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ORIGINAL ARTICLE

Factors Influencing Uptake of Family Planning Among Women of Reproductive Age in Public Health Facilities of Juba County, South Sudan

Abdalla Majok[a*], Shiferaw Mitiku-T[b], Joseph Lune Ngenzi[c], Thomas Bizimana[c], Jean d'amour Habagusenga[c], Gaspard Nelly Uwumuremyi[c], and Ezbon WApary[d]

[a]Institute of Pharmacy Technicians, Ministry of Health, Juba, South Sudan; [b]School of Commerce, College of Business and Economics, Addis Ababa University, Addis Ababa, Ethiopia; [c]EAC Regional Centre of Excellence for Vaccines, Immunization and Health Supply Chain Management, College of Medicine and Health Sciences, University of Rwanda, Kigali, Rwanda; [d]Department of Community Medicine, School of Medicine, University of Juba, Juba, South Sudan.

Correspondence to Abdalla Majok (abdona83@gmail.com)

ABSTRACT

Background: Family planning uptake among women of reproductive age remains critically low in South Sudan despite national commitments and investments in reproductive health services. Evidence shows a contraceptive prevalence rate of only 4.7%, high unmet need, and elevated maternal mortality. However, limited context-specific evidence exists on determinants of family planning utilization in public health facilities in Juba County.

Objective: This study seeks to explore factors that influence family planning uptake in public health facilities of Juba County.

Methods: A quantitative cross-sectional study design was employed, and data were collected from April to May 2024, using structured questionnaires from a total of 397 women of reproductive age in public healthcare facilities of Juba County, South Sudan. The data were analysed using descriptive and inferential statistics. The factors that were statistically associated with uptake of FP at bivariate Chi-square level of analysis entered multivariable analytical model.

Results: Of the women of reproductive age participated, the response rate was 99.3%, majority were aged from 30 to 39 years (45.60%), majority were married. The model precisely revealed 89.9% of the women had used FP methods from the served one (35.5%). Duration of the marriage of 6 to 10 years were 17.5 times more likely to have utilized the available FP at health facilities than those with marriage duration of less than 1 year (P=.110). Those who disagreed that their family/spouse prevents using the FP were 16 times more likely to use the available FP than the reference group (P=.008). Those who disagreed that transport from home to the health facility was expensive were 5 times more likely to use the available FP methods than those strongly agree (P=1.000). Those who disagreed no diseases could be due to use of FP were more likely to use FP (OR 28.06, (P<.001)

Conclusion: Family planning utilization among women of reproductive age was high and significantly influenced by spousal support, transportation affordability, and perceptions of health risks. Strengthening community awareness, male partner involvement, and access to affordable reproductive health services is recommended to further improve utilization.

BACKGROUND

The uptake of family planning (FP) varies significantly across different regions and countries.[1] Global data related to improvement on the Sustainable Development Goal (SDG) indicator 3.7.1 show the proportion of FP needs satisfied by modern contraceptive methods has been stagnated at around 77%, between the years 2015-2020.[2,3] In 2015, about 64% of women of reproductive age who were married or in union, were using any form of FP. However, FP use was about 40% in less developed countries, and 33% in developing countries including African countries.[4] In sub-Saharan Africa, the unmet need for FP was around 66% with significant variation between the countries, and that associated with high fertility rate.[5] The high fertility rate and low contraceptive prevalence rate are often linked with socio-demographic characteristics, lower educational attainment, misconceptions, limited access to healthcare, and other barriers, affecting the uptake of FP in the region[5]. In the East Africa region, the Contraceptive Prevalence Rate (CPR) varies between the countries, with 64% in Rwanda as the highest CPR and 4.7% in South Sudan as the lowest rate in the region.[5]

In South Sudan approximately 96% of the Women of reproductive age (WRA) were unable to access the modern FP method, with the unmet need for contraceptive of about 30%.[6] However, with the high Maternal Mortality Rate (MMR) of 1,150 per 100,000

life-birth and the low CPR, South Sudan owned the poorest Reproductive Health (RH) situations in the world.[7] The government of South Sudan has made commitments to improve FP access and uptake, including setting a goal to increase the modern CPR to 20% by 2030.[8] The plan to improve FP services was declaimed through the implementation of national health policy (NHP), the Health Sector Strategic Plan (HSSP), and Boma Health Initiative (BHI), development of a national action plan to combat early marriage.[9,10] The National Ministry of Health in collaboration with international donors planned to increase the distributed funding for reproductive health and FP.[10] Despite all these government efforts to reduce the fertility rate, increase the CPR and use of FP, the prevalence rate of unmet need for FP remains high.[11,12]

