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Socio-demographic and Clinical Profiles of Couples Seeking Infertility Care in Bangladesh: A Facility-Based Cross-Sectional Study

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Abstract

***Background*:** Infertility is a growing reproductive health concern globally and poses substantial social and psychological challenges in low- and middle-income countries, including Bangladesh. Despite increasing demand for infertility services, comprehensive couple-based data describing socio-demographic and clinical profiles of infertile couples in Bangladesh remain limited. ***Objective*:** To describe the socio-demographic characteristics, infertility patterns, reproductive history, and clinical profiles of couples seeking infertility care in selected healthcare facilities in Bangladesh. ***Methods*:** This facility-based cross-sectional study was conducted from May to December 2024 at three private and semi-specialized infertility care centers in Bangladesh. Married couples presenting with primary or secondary infertility were consecutively enrolled. Data were collected using structured questionnaires and medical record reviews. Socio-demographic variables, infertility characteristics, female and male clinical factors, endocrine conditions, semen parameters, and lifestyle factors were analyzed using descriptive statistics. ***Results*:** A total of 362 couples were included. The mean age was 26.9 ± 4.7 years for women and 33.1 ± 5.3 years for men, with most couples residing in urban areas (83.7%). Primary infertility accounted for 51.9% of cases, and secondary infertility for 48.1%, with a median infertility duration of 36 months (IQR: 23–60). Among women with secondary infertility, spontaneous abortion was the most commonly reported prior pregnancy outcome (62.1%). Female factor infertility was identified in 94.2% of women, predominantly polycystic ovary syndrome (75.7%) and hypothyroidism (32.9%). Male factor infertility was identified in 43.3% of men; normozoospermia was observed in 74.0%, while asthenozoospermia was present in 19.0%. Mean body mass index was in the overweight range for both women (25.9 ± 4.6 kg/m²) and men (25.7 ± 3.5 kg/m²). ***Conclusion*:** Couples seeking infertility care in Bangladesh commonly present after prolonged infertility and exhibit a high burden of identifiable female and male clinical factors, alongside modifiable lifestyle characteristics. These findings underscore the need for integrated, couple-centered infertility services and timely access to standardized diagnostic and management pathways.

Keywords: Infertility, Socio-Demographic Factors, Reproductive History, Polycystic Ovary Syndrome, Bangladesh.

INTRODUCTION

Infertility is increasingly recognized as a major global reproductive health challenge, with substantial psychosocial and economic consequences for affected individuals and couples. In 2023, the World Health Organization (WHO) reported that approximately 17.5% of the adult population (roughly 1 in 6 people) experience infertility at some point in their lives, underscoring the need to expand access to affordable, high-quality fertility care across health systems [1]. Standardized terminology and definitions are essential for comparability across studies and settings; the International Glossary on Infertility and Fertility Care (2017) provides consensus-based definitions and classification that support consistent reporting of infertility and fertility care outcomes [2].

In Bangladesh, infertility is frequently under-prioritized within formal reproductive health programming, where historical emphasis has largely been placed on fertility reduction rather than on infertility prevention and management [3, 4]. Social expectations around parenthood, coupled with gendered norms, can intensify the lived burden of infertility—women often experience disproportionate blame and social vulnerability, even when male factors contribute [5]. Qualitative and stakeholder-based evidence from Bangladesh has described infertility care as constrained by stigma, limited service availability, and weak integration of infertility services into routine public-sector care pathways [4]. More recent evidence on care-seeking has also highlighted heavy reliance on private facilities and persistent financial barriers, reinforcing concerns about equity and continuity of care [3].

Despite these contextual challenges, contemporary facility-based evidence describing couple-level socio-demographic and clinical profiles in Bangladesh remains limited. Existing studies have often focused primarily on women, with comparatively less systematic documentation of male partners, semen parameters, or combined couple characteristics that are central to infertility evaluation [6]. At the same time, the contribution of male factors to infertility is increasingly emphasized globally, and the broader burden of male infertility has shown rising trends over recent decades, indicating the importance of including men in both clinical assessment and research reporting [7].

Against this background, this facility-based cross-sectional study aimed to describe the socio-demographic characteristics, infertility history, and clinical profiles of couples seeking infertility care in Bangladesh, incorporating both female- and male-related clinical factors, selected endocrine/metabolic comorbidities, and semen characteristics. By providing an updated couple-centered profile from routine care settings, the study seeks to inform service planning, guide prioritization of diagnostic pathways, and support context-appropriate strategies to strengthen infertility care delivery in Bangladesh.

