



Prevalence, Risk Factors and Complication of Pelvic Inflammatory Disease among Women of Reproductive Age at the EHFA Foundation Teaching Medical Centre in Foubot

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Abstract

Pelvic inflammatory disease (PID) is a polymicrobial infection that originates from the upward spread of infecting organisms through the cervix and into the uterus, fallopian tubes, or peritoneal cavity. PID can result in a range of serious complications, particularly when diagnosis and treatment are delayed. The main objective of this study was to determine the prevalence, risk factors and complications of pelvic inflammatory disease among women of reproductive age attending the EHFA Foundation Teaching Medical Centre in Foubot. A hospital based cross-sectional study design was used to determine the prevalence, risk factors and complications of pelvic inflammatory disease among women of reproductive age. A convenient sampling technique was used and data were collected using a well-structured questionnaire and data extraction form and ethical consideration was well observed. Statistical analysis was done using SPSS version 21 and statistical significance was considered if p value was less than or equal to 0.05. A total of 123 respondents were included in the study. Out of this population, 76 respondents (61.8%) were suspected of having PID based on clinical symptoms and initial screening. The majority were within the age range of 20 - 35 years. Subsequent diagnosis procedure confirmed PID in 46 out of 76 suspected cases. Out of the total cases identified (46 infections), Syphilis was the most prevalent, accounting for 14 cases (30.4%), followed closely by co-infection with *Chlamydia trachomatis* and Syphilis, which occurred in 13 cases (28.3%). Level of education had a statistically significant association with PID ($\chi^2 = 8.082$; $p = 0.044$), with the highest prevalence among

women with secondary education (n = 23; 18.7%). Among the statistically significant variables, having multiple sexual partners was strongly associated with PID ($\chi^2 = 8.418$; p = 0.004), with a higher prevalence among those who reported multiple partners (n = 17; 13.8%) compared to those who did not (n = 29; 23.6%). The study revealed a high prevalence of sexually transmitted infections (STIs) among sexually active youths, with 37.4% of participants confirmed to have PID-related infections, underscoring a significant public health concern. Syphilis was the most common infection (30.4%), followed by co-infection with chlamydia and syphilis (28.3%). It can therefore be recommended that the Ministry launch public campaigns to raise awareness about causes, signs and symptoms, complications, risk factors and prevention of pelvic inflammatory disease.

Subject Areas

Infectious Diseases, Women's Health

Keywords

Prevalence, Risk Factors, Complication, PID, Women of Reproductive Age, EHFA Foundation Teaching Medical Centre in Foubot

1. Introduction

Pelvic inflammatory disease (PID) is a polymicrobial infection of the upper female genital tract that arises from the ascending spread of microorganisms from the cervix to the endometrium, fallopian tubes, and peritoneal cavity [1]. It commonly develops from untreated sexually transmitted infections (STIs), particularly *Chlamydia trachomatis* and *Neisseria gonorrhoeae*. Globally, PID remains a significant reproductive health issue, with an estimated 20 million cases reported among women aged 15 - 49 years in 2019, representing an age-standardized prevalence rate of 72.99 per 100,000 women [1]. Epidemiological trends reveal variations across regions, with higher prevalence in Africa and the United States compared to Europe, largely due to differences in access to STI screening, treatment, and reproductive health services [2].

In Cameroon, though comprehensive national data are limited, regional studies provide insights into PID burden among young women. A cross-sectional study in Yaoundé highlighted a mean age of 29 years among women diagnosed with acute PID, with students constituting 37.1% of cases and 64.3% reporting multiple sexual partners [3]. Several risk factors have been associated with PID in Cameroon, including early sexual debut, multiple sexual partners, low educational attainment, unmarried status, and intrauterine contraceptive use [3] [4]. Microbiological investigations reveal *Chlamydia trachomatis*, *Ureaplasma urealyticum*, and *Mycoplasma hominis* as predominant pathogens [4]. The susceptibility of young women is further influenced by anatomical and immunological factors in the cervix, particularly at the time of hormonal changes or after cervical proce-

dures [3] [4].

The clinical presentation of PID ranges from asymptomatic infections to severe systemic illness. Common symptoms include lower abdominal pain, abnormal vaginal bleeding (intermenstrual, post-coital, or menorrhagia), dyspareunia, and fever [5] [6]. Delayed diagnosis and treatment increase the likelihood of long-term reproductive complications, including infertility, chronic pelvic pain, and ectopic pregnancy [7]. Approximately 10% - 20% of women with PID develop infertility, 40% experience chronic pelvic pain, and up to 20% of those who conceive experience ectopic pregnancies [8]. Repeated episodes of PID substantially elevate the risk of irreversible tubal damage, with even asymptomatic infections leading to tubal factor infertility [9].

