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Factors Associated with Unmet Needs for Contraception among Women of Reproductive Age in Parakou in 2022

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Abstract

Background: Unmet needs for contraception remain a major public health issue, exposing women to the risks of unintended pregnancies and their complications in developing countries. **Methods**: A cross-sectional descriptive and analytical study was conducted in Parakou from May 1 to July 1, involving 528 women of reproductive age. A cluster random sampling method was used to select participants, and data were collected through a semi-structured questionnaire. Statistical analyses were performed using SPSS 21, with a significance threshold set at $p < 0.05$. **Results**: The prevalence of unmet needs for contraception was 64.8%. Women aged 20 to 29 years had a reduced risk (OR = 0.49, p = 0.009) compared to adolescents (<19 years). A low educational level increased the risk (OR = 0.32, $p < 0.001$), as did being married (OR = 1.79, p = 0.0015), belonging to the Bariba ethnic group (OR = 1.63, p = 0.0119), and having high parity (>5, OR = 8.86, p = 0.0362). More than half of the participants (51.5%) had previously used contraceptive methods, but only 32.8% were using one at the time of the survey. Among non-users (n = 318), the main reasons for non-use were fertility-related factors, fear of side effects (22.6%), and partner's opposition (4.7%). **Conclusion**: Unmet needs for contraception are high in Parakou and are influenced by sociodemographic and cultural factors. Targeted interventions for vulnerable groups are essential.

Keywords

Contraception, Unmet Needs, Associated Factors, Parakou

1. Introduction

Contraception includes methods that temporarily and reversibly prevent pregnancy [1]. It includes the use of chemicals (spermicides), medications (hormones), devices (condoms, diaphragms, intrauterine devices), as well as surgical interventions or practices like withdrawal, aimed at preventing pregnancies. Effective use of contraception could prevent up to one-third of maternal deaths by delaying motherhood, spacing births, preventing unwanted pregnancies and abortions, and enabling women to stop procreating when they reach their desired family size [2]. This significantly contributes to reducing maternal and neonatal morbidity and mortality, while improving the well-being of women and their families.

Globally, about 12% of women of reproductive age (15 - 49 years) have unmet contraceptive needs, although significant disparities exist across regions and countries, particularly between rich and poor populations [3]. In developing countries, one in four women is of reproductive age, representing 867 million women who wish to avoid, space, or limit pregnancies. Among them, 222 million do not use modern contraceptive methods, with some opting for traditional methods that have high failure rates [1]. In Sub-Saharan Africa, data show that despite their desire to avoid pregnancy, many women do not use modern contraceptives, thus reflecting unmet needs [4].

Several factors explain these unmet needs, including ignorance of contraceptive methods, poor quality or limited access to services, high costs, concerns about side effects, objections from partners or family, and some providers' reluctance to offer methods, sometimes prioritizing approaches like abstinence [5].

Around the world, studies have measured the prevalence of unmet needs. In Mexico in 2014, Juarez *et al.* estimated unmet needs at 11.5% among married women and 28.9% among those never married [6]. In Nepal in 2018, Målqvist *et al.* reported a prevalence of 40.9% [3]. In Bangladesh, Bishwajt *et al.* (2017) found a prevalence of 13.3%, with 30% of pregnancies being unwanted among respondents [7]. In Africa, prevalence varies: 41% in Senegal in 2013 according to Machiyama and Cleland, 38.8% in Ghana in 2020 according to Wemakor *et al.*, and 24.9% in a multisite study in Sub-Saharan Africa conducted by Ahinkorah in 2020. According to Family Planning 2020, the prevalence in Benin is estimated at 35.3% [8].

2. Methods

This cross-sectional, descriptive, and analytical study with prospective data collection was conducted in the commune of Parakou, from May 1 to July 1, 2022, targeting women of reproductive age (15 - 49 years), particularly those with unmet contraceptive needs.

The sample size, calculated using Schwartz's formula, was 528 women. A cluster random sampling method, recommended by WHO, was used to select 30 clusters of approximately 18 women each. The clusters were defined by calculating a cluster step (k), obtained by dividing the total number of women of reproductive age by the number of clusters, with a random starting point (d). Subsequent clusters

were identified by successive addition of the step.

Local authorities were consulted to define the geographical boundaries. Households were selected using random direction (pen spinning), with one in two households being interviewed, and a maximum of two women per household, depending on the order of encounter.

