

Utilization of Modern Contraceptives and Associated Factors among Women of Reproductive Age in Aweil State Hospital, Northern Bhar El Ghazal, South Sudan

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Abstract

The uptake of modern contraceptive services in South Sudan is poor across all regional, social, economic and political divides. Hence, this study aimed to assess demographic, knowledge, attitude and perception related factors on uptake of modern contraceptive among women of reproductive age in Aweil State hospital. A cross-sectional design was conducted among 411 women of reproductive age. Data was collected through face-to-face interviews using structured questionnaires and analyzed with SPSS software. The lifetime Uptake of contraceptive use was calculated as the proportion of women who had ever used any modern family planning method. Logistic regression model was applied to identified factors influencing contraceptive use (at the significance level $p < 0.05$). The result revealed that the lifetime uptake of modern contraceptive methods was 15.3% [injectables (5.8%), implants (5.1%), pills (3.2%), male condoms (0.7%), and emergency contraceptives (0.5%)]. Multivariable analysis showed that discussing contraceptives with a spouse ($aOR=98.34$), having spousal approval ($aOR=38.12$), high level of education ($OR=9.45$), having good knowledge ($aOR=3.367$) and a positive perception ($aOR=1.665$) increased usage. Mothers intending to have more children were less likely to use them ($aOR=0.187$). Hence, the study revealed a very low uptake of modern contraceptives among women of reproductive age, which was significantly associated with being good spousal communication and approval, receiving information from health facilities and maintaining positive perceptions towards modern contraceptives are associated with increased contraceptive use. The study recommends the Ministry of Health to promote modern contraceptive education by integrating family planning into broader health education and community health initiatives.

Key words: Aweil State Hospital, Modern Contraceptives, South Sudan, Utilization.

Introduction

Maternal mortality remains a major challenge worldwide both in developed and developing countries. Every day, about 830 women across the world die due to the complication of pregnancy and childbirth [1, 16]. Likewise, maternal mortality is a shadow that stretches across every corner of South Sudan, claiming over 1223 lives per 100,000

live births [2]. Since women in South Sudan have an average of six to seven births in their lifetime, this corresponds to approximately 20% of women dying in the process of giving birth [3].

Promotion of family planning in countries with high birth rates such as South Sudan has the potential of reducing poverty and hunger, while at the same time averting maternal and

neonatal morbidity and mortality [4]. According to Ahmed, satisfying unmet need for contraception can avert an estimated 30% of maternal deaths, 10% of infant deaths, unwanted pregnancies by two-thirds, and risks of abortion by 74% [5]. As a result, family planning remains one of the four pillars of the safe motherhood initiative and was identified as a key strategy to slow down maternal mortality rate, improve women's health and promote economic growth of nations [6].

In South Sudan, the unmet need for family planning remains high (29.7 per cent) despite the integration of family planning services into routine maternal and new-born health care services. Reasons affecting modern contraceptive use are multidimensional and include; misconception towards contraceptives, lack of knowledge, negative attitude and fear of side effects [7]. The 2019 Safe Motherhood Study identified several challenges affecting family planning services, including a lack of transport, the distance between health facilities, insecurity, gender inequality and gender-based violence. Additionally, the quality of family planning services remains poor, with limited demand generation activities [8].

The country is however faced with paucity of data and lack of clear understanding of the factors influencing modern contraceptive use in South Sudan, which greatly hinders the promotion initiatives. This study sought to assess the factors associated with utilization of modern method of contraceptive among women of reproductive age in Aweil State hospital, Northern Bhar El Ghazal, South Sudan.

Methods

Study Design and Setting

This was a descriptive cross-sectional conducted in Aweil State hospital, Northern Bhar El Ghazal, South Sudan. Aweil State in Northern Bahr el Ghazal is one of the South Sudan's poorest states and is generally neglected by national and international aid

organisations, which focus instead on regions of active conflict. The state has one principal hospital in the main town of Aweil which caters to the entire state and a regional population of up to 1.4 million. Aweil state hospital is a government facility with a wide range of services including neonatal care, maternity and paediatrics, surgical, medical, family planning, immunisation and postnatal care services. The hospital is supported by the ministry of health and Médecins Sans Frontières (MSF) with over 10 doctors on duty at any one time.