Short-term complications of PID include tubo-ovarian abscesses, which may rupture and cause peritonitis or sepsis, as well as Fitz-Hugh–Curtis syndrome—an inflammatory condition involving the liver capsule [8]. In the long term, PID severely compromises reproductive health and contributes to significant psychosocial and emotional burdens, particularly among young women. The associated morbidity undermines quality of life and poses a major barrier to achieving sexual and reproductive health rights [9]. These consequences highlight the importance of early diagnosis, treatment, and preventive interventions.

Despite governmental and institutional efforts, PID remains a persistent public health challenge in Cameroon. Strategies such as integration of STI prevention into reproductive health services, youth-friendly clinics, sexual education in schools, and partnerships with organizations like WHO and UNFPA have been implemented [10]. However, barriers including limited healthcare access, stigma, weak service coordination, and inadequate sexual health education continue to undermine progress [11]. If left uncontrolled, risk factors such as multiple sexual partners, untreated STIs, and poor reproductive health services will exacerbate the problem, leading to life-threatening complications such as infertility, ectopic pregnancies, sepsis, and chronic pelvic pain [7] [12]. This underscores the urgent need to assess the prevalence, risk factors, and complications of PID among women of reproductive age in Cameroon.

2. Methodology

The study was conducted at the EHFA Foundation Teaching Medical Centre in Foubot, West Region of Cameroon, between April and May 2025, a period corresponding to the dry season. The centre, a non-profit institution providing healthcare, community outreach, and professional health training through its accredited Essential Health Higher Institute, comprises five major units (outpatient, medical, pediatric, maternity, and imaging) and receives an average of approximately 300 female admissions per month, providing a clear sampling frame and allowing consideration of potential seasonal effects. A hospital-based cross-sectional design was employed to determine the prevalence, risk factors, and complications of pelvic inflammatory disease (PID) among women of reproductive age. PID was diagnosed using a combination of clinical evaluation, laboratory assays,

and imaging to enhance diagnostic accuracy. Clinically, diagnosis required lower abdominal or pelvic pain, adnexal tenderness, and cervical motion tenderness, with fever $\geq 38^{\circ}\text{C}$ and purulent cervical discharge considered supportive. Laboratory confirmation included complete blood count ($\text{WBC} > 10,000/\text{mm}^3$) or C-reactive protein ($>10 \text{ mg/L}$), and rapid diagnostic tests for *Chlamydia trachomatis* and *Neisseria gonorrhoeae* from endocervical or vaginal swabs, while urine analysis was used to exclude urinary tract infections. Imaging modalities, primarily transvaginal ultrasonography, identified tubo-ovarian abscesses, thickened fluid-filled fallopian tubes ($\geq 5 \text{ mm}$), or free pelvic fluid, with abdominopelvic ultrasound employed as needed to detect complications. The dependent variable was PID prevalence, while independent variables included socio-demographic characteristics, associated risk factors, and complications. The target population consisted of freely consented women of reproductive age admitted during the study period, with inclusion limited to those who provided informed consent. Using Lorentz's formula with a 95% confidence interval, 5% margin of error, and an assumed prevalence of 40%, the minimum sample size was calculated as 123 participants. Data were collected using a structured questionnaire (socio-demographic and risk factor sections) and patient medical records (prevalence and complications), with pre-testing conducted to ensure clarity. Participants were approached upon admission, informed about the study, and consent obtained before questionnaire administration; assistance was provided to those unable to read or write. Confidentiality was strictly maintained throughout the study to protect participant privacy. Each participant was assigned a unique identification code, and no personal identifiers (such as names, addresses, or phone numbers) were recorded on the data collection forms. Completed questionnaires and extracted medical record data were stored securely in locked cabinets accessible only to the research team. A convenience sampling technique was applied. Data were coded in Excel (2016) and analysed in SPSS version 21, using descriptive statistics (frequencies, percentages, tables, and charts), and inferential tests including chi-square and regression analysis, with statistical significance set at $p \leq 0.05$.