Data were collected using a semi-structured questionnaire administered through individual interviews, after a pre-test conducted in a neighborhood not included in the study to adjust the content.

2.1. Operational Definitions

1) Unmet contraceptive need: sexually active women wishing to avoid pregnancy but not using a modern method.

2) Satisfied need: women using a contraceptive method, whether modern or traditional.

3) No need: women desiring a pregnancy, pregnant, menopausal, or not sexually active.

The dependent variable, unmet contraceptive need, was analyzed using SPSS 21, with comparisons made using Chi-square, Fisher, Student, or Kruskal-Wallis tests, depending on the variables. A p-value of <0.05 was considered statistically significant.

2.2. Ethical Considerations

The study protocol was approved by the ethics committee of the University of Parakou. All participants provided informed consent prior to their inclusion. Local authorities were also consulted for community approval.

3. Results

3.1. Prevalence of Unmet Contraceptive Needs among Women of Reproductive Age (15 - 49 Years) in Parakou in 2022

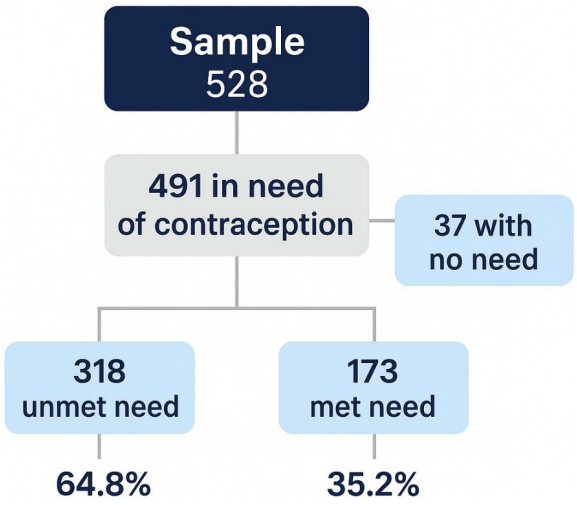

Figure 1. Prevalence of unmet contraceptive needs among women of reproductive age in Parakou, 2022.

Out of the 528 women surveyed, 37 had no contraceptive needs as they were either pregnant or desiring motherhood. At the end of this study, 318 women out of the remaining 491 had unmet contraceptive needs, resulting in a prevalence of 64.8% (Figure 1).

3.2. Descriptive Part

3.2.1. Sociodemographic Characteristics

The average age of women with unmet contraceptive needs was 27.49 ± 7.61 years, with extremes ranging from 15 to 47 years. The age group 20 to 29 years accounted for 43.1% of the cases (Table 1).

Table 1. Distribution of women with unmet contraceptive needs by age group.

	Count (n = 318)	Percentage
<20	59	18.5
[20 - 30 [	**137**	**43.1**
[30 - 40[	96	30.2
≥40	26	08.2
Total	318	100.0

Women with unmet contraceptive needs had a first-cycle secondary education level (24.8%, 79/318), were married (47.8%, 152/318), lived in a monogamous household (86.8%, 171/197), and practiced Islam (54.1%, 172/318) (Table 2).

Table 2. Distribution of women with unmet contraceptive needs by education level, marital status, household type, and religion.

	Count (n = 318)	Percentage
Education Level		
Uneducated	47	14.8
Primary	74	23.3
Secondary, First Cycle	**79**	**24.8**
Secondary, Second Cycle	63	19.8
Higher Education	55	17.3
Religion		
Christian	140	44.0
Muslim	**172**	**54.1**
Indigenous	06	01.9
Marital Status		
Married	**152**	**47.8**
Single	111	34.9
Common-law	26	08.2

Continued

Engaged	16	05.0
Widow	08	02.5
Divorced	05	01.6
Household Type (n = 197)		
Monogamous	**171**	**86.8**
Polygamous	26	13.2

3.2.2. History and Current Use of Contraceptive Methods

In the study, just over half of the respondents (51.5%, 272/528) had previously used a method to delay or prevent pregnancy. The three main methods used were condoms (44.5%, 121/272), pills (39.7%, 108/272), and implants (32.0%, 87/272).

At the time of the survey, 32.8% (173/528) of the respondents were using a contraceptive method to delay or prevent pregnancy. The three main methods were condoms (39.3%, 68/173), pills (32.4%, 56/173), and implants (18.5%, 32/173) (Table 3).