Addressing these multifaceted barriers will require a comprehensive, multi-sectoral approach to increase the use of modern contraceptive methods. The study focused on the factors influencing the uptake of FP among the WRA (15-49 years old) in the public healthcare facilities of Juba County. findings from this study are expected to increase awareness and help the concerned stakeholder in FP project, government, and donors to having more choices and flexibility in modifying such policies to improve the maternal health, reduce the unmet needs pregnancy, and MMR in the Country.

METHODS

Study Design

The study employed a cross-sectional design, it was a facility-based activity, in which quantitative data were collected using a semi-structured questionnaire from a sample of 400 women of reproductive age. This sample size was determined using a single population proportion formula, assuming a 50% proportion of FP uptake (due to the absence of a prior local estimate), a 95% confidence level, and a 5% margin of error, which yielded a minimum required sample of 384 women rounded up to 400 to account for potential non-response. Although approximately 4,000 women of reproductive age visited the nine public healthcare facilities that provide FP services in Juba County during the survey period, the sample of 400 is statistically sufficient to produce generalizable estimates within the facility-based population.

Study Setting

Juba County is an administrative area found in Central Equatoria State (CES), Republic of South Sudan. It is the largest county in CES and hosts Juba city, the capital city of the state and the national capital city of the Republic of South Sudan. It is sub-divided into 13 Payams namely: Bungu, Dolo, Ganji, Gondokoro, Lirya, Northern Bari, Rejaf, Tijor, Rokon, and Wonduruba, with an estimated population of 459,000. The county has about fourteen primary healthcare centres and 4 Hospitals including referral hospitals Figure 1.

This study conducted in nine public health facilities that provide FP services, distributed throughout the administrative payams and serving the entire payams of the County, as well as the bordering counties of Terkeka, Kajokeji and Lanya. These health facilities include Juba Teaching Hospital, Juba Referral Military Hospital, Malakia Primary Healthcare Centre (PHCC), Kator PHCC, Munuki PHCC, Nyakuron PHCC, Gurie PHCC, Lologo PHCC, and Gumbo PHCC.

The women of reproductive age (15 to 49 years) who were visiting the facilities during the survey included in the study. To figure out the study population, one-month data generated from District Health Information System (DHIS-2) served as reference, showing that the numbers of WRA (15 to 49 years) who used Modern Contraceptive Methods (MCM) during the month of June 2023 was four thousand. A total of four hundred participants conveniently selected as the sample, the sample size being found using Krejcie & Morgan (1970) Table[13] assuming a 95% confidence interval (CI), 5% margin of errors, and a *P* value of 50%.

FIGURE 1: A Map Indicating Study Sites

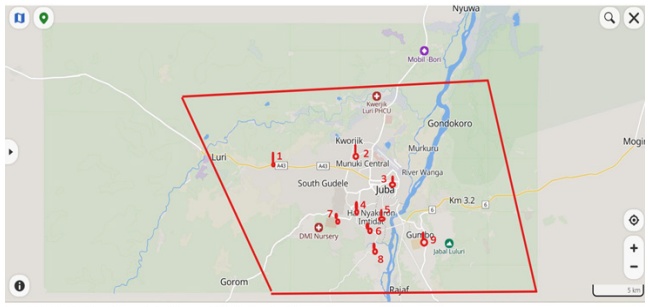


Figure 2: A Map indicating the area where the research has been conducted.

The Key:

1	Gurie PHCC
2	Munuki PHCC
3	Juba Teching Hospital
4	Nyakuron PHCC
5	Malakia PHCC
6	Kator PHCC
7	Juba Military Referral Hospital
8	Lologo PHCC
9	Gumbo PHCC

Data Collection

The data collected between April and May 2024 using semi-structured paper-based questionnaires. The data collection done at the date and time that were comfortable with the respondents. The data collection process involved the provision of the printed questionnaires to the health facilities and distributing them by the researcher or trained assistants, to the participants after their acceptance and approval of the health facility management to conduct the study. The data collection tool subjected to consultative discussions between the researcher and the supervisors. The external validity achieved through assuring that the sample size is truly representing the target population. The necessary adjustment made appropriately between the high and low volume facility to make the process dependable.