3. Results

3.1. Socio-Demographic Characteristics of Research Participants

Out of the total 123 participants ($n = 123$), the majority were aged 20 - 35 years ($n = 53$; 43.1%), followed by those aged 36 - 44 years ($n = 31$; 25.2%), 15 - 19 years ($n = 26$; 21.1%), and above 44 years ($n = 13$; 10.6%), indicating a youthful population predominantly within the reproductive age group. Regarding educational level, most had secondary education ($n = 61$; 49.6%), followed by tertiary ($n = 34$; 27.6%), primary ($n = 22$; 17.9%), and none ($n = 6$; 4.9%), showing that the majority had at least some formal education. In terms of marital status, 48.0% were married ($n = 59$), 39.0% single ($n = 48$), 8.1% divorced ($n = 10$), and 4.9% widowed ($n = 6$). For parity, 1 - 2 children were reported by 33.3% ($n = 41$), 3 - 4 by 25.2% ($n = 31$), more than 4 by 12.2% ($n = 15$), while 29.3% ($n = 36$) had no children. Reli-

gious affiliation showed Muslims as the majority ($n = 67$; 54.5%), followed by Christians ($n = 52$; 42.3%) and Pegans ($n = 4$; 3.3%). A greater proportion resided in rural areas ($n = 71$; 57.7%) compared to urban settings ($n = 52$; 42.3%). Regarding occupation, most were self-employed ($n = 45$; 36.6%), followed by employed ($n = 35$; 28.5%), students ($n = 32$; 26.0%), and unemployed ($n = 11$; 8.9%), indicating diverse economic backgrounds. This is presented in **Table 1**.

Table 1. Distribution of respondents according to their socio-demographics.

Variable	Characteristic	Frequency (n)	Percentage (%)
Age range	15 – 19 yrs	26	21.1
	20 – 35 yrs	53	43.1
	36 – 44 yrs	31	25.2
	44+ yrs	13	10.6
	Total	123	100
Level of education	Primary	22	17.9
	Secondary	61	49.6
	Tertiary	34	27.6
	None	6	4.9
	Total	123	100
Marital status	Single	48	39.0
	Married	59	48.0
	Divorced	10	8.1
	Widowed	6	4.9
	Total	123	100
Parity	1 - 2	41	33.3
	3 - 4	31	25.2
	4+	15	12.2
	None	36	29.3
	Total	123	100
Religion	Christian	52	42.3
	Muslim	67	54.5
	Pegan	4	3.3
	Total	123	100
Place of residence	Urban	52	42.3
	Rural	71	57.7
	Total	123	100
Occupation	Student	32	26.0
	Employed	35	28.5
	Self employed	45	36.6
	Unemployed	11	8.9
	Total	123	100

3.2. Prevalence, of Pelvic Inflammatory Disease among Women of Reproductive Age

A total of 123 respondents were included in the study. Out of this population, 76 respondents (61.8%) were suspected of having Pelvic Inflammatory Disease (PID) based on clinical symptoms and initial screening.

Subsequent diagnostic procedures confirmed PID in 46 out of the 76 suspected cases, representing 60.5% of those initially suspected and 37.4% of the total study population. This gives a prevalence score of PID in this population at 37.4% as presented in **Figure 1** below.

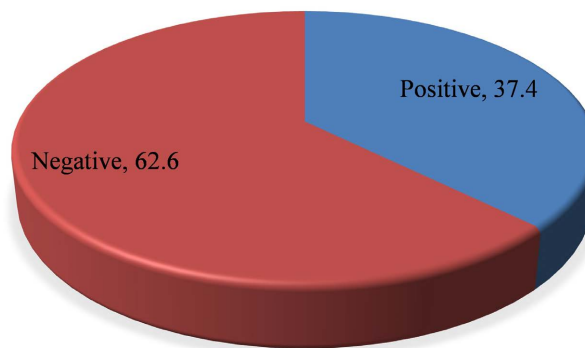


Figure 1. Pie chart showing the prevalence of PID in the study population.

Out of the total cases identified (46 infections), Syphilis was the most prevalent, accounting for 14 cases (30.4%), followed closely by co-infection with *Chlamydia trachomatis* and Syphilis, which occurred in 13 cases (28.3%). *Chlamydia trachomatis* alone was detected in 9 cases (19.6%), while Neisseria gonorrhoeae was found in 6 cases (13.0%), and Bacterial Vaginosis was the least common, recorded in 4 cases (8.7%) as shown in **Figure 2** below.