MATERIALS AND METHODS

Study Design and Setting

This cross-sectional study examined the socio-demographic and clinical profiles of couples seeking infertility care in Bangladesh from May to December 2024. It was conducted at three private, semi-specialized centers—Alok Healthcare Centre, MH Samorita Hospital & Medical College, and Confidence Diagnostic Centre— which routinely provide infertility evaluation and treatment services. These centers serve patients from urban and peri-urban areas and are typical settings for infertility care. Data were collected from eligible couples attending these facilities using standardized data collection tools and uniform diagnostic criteria.

Study Population

The study population consisted of married couples who presented for infertility evaluation or treatment at the participating healthcare facilities during the study period. Couples were eligible if they sought care for either primary or secondary infertility, defined as the failure to achieve pregnancy after at least 12 months of regular, unprotected sexual intercourse, regardless of previous pregnancy outcomes. Both female and male partners were considered jointly as the unit of analysis to allow a comprehensive assessment of couple-level socio-demographic and clinical characteristics.

Female partners aged 15–49 years and male partners aged 18 years or older were eligible for inclusion. Couples were enrolled if they provided written informed consent and had available socio-demographic and clinical data for at least one partner. Consecutive eligible couples attending the selected facilities during the study period were included to capture routine care-seeking patterns and reduce selection bias.

Couples were excluded if infertility resulted from prior surgical sterilization, including hysterectomy or bilateral tubal ligation, or if either partner had undergone irreversible procedures that precluded natural conception. Participants with incomplete or missing key clinical data and those unable or unwilling to provide informed consent were also excluded. These criteria ensured a well-defined study population representative of couples actively seeking infertility care in Bangladesh.

Sample Size and Sampling Technique

A consecutive sampling approach was employed, whereby all eligible couples attending the participating healthcare facilities during the study period were invited to participate. This non-probability sampling strategy was chosen to ensure inclusion of all consecutive infertility cases presenting for care, thereby reflecting routine clinical practice and minimizing selection bias within the facility-based setting.

Sample size estimation was based on an assumed infertility prevalence of 15%, a 95% confidence level, and a 5% margin of error, which yielded a minimum required sample of approximately 196 infertile individuals. As the unit of analysis comprised couples, this corresponded to an estimated minimum of 196 female partners and 196 male partners, resulting in a targeted sample size of approximately 392 participants.

During the study period, the participating facilities and available resources allowed enrollment beyond the minimum required sample. Consequently, a total of 362 female partners and 362 male partners were included in the final analysis. This larger sample size increased the precision of prevalence estimates and enhanced the overall statistical robustness of the study findings.

Statistical Analysis

Data were analyzed using STATA (version 17). Continuous variables were summarized using the mean ± standard deviation or the median with interquartile range (IQR), depending on the data distribution. Categorical variables were presented as frequencies and percentages. Serum AMH levels were summarized using median and IQR due to skewed distribution. Binary clinical indicators were generated for comorbid conditions and infertility-related diagnoses.

Ethical Considerations

Ethical approval was obtained from the institutional ethics committee of the Bangladesh Bioethics Society before data collection. Written informed consent was secured from all participants. Participation was voluntary, and refusal to participate did not impact clinical care. All personal identifiers were removed, and data were stored securely in password-protected systems, in accordance with ethical guidelines and the Declaration of Helsinki.

RESULTS

Socio-Demographic Characteristics

A total of 362 couples were included in the analysis. The mean age of the female partners was 26.9 ± 4.7 years, while the mean age of the male partners was 33.1 ± 5.3 years. Most couples resided in urban areas (83.7%), with a smaller proportion originating from rural settings (16.3%).

In terms of educational attainment, more than half of the female partners had completed higher secondary education or above (55.3%), followed by secondary education (32.9%). Only a small proportion of women had no formal education (6.9%) or primary-level education (5.0%). In contrast, the majority of male partners had completed secondary education (73.2%), while 16.6% had primary education and 7.4% had higher secondary education or above; very few men reported no formal education (2.8%).