Data Analysis and Presentation

All the questionnaires reviewed for completeness and accuracy of the data prior to data entry into the software. The data analysed using the Statistical Package for Social Sciences (SPSS) Software version 23. The factors that were statistically associated with uptake of FP at bivariable Chi-square level of analysis entered multivariable analytical model (Logistic Regression) at 95% Confidence Intervals (CI) and *P* value of $P<.05$ considered statistically significant, the results of the analysis presented in tables and graphs.

Study Variables

In this study, the independent variables under the socioeconomic factors were the number of children, spouse employment status and spouse monthly income. Those under socio-cultural factors were the family or spouse resistance to the use of FP, communication with spouse about use of FP, religious and cultural beliefs influence on use of FP. The geographical location predictors were distance of facility from home, whether transportation to the facility was expensive. Furthermore, the independent variables under educational factors were the counselling before using FP methods, awareness about FP, and no disease could be due to uses of FP methods. The dependent variable of the study was the uptake of FP services. The uptake of FP services considered as the use of any modern contraceptive method and services.

Ethical Consideration

The ethical clearance obtained from the Research Ethical Review Board in the Ministry of Health of the Republic of South Sudan prior to commencement of the research, with the reference No: MOH/RERB/A-05/2024, Protocol No: RERB-P NO:05/01/2024, dated 12 February 2024.

RESULTS

Respondents' Socio-demographic Characteristics

Of the women of reproductive age participated, the response rate was 99.3%, majority were aged from 30to 39 years (45.60%), majority were married, 186 (46.90%), unemployment was observed in 188 (47.4%). The monthly income of these women who earned South Sudanese Pound (SSP)2000 to10,000 staged at 22.9%, whereas those who earned more than SSP100,000 accounted for 22.40% (Table 1).

TABLE 1: Respondents' Demographic Profile

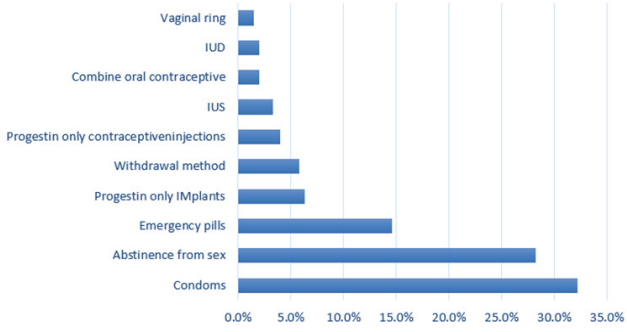
Variables/ Categories	n (%)
Age group	
15 - 24	81(20.4)
25 - 29	121(30.5)
30 - 39	181(45.6)
40 - 44	3(0.8)
45 - 49	11(2.8)
Marital Status	
Single	183(46.1)
Married	186(46.9)
Divorced	1(0.3)
Separated	27(6.8)
Employment status	
Employee	165(41.6)
Self-employed	43(10.8)
Your monthly income	1(0.3)
Unemployed	188(47.4)
Monthly income	
2000 - 10,000 SSP	91(22.9)
11,000 - 25,000 SSP	7(1.8)
26,000 - 50,000 SSP	47(11.8)
51,000 - 100,000 SSP	20(5)
More than 100,000 SSP	89(22.4)
Not applicable	143(36)
Religion	
Christian	359(90.4)
Muslim	7(1.8)
Traditional Beliefs	31(7.8)
Your residence	
Juba area	123(31)
Jebel area	33(8.3)
Munuki, New-site, or Tongpiny	135(34)
Gudele/Gurie area	78(19.6)
Malakia/Kator aeras	24(6)
Lologo/Khor William	1(0.3)
Gumbo, Shirekat or Rejaf area	3(0.8)
Educational background	
Never went to school	25(6.3)
Primary level	58(14.6)
Secondary level	104(26.2)
Undergraduate level	109(27.5)
Post graduate level	101(25.4)
Duration of your marriage	
Less than 1 year	143(36)
1 - 5 years	189(47.6)
6 - 10 years	12(3)
11 - 15 years	26(6.5)
16 - 20 years	27(6.8)
Spouse monthly income	
2000 - 10,000 SSP	197(49.6)
11,000 - 25,000 SSP	17(4.3)
26,000 - 50,000 SSP	54(13.6)
51,000 - 100,000 SSP	43(10.8)
More than 100,000 SSP	86(21.7)
Spouse employment status	
Student	176(44.3)
Unemployed	71(17.9)
Employee	56(14.1)
Self-employed	59(14.9)
Businessman	12(3)
Military officer	23(5.8)
Number of children	
No children	163(41.1)
1 - 2 children	154(38.8)
3 - 5 children	72(18.1)
6 children or more	8(2)
Spouse monthly income	
2000 - 10,000 SSP	219(55.2)
11,000 - 25,000 SSP	67(16.9)
26,000 - 50,000 SSP	27(6.8)
51,000 - 100,000 SSP	15(3.8)
More than 100,000 SSP	69(17.4)

