.5 (1.0)	2.4 (1.3)	0.26	3.8 (0.7)	2.3 (1.3)	<0.001**
Becoming pregnant now would be a serious problem for my family	2.0 (1.0)	1.9 (1.2)	0.11	3.8 (0.6)	1.9 (1.2)	<0.001**
Getting pregnant again now could be dangerous to baby	2.4 (1.2)	2.3 (1.3)	0.14	3.1 (1.3)	2.3 (1.3)	<0.001**
If I am sexually active and not using FP I' d likely get pregnant	3.2 (1.0)	3.3 (1.0)	0.20	3.7 (0.8)	3.2 (1.0)	<0.001**
FPM are effective at preventing an unplanned pregnancy	3.3 (1.0)	3.4 (0.9)	0.20	3.9 (0.5)	3.4 (0.9)	<0.001**
Delay getting pregnant again allows me to spend more time with baby	3.3 (1.0)	3.3 (0.9)	0.60	3.9 (0.3)	3.2 (1.0)	<0.001**
Using FPM to space my pregnancies will help me have a healthier again	3.4 (1.0)	3.5 (0.9)	0.21	3.9 (0.4)	3.5 (0.8)	<0.001**
Having children is expensive and FP allows families care for them	3.4 (1.0)	3.4 (0.9)	0.78	3.8 (3.6)	3.5 (0.9)	<0.001**
Intention score	23.5 (3.5)	23.5 (3.5)	0.91	39.9 (2.9)	23.3 (3.6)	<0.001**

Table 9 Analysis on Intention

	Pretest (%)	Posttest (%)	Change (%)
Intervention group (High Intention)	29.0	98.4	69.4
Comparison group (High Intention)	28.8	20.5	-8.3
DID	0.2	77.9	77.7

Table 10 Binary Logistic Regression for Intention Between Study Groups, Post Intervention (n=647)

Variables	B (Regression Coefficient)	Adjusted Odds Ratio	95% CI for OR		p-value
			Lower	Upper	
Study group Intervention Comparison Ref	3.595	36.419	22.305	59.464	<0.001**

Note: The significance is at **p<0.05

Discussion

In this study, overall, respondents' socio-demographic characteristics revealed that the two groups were comparable. However, there were differences in ethnicity, marriage and employment ($P<0.05$). This frequency of ethnicities at different regions is in line with the results of the Gambia Population and Housing Census (2013)²¹ which showed that Fullas are the majority tribe in the Upper River Region and Mandinkas in the Lower River Region.²¹ Married participants were higher in the intervention group compared with the comparison group. The health implications of marriage for women may be to minimize multiple sexual partners thereby curbing sexually transmitted diseases, safer healthy behavior and receiving support from their spouses. Similar findings were reported among post-partum women (91%) in Ethiopia,²² just as 93% of the married women was also reported in a Zimbabwean study.²³ Similarly, unemployment was higher in the intervention than the comparison group. A possible explanation is that the comparison study site is more of a business center (transit point) and has more infrastructural development than that of the intervention study site. The financial empowerment of employment may improve family stability, mental health and wellbeing.

Even though there were statistically significant differences in ethnicity of participants between the two groups, this is most unlikely to have significant clinical implication on knowledge, attitude and intention to use contraceptives. This is because of the small nature of the country and the intermarriages among the different tribes. While the significant difference in marital status might have an effect on knowledge, attitude and intention to use contraceptives. This is reflected in the current GDHS that shows that the contraceptive uptake among the sexually active unmarried is about 41% versus 19% among married women.⁶ Secondly, the employment was on petty trading and might not have much clinical significance on the outcome variables.

Participants' Knowledge, Attitude and Intention to Use Contraceptives

At 6 weeks post-intervention, the intervention group had statistically significant higher contraceptive knowledge, attitude and intention scores than the comparison group in all the subscales. Respondents in the intervention group were more knowledgeable, had a favourable attitude and higher intention than those in the comparison group ($p<0.05$). This indicates that the intervention offered to women in the intervention group was effective and thus supports the need to provide and sustain this counselling to postpartum women at the facility level. Further studies are needed to assess whether PPFC when used in routine clinical practice would increase contraceptive uptake. This would help to inform and formulate policies and guidelines regarding postpartum family planning counselling.