In terms of gender, most female partners were homemakers (78.5%), while employment among women was relatively limited. Only 9.9% were engaged in professional occupations, and smaller proportions held service or salaried positions (7.5%) or were involved in manual or self-employment (4.2%). Among male partners, nearly half were employed in service or salaried positions (47.8%), and a similar proportion were engaged in manual or self-employment (45.6%). Professional occupations accounted for 4.7% of male partners, while a small minority were migrant workers (1.4%) or unemployed (0.6%) (Table 1).

Table 1: Socio-demographic Characteristics of Couples Seeking Infertility Care in Bangladesh (N = 362)

Variable	Female Partner	Male Partner
Age (years), mean ± SD	**26.9 ± 4.7**	**33.1 ± 5.3**
Residence, n (%)		
Rural	59 (16.3)	—
Urban	303 (83.7)	—
Education level, n (%)		
No formal education	25 (6.9)	10 (2.8)
Primary	18 (5.0)	60 (16.6)
Secondary	119 (32.9)	265 (73.2)
Higher secondary or above	200 (55.3)	27 (7.4)
Occupation, n (%)		
Homemaker	284 (78.5)	—
Manual / Self-employed	15 (4.2)	165 (45.6)
Service / Salaried	27 (7.5)	173 (47.8)
Professional	36 (9.9)	17 (4.7)
Migrant worker	—	5 (1.4)
Unemployed	—	2 (0.6)

Occupational categories were collapsed for analytical clarity. Manual/self-employed includes business owners, workers, and self-employed individuals. Professional includes doctors, nurses, teachers, and lawyers.

Infertility Characteristics and Reproductive History

Among the 362 couples, primary infertility was reported in 188 cases (51.9%), while secondary infertility was reported in 174 cases (48.1%). The median duration of infertility was 36 months (interquartile range [IQR]: 23–60 months).

When infertility duration was categorized, 94 couples (26.0%) reported a duration of less than 24 months, 145 couples (40.1%) reported a duration of 24–60 months, and 123 couples (34.0%) reported a duration of more than 60 months. A history of at least one prior pregnancy was reported by 174 women (48.1%). Additionally, 67 female partners (18.6%) reported a history of prior gynecologic or abdominal surgery (Table 2).

Table 2: Infertility Characteristics and Reproductive History

Variable	Value
Type of infertility, n (%)	
Primary infertility	188 (51.9)
Secondary infertility	174 (48.1)
Duration of infertility (months), median (IQR)	36 (23–60)
Duration category, n (%)	
< 24 months	94 (26.0)
24–60 months	145 (40.1)
> 60 months	123 (34.0)
History of any pregnancy, n (%)	174 (48.1)
Female surgical history, n (%)	67 (18.6)

Previous Pregnancy Outcomes among Women with Secondary Infertility

Among the 174 women with secondary infertility, spontaneous abortion was reported by 108 participants (62.1%). A history of stillbirth was reported by nine women (5.2%), while ectopic pregnancy and molar pregnancy were each reported by seven women (4.1%).

Regarding prior live birth outcomes, 27 women (15.5%) reported a history of vaginal delivery, and 62 women (35.6%) reported having undergone lower uterine cesarean section (LUCS). Additionally, 11 women (6.3%) reported a history of menstrual regulation (MR). As multiple responses were permitted, some women reported more than one type of pregnancy outcome (Table 3).

Table 3: Previous Pregnancy Outcomes among Women with Secondary Infertility (n = 174)

Pregnancy outcome*	n (%)
Spontaneous abortion	108 (62.1)
Stillbirth	9 (5.2)
Ectopic pregnancy	7 (4.1)
Molar pregnancy	7 (4.1)
Vaginal delivery	27 (15.5)
LUCS	62 (35.6)
MR	11 (6.3)

Female Clinical and Endocrine Factors of Infertility

Among the 363 female partners, female factor infertility was identified in 341 women (94.2%). Polycystic ovary syndrome (PCOS) was reported in 274 women (75.7%), and ovulatory disorders were found in 39 women (10.8%). Tubal factors were noted in 31 women (8.6%), while uterine abnormalities were identified in 4 women (1.1%). Additionally, fibroids were reported in 13 women (3.6%), endometriosis in 21 women (5.8%), and endometrial polyps in 6 women (1.7%). Adenomyosis was identified in 4 women (1.1%), and pelvic inflammatory disease was reported in 12 women (3.3%).