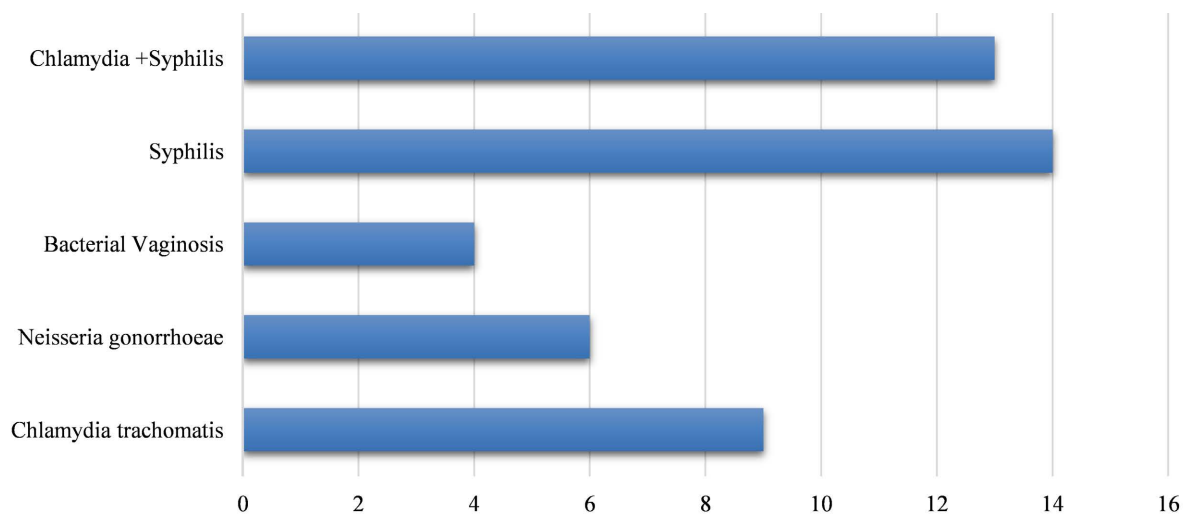


Figure 2. Bar chart showing causes of PID in the study population.

Table 2 below presents the duration of PID symptoms among affected patients, with a total of 46 confirmed cases. The majority of patients, 26 out of 46 (56.5%), reported experiencing PID symptoms for 1 - 2 months, suggesting that most cases were relatively recent or acute. 14 patients (30.4%) had symptoms lasting 3 - 4 months, indicating progression toward a more prolonged or subacute phase. A smaller proportion, 2 patients (4.3%), reported having PID for 4 - 5 months, while 4 patients (8.7%) experienced symptoms for 8 months or more, which may suggest chronic or recurrent PID.

Table 2. Duration of PID in the study respondents.

	Frequency	Percent	Positive percentage scores
1 - 2 months	26	21.1	56.5
3 - 4 months	14	11.4	30.4
4 - 5 months	2	1.6	4.3
8 months +	4	3.3	8.7
Total (Positive)	46	37.4	100.0
Negative cases	77	62.6	
Total (pos + neg)	123	100.0	

For diagnosis, majority of the PID cases were diagnosed from a combination of medical history, laboratory analysis and imaging (71.7%) as presented in **Figure 3** below.

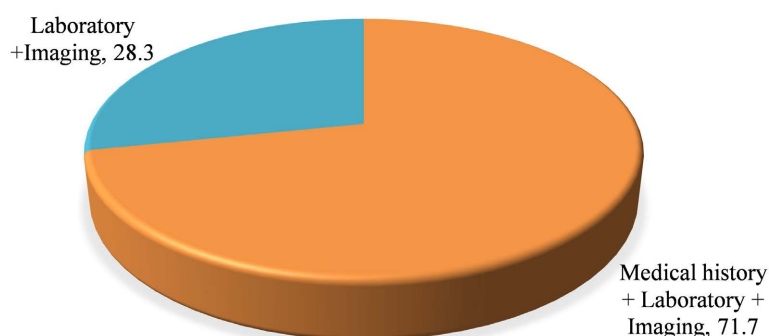


Figure 3. Pie chart showing the method of diagnosis of PID in the respondents.