Our findings are consistent with a Zimbabwean study on contraceptive counselling among HIV-positive mothers, which showed a significant difference in the proportion of women with a good level of knowledge between the intervention and comparison groups at 3 months (85.5%, and 56.3% respectively; $P<0.002$).²³

Findings regarding attitude falls in line with a study among postpartum women in Uganda which revealed that the intervention group differed significantly from the comparison group in terms of contraceptives attitude ($p<0.05$) post-test.¹⁵ Similarly, a study also revealed that most postpartum women had a favourable attitude towards contraceptives in Ethiopia.²⁴

A previous study in Uganda revealed that 71.4% of the women in the comparison and 87% in the intervention group had intention to use a modern contraceptive method following counselling on PPFP and the difference was statistically significant.¹⁶ A study from Pakistan found that at 8–12 weeks' postpartum all women in the counselling group planned to

use a modern contraceptive method compared with only a third in the comparison group.²⁵ All the eight items of the intention subscale were found to be greater and statistically significant in the intervention than the comparison group ($p < 0.05$).

The study was the first of its kind to be conducted in The Gambia; thus, it provides a valuable contribution to knowledge and would serve as a reference material in The Gambia and beyond. In addition, the implementation of the intervention in clinical practice will help to improve knowledge, attitude, and intention regarding contraceptives among postpartum women. It will equally help inform and formulate policies and guidelines regarding postpartum contraceptive uptake, thus, reducing maternal and neonatal mortality and morbidity in The Gambia.

Limitations of the study were that the interviewers also served as the family planning counselors. This was due to limited number of staff on the ground and may have introduced reporting bias in our findings. However, reporting biasness was mitigated during the data collection training exercise. Secondly, the use of nicknames by participants and incorrect addresses impaired participant tracing and limited the posttest numbers. These wrong addresses may be due to clients coming from the neighboring villages in Senegal for antenatal care and delivery, thus benefitting from the free maternal health services offered in The Gambia, after which they return to their places of origin.

Conclusion

Family planning counselling is one of the cornerstones for increasing contraceptive, knowledge, attitude and intention and thus contraceptive use during the post-partum period. Findings of this study indicated that at post-intervention participants had statistically significant better knowledge, more positive attitudes, and higher intentions towards contraceptive methods. Family planning counselling during the postpartum period, particularly before the discharge of women from health facilities, may improve knowledge, attitudes, and intentions towards contraceptive methods. This may increase contraceptive uptake and, thereby, curb unwanted pregnancies, unsafe abortions, improve birth spacing and reduce the high fertility rate and maternal and child morbidities and mortalities associated with short-birth intervals. PFP has the potential to contribute to achieving the Sustainable Development Goals 3 and 5.

Abbreviations

BGH, Bansang General Hospital; CPR, contraceptive prevalence rate; CI, confidence interval; DID, difference-in-difference; GATHER, Greet, Ask, Tell, Help, Explain and Return; HIV, human immunodeficiency virus; PFP, postpartum family planning; SD, single difference; SHC, Soma Health Centre.

Data Sharing Statement

The datasets used to analyze this study are available from the corresponding author on genuine request.

Consent for Publication

No personal data were recorded for any participant. The data were treated in an aggregate and anonymous manner. All the authors consented for this paper to be published.

Acknowledgments

Special thanks are due to the Gambia Government through the Ministry of Higher Education, Research, Science and Technology and the World Bank under the ACE Scholarship Project for awarding the first author scholarship to pursue a Doctor of Philosophy Degree in Reproductive and Family Health Nursing at the University of Benin, Edo State, Nigeria.

Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

Funding

The study was part of a PhD thesis funded by the Gambia Government in partnership with the World Bank, under the African Centre of Excellence (ACE) Scholarship Project where the first author was a beneficiary of the project. However, the funder did not play any role in the design of the study or the collection, analysis, and interpretation of data and writing the manuscript.

Disclosure

The authors declare no conflicts of interest in this work.

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