Study Participants and Sample Size

The target population comprised of mothers of reproductive age (15–49) years seeking medical services at Aweil State hospital [18]. These were identified from OPD and inpatient wards. The sample size was 374, calculated using Kish Leslie formula (Kish, 1965) using a lifetime modern contraceptive prevalence rate in South Sudan, which is 42% according to a study done in Juba [9]. A 10% was added to make 411 respondents as the final sample size.

Data Collection Instrument and Procedure

With the help of ward in-charges, all mothers seeking health services at Aweil State Hospital were assessed for eligibility to participate in the study by checking the doctors' notes for the stable ones at that time. Eligible mothers were recruited into the study using simple random sampling technique. These were consented and then interviewed using face to face interviews guided by a structured questionnaires with closed ended questions.

Data Quality Control

Data quality was ensured before, during and after the data collection. Before data collection, training was provided to the data collectors on the data collection process and ethical standards. The data collection tool was pretested on 10 mothers to ensure its clarity and suitability. Field editing of data was done to identify technical omissions and clarify

responses that are logically and conceptually inconsistent. Double data entry check was done by two independent data verification team. The final data set was rigorously cleaned to remove duplicate records, correct misspelled information, and standardize data formats.

Data Processing and Analysis

Data was analysed using SPSS version 20. Descriptive statistics were used to analyze categorical variables data while numerical variables were analyzed using measures of central tendency and measures of variability. The proportion of mothers utilising modern FP methods was determined by dividing the number of those who reported to have ever used modern contraceptives in their lifetime by the total number of those recruited. Logistic Regression analysis model was used to determine identify the factors associated with modern contraceptive methods use. The measure of effect was odds ratios which was reported with their 95% CI. Variables with a p-value <0.2 in bivariate analysis and variables with biological plausibility were considered for multivariable analysis. At multivariable analysis, a p-value <0.05 was considered statistically significant.

Results

Sociodemographic and Reproductive Characteristics of Participants

A total of 411 mothers were recruited giving response rate of 100%. The average age of the participants was 20.8 (SD 8.89) years, the youngest was 15 and the oldest was 44 years. Majority were married 387 (94.2%), were Catholics 175 (42.6%) and had 1-5 live births 203 (49.4%) or more than five 197 (47.9%). Majority 317 (77.1%) intended to have more children and 85 (20.7%) reported to have had an unintended previous pregnancy.

Contraceptives Use Practices among Women

The lifetime Uptake of modern contraceptives methods use was 15.3%, with 348 (84.7%) never using any method. Modern contraceptives methods were the most used: injectables 24 (5.8%), implants 21 (5.1%), pills 13 (3.2%), male condoms 3 (0.7%), and emergency contraceptives 2 (0.5%). No participants reported using IUCD, female condoms, sterilization, or traditional methods like the standard days' method/moon beads, lactation amenorrhea, rhythm method, or withdrawal method.

Factors Associated with Family Planning Services Utilisation

On multivariate analysis, the odd ratio for the utilization of modern contraceptives were significantly high in women who are married (aOR=1.93 [95% CI: 1.284-2.993], P=0.016), women who had discussed family planning issues with their spouses (aOR=98.34 [95% CI: 76.625-104.911], P<0.001) and women whose spouses approve the use of FP (aOR=38.12 [95% CI: 20.379-63.309], P<0.001). The odd ratio for the utilization of modern contraceptives were also significantly high in women who obtain family planning information from health facilities (aOR=3.367 [95% CI: 2.904-8.067], P<0.001), in mothers with a positive perception towards modern contraceptives (aOR=1.665 [95% CI: 0.877-3.161], P<0.001) and women who had never lost a child (aOR=5.244 [95% CI: 3.926-8.277], P<0.001). However, the odd ratio for utilization of modern family planning services were lower in women who intended to have more children (aOR=0.187 [95% CI: 0.021-1.692], P<0.001).