Endocrine-related conditions included hypothyroidism, reported in 119 women (32.9%), and hyperprolactinemia, reported in 10 women (2.8%). Diminished ovarian reserve was identified in 4 women (1.1%). Serum anti-Müllerian hormone (AMH) levels were available for 18 women, with a median value of 1.79 ng/ml (interquartile range [IQR]: 0.84–4.18). A normal evaluation with no identifiable female factor was reported in 21 women (5.8%) (Table 4).

Table 4: Identified Female Clinical and Endocrine Factors of Infertility (N = 362)

Female factor*	n (%)
Female factor infertility identified, n (%)	**341 (94.2)**
Ovulatory disorders	39 (10.8)
Polycystic ovary syndrome (PCOS)	274 (75.7)
Tubal factors	31 (8.6)
Uterine abnormalities	4 (1.1)
Fibroids	13 (3.6)
Endometriosis	21 (5.8)
Endometrial polyp	6 (1.7)
Adenomyosis	4 (1.1)
Pelvic inflammatory disease	12 (3.3)
Hypothyroidism	119 (32.9)

Hyperprolactinemia	10 (2.8)
Diminished ovarian reserve	4 (1.1)
AMH (ng/ml), median (IQR), (n =18)	1.79 (0.84–4.18)
Normal evaluation	21 (5.8)

Male Clinical Characteristics and Semen Profile

Among the 362 male partners, male factor infertility was identified in 157 individuals (43.3%). A history of prior surgery was reported by 38 male partners (10.5%). The median sperm count was 45 million/ml (interquartile range [IQR]: 30–70), the median progressive motility was 45% (IQR: 25–60), and the median proportion of morphologically normal sperm was 40% (IQR: 10–60).

Regarding spermatogenesis status, normozoospermia was observed in 268 men (74.0%). Oligozoospermia was identified in 20 men (5.5%), and severe oligozoospermia in 6 men (1.7%). Asthenozoospermia was present in 69 men (19.0%), including nine men (2.5%) with severe asthenozoospermia. Teratozoospermia was identified in eight men (2.2%), and azoospermia in 6 men (1.7%) (Table 5).

Table 5: Male Clinical Characteristics and Semen Profile (N = 362)

Variable	Value
Male factor infertility identified, n (%)	157 (43.3)
Male surgical history, n (%)	38 (10.5)
Sperm count (million/ml), median (IQR)	45 (30–70)
Progressive motility (%), median (IQR)	45 (25–60)
Normal morphology (%), median (IQR)	40 (10–60)
Spermatogenesis Status	
Normozoospermia	268 (74.0)
Oligozoospermia	20 (5.5)
Severe oligozoospermia	6 (1.7)
Asthenozoospermia	69 (19.0)
Severe asthenozoospermia	9 (2.5)
Teratozoospermia	8 (2.2)
Azoospermia	6 (1.7)

Table 7: Lifestyle Factors and Anthropometric Measurements

Variable	Female	Male
Smoking history, n (%)	—	68 (18.8)
Alcohol consumption, n (%)	—	—
Regular physical activity, n (%)	61 (16.9)	65 (18.0)
BMI (kg/m²), mean ± SD	25.9 ± 4.6	25.7 ± 3.5

DISCUSSION

In this cohort of 362 couples seeking infertility care, the mean age of female partners (26.9 ± 4.7 years) was lower than that of male partners (33.1 ± 5.3 years), consistent with demographic patterns observed in reproductive health research where men typically present at older ages than their female counterparts in infertility settings [8]. The predominance of couples from urban areas (83.7%) reflects differential access to specialized infertility services, as urban residence is often associated with greater availability and utilization of reproductive health care compared with rural settings [9].

Educational attainment differed markedly between genders. A majority of female partners had completed higher secondary or above (55.3%), with only a minority lacking formal education, whereas male partners were predominantly educated to the secondary level (73.2%). This discrepancy may reflect broader socio-economic shifts in Bangladesh, where female educational attainment has increased over recent decades but male patterns of formal education remain more concentrated at foundational levels [10]. Higher education is often associated with greater health literacy and care-seeking behavior, which may influence presentation to infertility services, though formal causal inference is beyond the scope of these analyses.

Occupational profiles revealed a clear gendered distribution: most female partners were homemakers (78.5%), with few engaged in professional or salaried employment, whereas male partners were predominantly employed in service or salaried positions (47.8%) or manual/self-employment (45.6%). These patterns reflect traditional gender roles in Bangladesh, where women's participation in formal labor markets remains limited relative to that of men, even as overall gender inequality indicators show gradual improvement [11]. Small proportions of male partners were identified as migrant workers (1.4%) or unemployed (0.6%), further

illustrating the diverse socio-economic contexts of couples presenting for infertility care.