Table 3. Distribution of respondents based on past and current use of contraceptive methods.

	Time of Contraceptive Method Use	
	Past n (%)	During the study n (%)
Use of Contraceptive Methods		
Yes	272 (51.5)	173 (32.8)
No	256 (48.5)	355 (67.2)
Method Used*		
Condoms	121 (44.5)	68 (39.3)
Pills	108 (39.7)	56 (32.4)
Implants	87 (32.0)	32 (18.5)
Injectables	34 (12.5)	14 (8.1)
Rings	09 (3.3)	12 (6.9)
Abstinence	06 (2.2)	08 (4.6)
Withdrawal	04 (1.5)	05 (2.9)
IUD (Intrauterine Device)	01 (0.4)	02 (1.2)
Diaphragm	01 (0.4)	04 (2.3)
Traditional methods	01 (0.4)	05 (2.9)

*Multiple responses permitted for this item.

3.2.3. Reason for Non-Use of Contraceptive Methods

Among the women not using contraceptive methods at the time of the survey (n = 355), 24 had a desire for motherhood (6.8%) and 13 were pregnant (3.7%). Among the women with unmet contraceptive needs (n = 318), several reasons

explained why they were not using contraceptive methods (Table 4).

Table 4. Reasons for non-use of contraceptive methods among women of reproductive age in Parakou, 2022.

Reason Category	Specific Reason*	Count (n = 318)	Percentage (%)
Fertility-Related	No or rare sexual intercourse	98	30.8
	Desire to have more children	85	26.7
	God's will	70	22.0
	Breastfeeding	25	07.9
	No return of menstruation	05	01.6
Opposition to Use	Religious prohibitions	24	07.5
	Husband's opposition	15	04.7
Contraceptive Concerns	Fear of side effects	72	22.6
	Other reasons related to methods	09	02.8

*Multiple responses permitted for this item.

3.2.4. Discussion and Spouse's Position on Contraceptive Methods

It was found that 23.9% (126/528) of the respondents would not feel at all comfortable discussing contraceptive methods with their spouses. Additionally, 9.7% (51/528) stated that their spouses definitively approved the use of contraceptive methods (Table 5).

Table 5. Distribution of respondents based on spouse's approval or disapproval of contraceptive methods.

	Count (n = 528)	Percentage
Discussion of Contraceptive Methods with Spouse		
Very comfortable	82	15.5
Comfortable	148	28.0
A little comfortable	172	32.6
Not at all comfortable	126	23.9
Spouse's Position on Contraceptive Methods		
Definitely approves	51	9.7
Might approve	167	31.6
Might not approve	76	14.4
Does not approve at all	62	11.7
Not concerned	172	32.6

3.2.5. Factors Associated with Unmet Contraceptive Need

According to this study, age, educational level, marital status, ethnicity, gravidity, and parity increase the risk of unmet contraceptive need ($P < 0.005$) (Table 6).

Table 6. Factors associated with unmet contraceptive needs among women of reproductive age in Parakou, 2022.

	N	Unmet need for contraception		OR	95% CI	P-value
		Yes n (%)	No n (%)			
Age (years)						
≤19	83	59 (71.1)	24 (28.9)	1	-	-
20 - 29	251	137 (54.6)	114 (45.4)	0.49	[0.29 - 0.84]	0.009
30 - 39	154	96 (62.3)	58 (37.7)	0.67	[0.38 - 1.20]	0.178
≥40	40	26 (65.0)	14 (35.0)	0.76	[0.34 - 1.69]	0.495
Education level						
Low	110	55 (50.0)	55 (50.0)	0.32	[0.19 - 0.54]	<0.001
Medium	258	142 (55.1)	116 (44.9)	0.39	[025 - 0.61]	<0.0001
High	160	121 (75.6)	39 (24.4)	1	-	-
Marital status						
Married	223	152 (68.2)	71 (31.8)	1.79	[1.25 - 2.55]	0.0015
Other	305	166 (54.4)	139 (45.6)	1	-	-
Ethnicity						
Bariba	177	120 (67.8)	57 (32.2)	1.63	[1.11 - 2.38]	0.0119
Other	351	198 (56.4)	153 (43.6)	1	-	-
Gravidity						
≤5	504	298 (59.1)	206 (40.9)	1		
>5	24	20(83.3)	04 (16.7)	3.44	[1.16 - 10.21]	0.0261
Parity						
≤5	514	305 (59.3)	209 (40.7)	1		
>5	14	13 (92.9)	01 (7.1)	8.86	[1.15 - 68.28]	**0.0362**