3.3. Association between Socio Demographic Characteristics and PID Status of Study Respondents

Table 3 below shows that level of education had a statistically significant association with PID ($\chi^2 = 8.082$; $p = 0.044$), with the highest prevalence among women with secondary education ($n = 23$; 18.7%), followed by tertiary ($n = 18$; 14.6%), primary ($n = 4$; 3.3%), and no education ($n = 1$; 0.8%). Occupation was also significantly associated with PID ($\chi^2 = 10.259$; $p = 0.016$), with the highest number of cases among employed ($n = 19$; 15.4%) and self-employed women ($n = 18$; 14.6%), compared to students ($n = 8$; 6.5%) and the unemployed ($n = 1$; 0.8%).

Parity showed a significant relationship as well ($\chi^2 = 7.933$; $p = 0.047$), with most PID cases among women with 1 - 2 children ($n = 19$; 15.4%) and those with no children ($n = 17$; 13.8%). In contrast, variables such as age group ($\chi^2 = 7.035$; $p = 0.071$) showed the highest PID prevalence in the 20 - 35 age group ($n = 26$; 21.1%), but the association was not statistically significant. Similarly, religion ($p = 0.076$) and place of residence ($p = 0.063$) were not significantly associated with PID, although Christians ($n = 25$; 20.3%) and urban dwellers ($n = 24$; 19.5%) recorded slightly more cases. Marital status had no significant association with PID ($p = 0.849$), with higher frequencies observed among married ($n = 21$; 17.1%) and single women ($n = 18$; 14.6%).

Table 3. Association between socio demographic characteristics and PID status of study respondents.

Variable	Characteristic	PID		Chi square (p. value)
		Positive n (%)	Negative n (%)	
Age range	15 – 19 yrs	05 (4.10)	21 (17.1)	7.035 (0.071)
	20 – 35 yrs	26 (21.1)	27 (22.0)	
	36 – 44 yrs	11 (8.90)	20 (16.3)	
	44+ yrs	04 (3.30)	09 (7.30)	
Level of education	Primary	04 (3.30)	18 (14.6)	8.082 (0.044)*
	Secondary	23 (18.7)	38 (30.9)	
	Tertiary	18 (14.6)	16 (13.0)	
	None	01 (0.80)	05 (4.10)	
Marital status	Single	18 (14.6)	30 (24.4)	0.803 (0.849)
	Married	21 (17.1)	38 (30.9)	
	Divorced	05 (4.10)	05 (4.10)	
	Widowed	02 (1.60)	04 (3.30)	
Parity	1 - 2	19 (15.4)	22 (17.9)	7.933 (0.047)*
	3 - 4	06 (4.90)	25 (20.3)	
	4+	04 (3.30)	11 (8.90)	
	None	17 (13.8)	19 (15.4)	
Religion	Christian	25 (20.3)	27 (22.0)	5.143 (0.076)
	Muslim	19 (15.4)	48 (39.0)	
	Pegan	02 (1.60)	02 (1.60)	
Place of residence	Urban	24 (19.5)	28 (22.8)	2.950 (0.063)
	Rural	22 (17.9)	49 (39.8)	
Occupation	Student	08 (6.50)	24 (19.5)	10.259 (0.016)*
	Employed	19 (15.4)	16 (13.0)	
	Self employed	18 (14.6)	27 (22.0)	
	Unemployed	01 (0.80)	10 (8.10)	

*-statistically significant at 0.05 significance level.

3.4. Risk Factors Associated with Pelvic Inflammatory Disease among Women of Reproductive Age

Table 4 below presents the association between various risk factors and the occurrence of PID, using chi-square tests and p-values to assess statistical significance. Among the statistically significant variables, having multiple sexual partners was strongly associated with PID ($\chi^2 = 8.418$; $p = 0.004$), with a higher prevalence among those who reported multiple partners ($n = 17$; 13.8%) compared to those who did not ($n = 29$; 23.6%). A history of sexually transmitted infections (STIs) also showed a significant association ($\chi^2 = 9.660$; $p = 0.002$), with $n = 33$ (26.8%) of those with past STIs being PID-positive, indicating a strong link between past infections and PID occurrence. The most significant predictor was a previous history of PID, where $n = 22$ (18.0%) of the PID-positive participants reported prior PID, compared to only $n = 2$ (1.6%) among the PID-negative group ($\chi^2 = 37.040$; $p = 0.0001$), suggesting a high risk of recurrence. On the other hand, factors like having a new sexual partner ($p = 0.247$), inconsistent or no use of contraceptives ($p = 0.202$), use of intrauterine devices (IUDs) ($p = 0.058$), and douching practices ($p = 0.375$) were not significantly associated with PID, although trends suggest they may still play contributory roles.