Discussion

The present study revealed that the uptake of modern contraceptives methods was 15.3%, lower than reported in South Asian region (42%), Sub Sahara Africa (23.6% -28.5%),

Latin America and the Caribbean (66.7%) and European countries (65-78%) [10]. This disparity can be attributed to a combination of socio-cultural, economic, and health system-related differences between south Sudan and other parts of the world. In South Sudan (unlike many parts of the world), many communities place a high value on large families and have deep-seated misconceptions about the health impacts of contraceptives. These coupled with inadequate availability of family planning methods, insufficient healthcare infrastructure, and a shortage of trained healthcare providers lead to a prevalence of modern contraceptive methods.

However, the modern contraceptive prevalence rate reported in this study is higher than that reported in previous studies in South Sudan which reported a national prevalence of 4.7% for all methods and only 1.7% for modern methods (Ministry of Health of South Sudan, 2011). Also, a South Sudan FP2030 Indicator Summary Sheet 2023 Measurement Report reported modern CPR of 4.2% for all women, 4.8% for married women and 2.0% for unmarried women [11]. These findings indicate a trajectory in modern contraceptives methods use in South Sudan over the last decade, attributed to increased availability of these methods and health education messages by government of South Sudan.

This study revealed that married women, women who discuss family planning with their spouses and women whose spouses approve use of family planning were more likely to use modern contraceptive methods. These findings highlight the role of spouse involvement in influencing modern contraceptive methods use, findings which are consistent with findings of Okafor, 2016 [12]. This is because spousal support and open communication about family planning can significantly influence a woman's decision to use contraceptives as this fosters a supportive environment that can alleviate fears and misconceptions. Hence engaging both partners in family planning education and

decision-making is essential for improving contraceptive use and reproductive health outcomes [13, 17].

The study also revealed that participants who had ever discussed modern contraceptives with their spouse and participants whose spouse approves use of modern contraceptives were more likely to use modern contraceptive as compared to those had never discussed contraceptives with their spouse and participants whose spouse do not approve use of modern contraceptives respectively. The findings of this study indicate the role of spouse involvement in influencing modern contraceptive methods use, findings which are consistent with findings of a study done in Kenya and Ethiopia [14].

This study also noted that the uptake of modern contraceptives was more likely in mothers who had never lost a child as compared to those who had ever lost a child but lower in mothers intending to have more children. This association is corroborated by other studies that suggest a higher inclination towards large families in among South Sudan residents. In many African cultures, having many children is often viewed as a sign of prosperity and social status, influencing reproductive behaviour and limiting the acceptance of FP methods [15].

Conclusion

The study revealed that only 15 in 100 women of reproductive age in Northern Bhar El Ghazal Region, South Sudan had ever used of modern family planning methods, which was influenced by being married, spousal communication and approval, experience of child loss, receiving information from health facilities, and maintaining positive perceptions towards family planning. It is crucial that mothers in South Sudan always ensure open discussions with their spouses about modern contraceptives and the ministry of health needs to promote modern contraceptives education through integrating family planning education

into the broader health education and community health initiatives.

Ethics Approval

Ethical approval was sought from the Cavendish University-Uganda and Administrative clearance was obtained from Aweil State hospital administration. A written informed consent was obtained from participants and participation was voluntary. Privacy of participants was always maintained by interviewing them in a separate room one at a time. Confidentiality of participants was highly maintained by not capturing names of participants the data collection tool and limiting access to the collected data only to the researchers and the statistician.

Data Availability

The datasets generated and/or analyzed during the current study are not publicly available due to confidentiality agreements and the sensitivity nature of the information collected. However, they are available from the corresponding author on reasonable request and with permission from Cavendish University Uganda, which granted ethical clearance for the study.

Competing Interest

The authors declare that they have no competing interests, as this study has no

financial, personal, or professional relationships with any organization that could potentially influence the research findings.

Consent for Publication

Not applicable.

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Authors' Contributions

GK led conceptualization, study design, data collection, data analysis, interpretation, manuscript drafting, and correspondence, while provided supervision, methodological guidance, data validation, and manuscript review. MI contributed through literature review, and manuscript review respectively.

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