Together, these socio-demographic profiles underscore that couples seeking infertility care in this facility-based sample are predominantly urban, relatively well educated (especially among women), and exhibit traditional gendered occupational roles, with a notable age difference between female and male partners.

In this cohort of 362 couples seeking infertility care, primary infertility (51.9%) and secondary infertility (48.1%) occurred at nearly comparable frequencies, indicating that both groups constituted a substantial portion of the clinical caseload. These findings align with population-based evidence showing variable patterns of primary versus secondary infertility across regions, with some studies reporting similar distributions in facility-based samples and others documenting context-specific differences [3-12]. Primary infertility reflects couples who have never achieved a live birth, whereas secondary infertility occurs in those who previously conceived but are unable to conceive again [13].

The median duration of infertility was 36 months (IQR: 23–60 months), and when categorized, a considerable proportion of couples had experienced infertility for extended periods: 40.1% for 24–60 months and 34.0% for more than 60 months. Long durations of infertility before presentation have been documented in several low- and middle-income settings and may reflect barriers to timely care-seeking, including limited access to specialized services and sociocultural factors affecting recognition and response to infertility [12].

A history of at least one prior pregnancy was reported by 174 women (48.1%), consistent with the observed proportion of secondary infertility in this sample. In facility-based studies, the prevalence of secondary infertility often parallels the proportion of women reporting previous pregnancies, reflecting the reproductive trajectory of couples who conceive but subsequently face difficulties [3].

Additionally, a history of prior gynecologic or abdominal surgery was reported by 18.6% of female partners. Surgical history may include procedures that impact reproductive anatomy or function, and is a recognized element of reproductive history important for infertility evaluation. However, the specific indications and types of surgery were not detailed in this context. These reproductive history profiles together highlight the clinical diversity among couples presenting for infertility care.

In this cohort of 174 women with secondary infertility, a high proportion reported a history of spontaneous abortion (62.1%), indicating that early pregnancy loss was a common reproductive outcome in this group. Spontaneous abortion, defined as the loss of a pregnancy before the completion of 20–24 weeks of gestation, is a frequent cause of adverse reproductive history and has been associated with subsequent fertility challenges in various settings. Epidemiological studies suggest that prior pregnancy loss can influence subsequent reproductive trajectories and is often reported in populations presenting for infertility evaluation [14].

Less common outcomes in this sample were stillbirth (9; 5.2%), ectopic pregnancy (4.1%), and molar pregnancy (4.1%). Stillbirth and ectopic or molar gestations represent distinct categories of adverse obstetric outcomes that can reflect underlying reproductive tract pathology or systemic maternal conditions and are recognized contributors to complex reproductive histories among women with subsequent fertility difficulties [15, 16]. Although ectopic and molar pregnancies are relatively rare in general obstetric populations, their occurrence in women with secondary infertility underscores the diversity of prior pregnancy experiences in clinical cohorts [16].

Regarding prior live birth outcomes, 15.5% women reported a history of vaginal delivery, while 35.6% reported a history of delivery by lower uterine cesarean section (LUCS). These proportions reflect the range of prior obstetric experiences in this cohort and align with evidence that previous modes of delivery do not uniformly preclude subsequent conception but may influence reproductive history documentation. Finally, 6.3% of women reported a history of menstrual regulation (MR), reflecting prior pregnancy interventions consistent with reproductive health practices in the region.

Taken together, these findings illustrate a spectrum of prior pregnancy outcomes among women with secondary infertility, encompassing both early pregnancy losses and various obstetric events.

In this cohort of 363 female partners presenting for infertility care, female factor infertility was identified in the vast majority (94.2%), highlighting the predominance of identifiable reproductive tract or endocrine abnormalities in this population. Polycystic ovary syndrome (PCOS) was the most frequently observed factor, present in 75.7% of women, underscoring its well-established role as a leading contributor to female infertility. PCOS is recognized globally as one of the most common causes of ovulatory dysfunction, affecting reproductive outcomes through hormonal imbalance, anovulation, and metabolic alterations, and is commonly reported in reproductive clinic cohorts [17, 18].