Predictors of FP Uptake

The uptake of FP was statistically associated with the duration of marriage, $P<.001$) with size effect of 0.403 implying strong association, spouse occupation/ employment status, spouse monthly income and number of children ($p<.001$, $p<.001$, and $p<.001$ respectively). These socio-economic factors entered multivariate analytical model (Logistic regression). The preliminary analysis suggested that the notion of multicollinearity met, that is, overall tolerance =0.961. Additionally, an analysis of standardized residual values showed that there were outliers which kept in the dataset.

Besides, the model was statistically significant, (20, N = 397) = 285.71, *P*<.001, meaning that it could make a uniqueness between the respondents with and without the FP uptake. Therefore, this model clarified between 20.3% (Cox & Snell R square) and 29.2% (Nagelkerke R square) of the variance in these factors and precisely showed 89.9% of the women who had used FP methods from the served one (35.5%) Figure 2.

FIGURE 2: Percent Distribution of FP Method Used



The odds ratio of duration of the marriage of 6 to10 years suggested that there were 17.485 times more likely to have utilized the available FP at health facilities than those with marriage duration of less than 1 year at 95% CI 0.522 - 585.133 (Table 2).

The uptake of FP was statistically associated with whether the family or spouse prevents using the FP and communication with the spouse about uses of FP (*P*<.001 and, *P*<.001 respectively). These factors of statistically significant associated with uptake of FP entered into multivariate statistical model (Logistic regression). This was performed to figure out the likelihood of the FP uptake.

The first analysis suggested that the concept of multicollinearity was met, that is, overall tolerance = 0.982. Additionally, an analysis of standardized residual values presented that there were outliers which were kept in the dataset. Further, the model was statistically significant (*P*<.001), showing that it could make a distinctiveness between the women with and without the FP uptake.

Therefore, this model clarified between 51.8% (Cox & Snell R square) and 71.2% (Nagelkerke R square) of the discrepancy in these factors and specifically classified 89.9% of the women who had used FP methods from the served one (35.5%).

The odds ratio of those who disagreed that their family/spouse prevents using the FP suggested that there were 15.55 times more likely to use the available FP methods at health facilities than those with the reference group (strongly agree) at 95% CI 2.07 - 116.95 (Table 3).

The location factors which were statistically associated with uptake of FP at the bivariate analysis entered multivariate Statistical model (Logistic regression). This was done to find the likelihood of the FP uptake.

The concept of multicollinearity was met, that is, overall tolerance = 0.872. Additionally, an analysis of standardized residual values presented that there were outliers which were supported in the dataset. Furthermore, the model was statistically significant, (*p*<.001), showing that it could make a distinctiveness between the women with and without the FP uptake.

Therefore, this model clarified between 51.8% (Cox & Snell R square) and 71.2% (Nagelkerke R square) of the discrepancy in these factors and specifically classified 89.7% of the women who had used FP methods from the served one (35.5%). These factors have significantly contributed to this statistical model.

The odds ratio of those who disagreed that transport from home to the health facility was expensive proposes that there were 5.19 times more likely to use the available FP methods at health facilities than those with the reference group (strongly agree) at 95% CI 2.07 - 116.96 (Table 4).

Those who disagreed no diseases could be due to use of FP were more likely to use FP (OR 28.06, (95%CI 11.36-69.35, *P*<.001) (Table 5).