4. Discussion

4.1. Prevalence of Unmet Contraceptive Needs

In this study, the prevalence of unmet contraceptive needs was 64.8% among the 491 women of reproductive age, indicating a substantial gap in family planning services in Parakou. This level is higher than that reported in Angola (35.6%) [9] but consistent with findings from Malawi [10]. Such variations may reflect differences in access to health services, sociocultural norms, and reproductive education. The results highlight the urgent need for locally adapted family planning policies and community-based strategies.

4.2. Sociodemographic Characteristics

1. Age

The mean age of women with unmet needs was 27.5 years, with a predominance among those aged 20 - 29 years (43.1%). Similar patterns were reported in the DRC [11], while adolescents remain particularly vulnerable due to cultural barriers and limited access to information [12]. These findings emphasize the importance of targeting young women with tailored interventions.

2. Education

Women with secondary education (first cycle) accounted for 24.8% of unmet needs. Evidence from Ethiopia [13] and Malawi [10] shows that lower educational levels reduce contraceptive use, while higher education enhances access but may still be constrained by cultural or religious beliefs [14]. Strengthening reproductive health education at all levels remains essential.

3. Marital Status

Nearly half (47.8%) of the women with unmet needs were married, consistent with findings in Ethiopia [15]. Spousal influence often limits contraceptive use, underscoring the need to involve men in family planning programs.

4.3. History and Current Use of Contraceptive Methods

More than half of the women (51.5%) had previously used contraceptives, yet only 32.8% were current users. Discontinuous use, often linked to side effects or misinformation, mirrors trends in Ethiopia [16]. This suggests the need for regular follow-up and counseling to improve continuity.

4.4. Reasons for Non-Use of Contraceptives

The main reasons for non-use included a desire for pregnancy (6.8%) and current pregnancy (3.7%). Similar cultural and social influences have been observed in Nigeria [17] and Kenya [18]. Addressing misconceptions and stigma through awareness campaigns remains crucial.

4.5. Spousal Communication and Attitudes

Only 9.7% of women reported spousal approval, and 23.9% felt uncomfortable discussing contraceptive methods. Comparable findings from Ethiopia [13] and more recent evidence [19] show that male involvement is key to reducing unmet needs. Programs should therefore encourage open dialogue within couples.

4.6. Factors Associated with Unmet Needs

1. Age

Women aged 20 - 29 had a reduced risk compared to adolescents. Adolescents remain more exposed due to restrictive norms and lack of tailored services [9] [12]. Conversely, unmet needs may rise after 35 years due to inadequate support for multiparous women [11]. Age-specific strategies, from adolescent-friendly services to postpartum care, are needed.

2. Education

Low education was strongly associated with unmet needs. Studies in Ethiopia

[13], Malawi [10], and Tanzania [20] confirm that education enhances contraceptive knowledge and autonomy, despite persistent sociocultural barriers [14]. Incorporating sexual education into schools and communities is critical.

3. Marital Status

Married women had a higher risk, reflecting social and cultural pressures. Findings from Ethiopia [12] [13] and Togo [14] suggest that involving spouses can reduce unmet needs, while couple discussions are positively associated with modern contraceptive use [18].

4. Ethnicity

Bariba women were more exposed to unmet needs, likely due to cultural practices or reduced service access. Similar disparities have been reported in the DRC [11] and Ethiopia [21]. Community-based approaches tailored to cultural contexts are necessary.

5. Gestity and Parity

High gestity (>5) and parity (>5) significantly increased risk. Multiparous women are often neglected in family planning programs [10] [13]. Integrating family planning into postpartum services, as recommended in Ethiopia [15], would help address this gap.

5. Conclusion

Women of reproductive age in Parakou had a high unmet need for contraception in 2022. The reasons for not using contraceptive methods among these women included infrequent sexual activity, the desire for more children before using contraception, religious influence, religious prohibitions, spousal opposition, and fear of side effects. Factors associated with unmet contraceptive needs included age, low education level, marital status, ethnic group, side effects, and male influence. In light of these findings, it is necessary to address the associated factors in order to reduce the prevalence of unmet contraceptive needs in Parakou.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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