The binary logistic regression analysis below identified several statistically significant predictors of PID. A previous history of PID was the strongest predictor ($p = 0.000$; OR = 0.023; 95% CI: 0.004 - 0.126), indicating a markedly higher likelihood of recurrence. Use of intrauterine devices (IUDs) was also significantly associated with PID ($p = 0.003$; OR = 0.150; 95% CI: 0.043 - 0.520), as was a history of sexually transmitted infections (STIs) ($p = 0.004$; OR = 0.130; 95% CI: 0.033 - 0.517), showing that women with prior STIs were at higher risk. Additionally, having multiple sexual partners ($p = 0.027$; OR = 0.231; 95% CI: 0.063 - 0.845) and having a new sexual partner ($p = 0.013$; OR = 0.200; 95% CI: 0.057 - 0.710) were both significantly associated with increased odds of PID. In contrast, inconsistent contraceptive use ($p = 0.314$) and douching ($p = 0.090$) were not statistically significant, though their odds ratios suggest a possible trend toward increased risk.

Table 4. Binary logistic regression between PID and risk factors.

	Sig.	Odds ratios	95% CI. for odds ratios	
			Lower	Upper
Multiple sexual partners	0.027*	0.231	0.063	0.845
New sexual partner	0.013*	0.200	0.057	0.710
History of STIs	0.004*	0.130	0.033	0.517
Inconsistent use of contraceptives	0.314	0.516	0.143	1.870
Use of IUD	0.003*	0.150	0.043	0.520
Douching	0.090	0.372	0.119	1.166
History of PID	0.000*	0.023	0.004	0.126

3.5. Complications of Pelvic Inflammatory Disease in Women of Reproductive Age Attending the EHFA Foundation in Foubot

The most frequent complication was severe pelvic pain, reported by 33 women (73.3%), followed by severe pelvic pain combined with infertility in 6 cases (13.3%). Both infertility alone and ectopic pregnancy were reported by 3 women each (6.7%) as shown in **Figure 4** below.

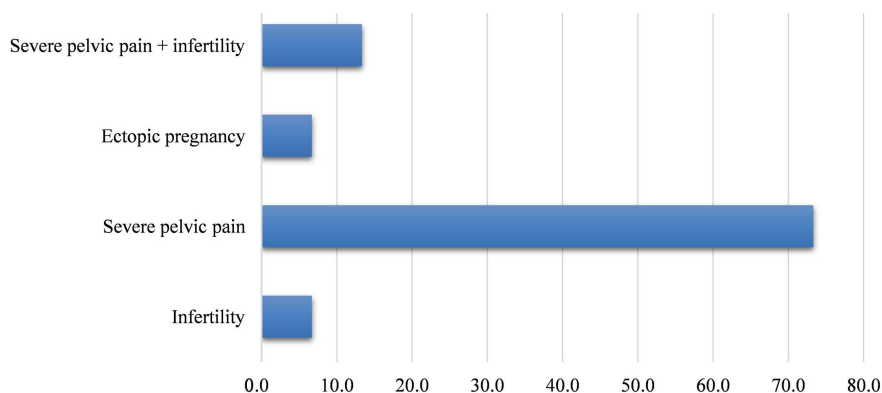


Figure 4. Bar chart showing the complications of pelvic inflammatory disease in the study population.

With respect to severity, 21 women (45.7%) had mild PID, 20 women (43.5%) had moderate PID, and 5 women (10.9%) presented with severe PID as shown in **Table 5** below.

Table 5. Severity of PID.

	Frequency	Percent	Valid percent	Cumulative percent
Mild	21	17.1	45.7	45.7
Moderate	20	16.3	43.5	89.1
Severe	5	4.1	10.9	100.0
Total (Pos)	46	37.4	100.0	
Negative	77	62.6		
Total	123	100.0		

4. Discussion

The study population was predominantly of reproductive age, with most participants aged 20 - 35 years (43.1%), a group considered at higher risk for pelvic infections due to increased sexual activity and hormonal fluctuations [1] [13]. Educational attainment was relatively high, with nearly half having secondary education, reflecting trends in developing settings where formal education is increasingly accessible [14]. The predominance of married women (48%) aligns with findings by Okeke *et al.* [15], who noted that marital status influences exposure to STIs and reproductive health challenges. Interestingly, Muslims were the majority

religion, differing from studies in southern Cameroon where Christians dominate [16]. Rural residents comprised 57.7% of respondents, which may reflect limited access to quality healthcare and screening services in these areas—a factor highlighted in earlier studies on poor STI services in sub-Saharan Africa [2] [17]. Occupational diversity was observed, with a high percentage of self-employed and employed participants, consistent with socio-economic shifts in semi-urban Cameroon [18].