TABLE 2: Socio-economic Predictors of FP Uptake in Public Healthcare Facilities in Juba

Socio-economic factors	Uptake of family planning Yes, n (%)	No, n (%)	N	OR (95%CI: LL-UL)	*P value*
Duration of your marriage					
Less than 1 year	58 (40.6)	85 (50.5)			
1 - 5 years	50 (26.5)	139 (73.5)	189	3.72 (0.19-72.69)	.386
6 - 10 years	6 (50)	6 (50)	12	17.49 (0.52-5.85)	.110
11 - 15 years	1 (3.8)	25 (96.2)	26	8.01 (15.65-4.1)	.005
16 - 20 years	26 (96.3)	1 (3.7)	27	0.02 (0-0.31)	.006
Monthly income					
2000 - 10,000 SSP	45 (49.5)	46 (50.5)			
11,000 - 25,000 SSP	6 (85.7)	1 (14.3)	7	0.01 (0-17.69)	.217

Continue

TABLE 2: Continued

Socio-economic factors	Uptake of family planning Yes, n (%)	No, n (%)	N	OR (95%CI: LL-UL)	*P value*
26,000 - 50,000 SSP	19 (40.4)	28 (59.6)	47	0.08 (0.01-0.65)	.018
51,000 - 100,000 SSP	5 (25)	15 (75)	20	0 (0-.)	.997
More than 100,000 SSP	23 (25.8)	66 (74.2)	89	1.26 (0.01-13.8)	.923
Not applicable	43 (30.1)	100 (69.9)	143	5.22 (1.01-26.91)	.048
Spouse employment status					
Student	70 (39.8)	106 (60.2)			
Unemployed	23 (32.4)	48 (67.6)	71	0.84 (0.06-12.32)	.896
Employee	6 (10.7)	50 (89.3)	56	13.39 (10.74-16.7)	<.001
Self-employed	32 (54.2)	27 (45.8)	59	8.92 (0-.)	.997
Businessman	10 (83.3)	2 (16.7)	12	15.17 (1.13-20.33)	.044
Military officer	0 (0)	23 (100)	23		
Number of children					
No children	78 (47.9)	85 (52.1)			
1 - 2 children	30 (19.5)	124 (80.5)	154	0.01 (0-0.08)	<.001
3 - 5 children	28 (38.9)	44 (61.1)	72	0.01 (0-0.06)	<.001
6 children or more	5 (62.5)	3 (37.5)	8	0 (0-0.01)	<.001
Spouse monthly income					
2000 - 10,000 SSP	99 (50.3)	98 (49.7)			
11,000 - 25,000 SSP	13 (76.5)	4 (23.5)	17	13.34 (0-.)	.998
26,000 - 50,000 SSP	2 (3.7)	52 (96.3)	54	0.91 (0.05-18.65)	.953
51,000 - 100,000 SSP	5 (11.6)	38 (88.4)	43	0.02 (0-0.49)	.016
More than 100,000 SSP	22 (25.6)	64 (74.4)	86	8.8 (0.08-10.04)	.368

TABLE 3: Socio-cultural Predictors of FP Uptake in Public Healthcare Facilities in Juba