Ovulatory disorders overall were observed in 10.8% of women, a category that encompasses a range of menstrual irregularities and endocrinopathies beyond

PCOS. Ovulatory dysfunction is a central cause of infertility in many clinical populations and can reflect underlying endocrine disruption [19]. Tubal factors (8.6%) and other structural abnormalities, such as uterine abnormalities (1.1%), fibroids (3.6%), and endometriosis (5.8%) constituted additional female clinical contributors. These findings are consistent with studies demonstrating that pelvic pathology, including endometriosis and leiomyomas, is variably represented in infertility clinic populations but remains an important clinical consideration [20, 21].

Less frequently observed were endometrial polyps (1.7%), adenomyosis (1.1%), and pelvic inflammatory disease (3.3%), which can individually or collectively impair implantation or tubal function. The relatively lower frequencies of these conditions are in line with other facility-based infertility studies where structural pathologies are documented but not predominant [21].

Among endocrine conditions, hypothyroidism was reported in 32.9% of women, a prevalence that underscores the importance of thyroid screening in infertility evaluation, given the established influence of thyroid dysfunction on menstrual regularity and early pregnancy outcomes [22]. Hyperprolactinemia was identified in 2.8%, consistent with its recognized but less common role in infertility. Diminished ovarian reserve (DOR) was identified in 1.1%, reflecting reduced follicular pool or function in a small subset of this cohort.

Serum anti-Müllerian hormone (AMH) levels, available for 18 women, had a median value of 1.79 ng/ml (IQR: 0.84–4.18), aligning with expected variability in ovarian reserve markers within infertile populations and providing a quantitative measure of ovarian follicular capacity in this subset [23].

A normal evaluation with no identifiable female factor was recorded in 5.8% of women, indicating that a minority of cases lacked detectable clinical or endocrine abnormalities despite infertility presentation, a pattern also reported in other clinical settings [17].

Interpretation of lifestyle factors and anthropometric profile (concise)

In this cohort, 18.8% of male partners reported a history of smoking; while smoking and alcohol consumption were not reported among female partners. This pattern is consistent with national data from Bangladesh, where tobacco use is predominantly observed among men and remains uncommon among women [24]. Cigarette smoking has been consistently associated with adverse semen parameters and impaired sperm DNA integrity in infertility clinic populations, reinforcing its relevance as a modifiable lifestyle factor among men seeking infertility care [25].

Only 16.9% of women and 18.0% of men reported engaging in regular physical activity, indicating low levels of habitual exercise among both partners. This finding aligns with national and regional evidence showing a high prevalence of insufficient physical activity among adults in Bangladesh [26, 27]. Low physical activity has been widely discussed in the reproductive health literature as a factor associated with metabolic dysregulation and suboptimal reproductive outcomes.

The mean body mass index was 25.9 ± 4.6 kg/m² in women and 25.7 ± 3.5 kg/m² in men, placing both groups, on average, in the overweight category according to WHO criteria [28]. Elevated BMI has been frequently reported among couples attending infertility clinics and has been linked to hormonal disturbances, ovulatory dysfunction, and altered semen quality in prior studies [29, 30]. Together, these findings highlight the presence of modifiable lifestyle and anthropometric characteristics among couples presenting for infertility care.

Limitations

This study has several limitations. Its facility-based, cross-sectional design limits generalizability to the broader Bangladeshi population and precludes causal inference. Data were collected from selected urban and peri-urban centers, which may underrepresent rural couples and those unable to access specialized infertility services. In addition, serum AMH data were available for a limited subset of women, restricting in-depth assessment of ovarian reserve at the population level. Finally, the non-probability consecutive sampling approach may introduce selection bias inherent to clinic-based studies.

CONCLUSION

This facility-based cross-sectional study provides a comprehensive, couple-centered overview of the socio-demographic characteristics, infertility patterns, and clinical profiles of couples seeking infertility care in Bangladesh. Both primary and secondary infertility were common, with prolonged durations of infertility before care-seeking. Female factors—particularly PCOS and endocrine disorders—and male factors were frequently identified, alongside modifiable lifestyle characteristics such as smoking, physical inactivity, and overweight status. These findings highlight the need for integrated, couple-based infertility services that incorporate timely access, standardized diagnostic evaluation, and attention to modifiable risk factors. The study contributes valuable evidence to inform clinical practice and guide future research and service planning for infertility care in Bangladesh.

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