The prevalence of PID was 37.4%, higher than figures reported in Ethiopia (15.7%) [19] and Nigeria (21.3%) [20]. This disparity may stem from differences in diagnostic approaches, health-seeking behavior, and sexual practices. Interestingly, syphilis (30.4%) was the most common causative agent, followed by syphilis and *Chlamydia* co-infection (28.3%). This deviates from reports in Kenya and South Africa, where *Chlamydia trachomatis* was most prevalent [21] [22]. Such differences may reflect underreporting or limited screening for syphilis in those settings. A majority of cases were recent or acute (1 - 2 months), suggesting either a recent increase in transmission or heightened awareness prompting earlier diagnosis. The predominant diagnostic approach was the use of combined clinical history, lab analysis, and imaging, consistent with WHO-recommended syndromic management protocols [23].

Significant associations were found between PID and several factors including education, occupation, and parity. Women with secondary or tertiary education had higher PID rates, aligning with findings that educated women may be more sexually active and thus more likely to report symptoms or seek care [24]. Employed and self-employed women also showed higher prevalence, possibly due to increased autonomy and exposure, supporting evidence from studies in Ghana and Uganda [25] [26]. Parity was significantly associated, with the highest PID prevalence among women with 1 - 2 children and those with none, corroborating earlier findings that nulliparous and low-parity women may face higher STI risks due to hormonal factors and cervical susceptibility [3] [27].

Key behavioral risk factors included multiple sexual partners ($p = 0.004$), previous STIs ($p = 0.002$), and prior PID ($p = 0.0001$), consistent with global evidence linking high-risk sexual behavior to PID transmission [3] [4] [28]. Although IUD use was not statistically significant at the bivariate level ($p = 0.058$), it emerged as significant in logistic regression ($p = 0.003$), confirming prior evidence that IUD insertion in the presence of STIs increases PID risk [4] [29]. Interestingly, douching and inconsistent contraceptive use were not significant predictors, diverging from studies in the U.S. and Asia where these were notable risks [30] [31]. This may be due to underreporting or cultural practices influencing disclosure.

The most common complication was severe pelvic pain (73.3%), followed by infertility and ectopic pregnancy, consistent with global literature identifying these as principal outcomes of untreated PID [5] [7] [8] [32]. The severity grading revealed a high proportion of mild and moderate cases, with only 10.9% presenting as severe, suggesting relatively timely intervention. However, the 13.3% experiencing combined severe pelvic pain and infertility highlight the long-term re-

productive health burden of PID. These findings echo studies from Nigeria and Egypt that reported infertility rates of 10% - 15% among women with recurrent PID [33] [34]. Such results reinforce the need for early screening, targeted education, and accessible treatment to mitigate complications.

5. Conclusions

The study revealed a high prevalence of sexually transmitted infections (STIs) among sexually active youths, with 37.4% of participants confirmed to have PID-related infections, underscoring a significant public health concern. Syphilis was the most common infection (30.4%), followed by co-infection with chlamydia and syphilis (28.3%).

Significant risk factors for STIs and related neonatal morbidity included primiparity (73.9% of neonatal deaths), low maternal education with the secondary education group having 18.7% PID cases, and rural residence accounting for 57.7% of participants. These factors were statistically associated with higher neonatal morbidity and mortality rates.

Severe pelvic pain was the most frequent complication, affecting 73.3% of women with PID, while infertility and ectopic pregnancy occurred in 13.3% and 6.7%, respectively.

6. Study Limitation

This study employed a convenience sampling technique and was conducted at a single centre, which may introduce selection bias. Women who presented to the EHFA Foundation Teaching Medical Centre during the study period may not be fully representative of the broader population of women of reproductive age in the region, potentially leading to over- or underestimation of PID prevalence. Furthermore, the single-centre design limits the generalisability of the findings to other healthcare settings with different patient populations, resource availability, or seasonal patterns of disease. These limitations should be considered when interpreting the study results and in planning future multi-centre research.

Conflicts of Interest

The authors declare no conflicts of interest.

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