Socio-cultural factors	Uptake of family planning Yes, n (%)	No, n (%)	N	OR (95%CI: LL-UL)	*P value*
Your family/spouse prevents you from using the family planning.					
Strongly Agree	82 (45.8)	97 (54.2)			
Agree	18 (26.5)	50 (73.5)	68	6.38 (1.59-25.56)	.009
Neutral	1 (6.7)	14 (93.3)	15	15.37 (11.75-20.1)	<.001
Disagree	40 (44.4)	50 (55.6)	90	15.55 (2.07-116.96)	.008
Strongly Disagree	0 (0)	45 (100)	45	11 (0-.)	.996
You don't communicate with your spouse about uses of family planning.					
Strongly Agree	61 (56.0)	48 (44.0)			
Agree	45 (62.5)	27 (37.5)	72	0.18 (0.03-1.2)	.076
Neutral	517.2)	24 (82.8)	29	4.49 (0.12-16.6)	.415
Disagree	3 (2.5)	115 (97.5)	118	7.08 (6.91-7.25)	<.001
Strongly Disagree	27 (39.1)	42 (60.9)	69	2.48 (0.45-13.74)	.297
You have misconceptions about family planning					
Strongly Agree	44 (48.9)	46 (51.1)			
Agree	61 (45.2)	74 (54.8)	135	0.04 (0.01-0.2)	<.001
Neutral	9 (15.3)	50 (84.7)	59	1.8 (0.22-14.73)	.585
Disagree	22 (26.5)	61 (73.5)	83	1.14 (0.19-6.96)	.889
Strongly Disagree	5 (16.7)	25 (83.3)	30	0.49 (0.01-18.87)	.700
Your religious culture advises you to not use the family planning					
Strongly Agree	87 (36.3)	153 (63.7)			
Agree	25 (49)	26 (51)	51	0.09 (0.02-0.55)	.009
Neutral	0 (0)	19 (100)	19	7.4 (0-0) 0.998	
Disagree	29 (35.4)	53 (64.6)	82	0.23 (0.03-1.91)	.174
Strongly Disagree	0 (0)	5 (100)	5	2.9 (0-0) 0.999	
Your cultural beliefs prevent use of the family planning.					
Strongly Agree	82 (35.5)	149 (64.5)			
Agree	45 (61.6)	28 (38.4)	73	0.31 (0.12-0.82)	.019
Neutral	0 (0)	18 (100)	18	8.9 (0-0) 0.997	
Disagree	9 (20.5)	35 (79.5)	44	1.15 (0.22-6.08)	.872
Strongly Disagree	5 (16.1)	26 (83.9)	31	0.39 (0.07-2.14)	.278
Total	141 (35.5)	256 (64.5)	397		

TABLE 4: Role of Health Facility Accessibility in Influencing FP Uptake in Juba

Locational factors	Uptake of family planning Yes, n (%)	No, n (%)	N	OR (95%CI: LL-UL)	*P value*
The health facility is far from home					
Strongly Agree	82 (59.9)	55 (40.1)	137		
Agree	39 (33.6)	77 (66.4)	116	10.85 (13.48-87.24)	<.001
Neutral	20 (35.7)	36 (64.3)	56	8.4 (2.62-26.9)	<.001
Disagree	0 (0)	49 (100)	49	2.34 (2.3-2.41)	.995
Strongly Disagree	0 (0)	39 (100)	39	1.63 (1.6-1.71)	.997
Transport from home to the health facility is expensive.					
Strongly Agree	87 (34.9)	162 (65.1)	249		
Agree	37 (53.6)	32 (46.4)	69	0.17 (0.03-0.93)	.041
Neutral	7 (11.5)	54 (88.5)	61	1.12 (0.11-10.96)	.923
Disagree	0 (0)	2 (100)	2	5.19 (5.11-5.21)	1.000
Strongly Disagree	10 (62.5)	6 (37.5)	16	0.63 (0.03-13.68)	.771
Don't have money to use transportation					
Strongly Agree	46 (37.4)	77 (62.6)	123		
Agree	45 (42.9)	60 (57.1)	105	0.08 (0.03-0.23)	<.001
Neutral	24 (35.8)	52 (68.4)	76	0.83 (0.21-3.25)	.793
Disagree	0 (0)	26 (100)	26	19.95 (19.91-19.99)	.998
Strongly Disagree	26 (38.8)	41 (61.2)	67	0 (0-0)	<.001
The road to the facility is not secure.					
Strongly Agree	60 (38.5)	96 (61.5)			
Agree	29 (76.3)	9 (23.7)	38	2.43 (0.31-18.89)	.397
Neutral	24 (54.5)	20 (45.5)	44	0.74 (0.17-3.19)	.683
Disagree	23 (30.7)	52 (69.3)	75	0.27 (0.05-1.59)	.147
Strongly Disagree	5 (6)	79 (94)	84	7.22 (1.65-31.65)	.009
No Transports, I must walk distance to reach the health facility.					
Strongly Agree	74 (39.6)	113 (60.4)	187		
Agree	23 (62.2)	14 (37.8)	37	0.11 (0.02-0.46)	.003
Neutral	0 (0)	4 (100)	4	3.54 (3.51-3.61)	.999
Disagree	44 (29.9)	103 (70.1)	147	0.07 (0.01-0.41)	.003
Strongly Disagree	0 (0)	22 (100)	22	0.07 (0.06-0.09)	1.000

TABLE 5: Role of Health Education in Influencing FP Uptake in Public Healthcare Facilities in Juba

Educational factors	Uptake of family planning Yes, n (%)	No, n (%)	N	OR (95%CI: LL-UL)	*P value*
You used to get counselling before using the family planning.					
Strongly Agree	74 (28.7)	184 (71.3)	258		
Agree	45 (80.4)	11 (19.6)	56	0.06 (0.02-0.27)	<.001
Neutral	5 (21.7)	18 (78.3)	23	0.12 (0.01-1.89)	.132
Disagree	17 (43.6)	22 (56.4)	39	0.01 (0-0.03)	<.001
Strongly Disagree	0 (0)	21 (100)	21	1.73 (1.71-1.79)	.998
You are aware of the family planning methods					
Strongly Agree	55 (36.9)	94 (63.1)	149		
Agree	64 (35.2)	118 (64.8)	182	1.6 (0.76-3.34)	.213
Neutral	0 (0)	19 (100)	19	1.78 (1.71-1.81)	.998
Disagree	22 (46.8)	25 (53.2)	47	5.04 (0.69-36.8)	.111
No diseases could be due to use of family planning					
Strongly Agree	74 (49.7)	75 (50.3)	149		
Agree	43 (84.3)	8 (15.7)	51	0.47 (0.18-1.25)	.131
Neutral	2 (3.7)	52 (96.3)	54	5.37(4.48-6.44)	<.001
Disagree	22 (16.1)	115 (83.9)	137	28.06 (11.36-69.35)	<.001
Strongly Disagree	0 (0)	6 (100)	6	4.31 (4.23-4.53)	.999
Total	141 (35.5)	256 (64.5)	397		

DISCUSSIONS

The purpose of this study was to analyse the situation of FP uptake among women of reproductive age in public healthcare facilities of Juba County and to inform stakeholders about the influencing factors. The study findings revealed that the FP uptake was significantly influenced by factors such as education, spousal and/or family dynamics, religious influences, cultural beliefs, and access to health facilities. The found low-rate uptake of FP methods among women of reproductive age was lower than what was found in countries in the region like Rwanda (51.6%) and Kenya (45.5%).[14] That variations could be because of the socioeconomic, socio-cultural, access to services, and educational barriers. A study by Amen *et al* supported the effect of births-spacing on the uptake.[15] However, other studies concurred with this study about the influence of socioeconomical factors on the uptake of FP,[16] and the study of Nigeria.[17]

The findings showed that socio-cultural factors influencing the uptake among women of reproductive age in which most of the respondents confirmed that their families or spouses prevented them from using FP methods, they had no communication with the spouses about use of FP methods, the misconceptions about the FP methods, the religious culture influence on use of FP, and cultural beliefs prevents use of FP. Open communications between spouses about FP has been identified as an important predictor of utilization. When couples discuss and make mutual decisions about family size and birth spacing, women are more empowered to adopt FP methods. The Study of Ghana concur with the findings of this study[18] also, a study by Sumit *et al* concluded the same about cultural beliefs.[19] Moreover, the religious culture influences on the uptake of FP were supported by studies of Nigeria,[20] Mali and Senegal[21] and Kenya.[22]

Geographical location factor was found with a significant influence on the uptake of FP methods; majority of respondents among WRA indicated that their residency was far from the health facilities where they used to receive the services. similarly, the same issue was reported by the study done in Nigeria, which showed that access to FP services (75%) increases the uptake,[20] as well as the study done in Ethiopia,[23] Uganda,[24] and Ghana.[25]

The educational factor determinants such as counselling before uses of FP methods, and the factor of "no disease could be due to uses of FP" were having significant influence on the uptake of FP. Equally, the knowledge and academic attainment of FP methods were significant and had influence on uptake of FP in the Nigerian study,[20] and the study done in Tanzania.[26]

Study Limitations

The major weakness of this study is its cross-sectional design and its restriction to women of reproductive age visiting nine healthcare facilities for services, which may limit the generalizability of the results. The reasons for this include insecurity in accessing healthcare facilities in remote areas, as well as cultural complexities within some communities that make household surveys difficult to conduct.

CONCLUSIONS

In conclusion: Family planning utilization among women of reproductive age was high and significantly influenced by spousal support, transportation affordability, and perceptions of health risks. Strengthening community awareness, male partner involvement, and access to affordable reproductive health services is recommended to further improve utilization.

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