

# Outcome of IVF Treatment of Couples Attending the HOPE and Lab Aid IVF Clinic, Dhaka

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*Ibrahim Cardiac Medical Journal 2024; 14 (1): 28-34*

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Lecturer

Anatomy

**At the end of this presentation, participants will be able to:**

- **Describe the burden of infertility**
- **Understand IVF outcomes in Bangladesh**
- **Critically appraise the study**
- **Discuss implications for infertility management**

- **Infertility**

- Failure to conceive after 12 months of regular unprotected intercourse

- Affects 60–80 million couples worldwide

- Approximately 15% of couples in Bangladesh are infertile

- **Impact**

- Psychological distress
  - Marital disharmony
  - Social stigma
  - Economic burden

## Assisted Reproductive Technology (ART) includes:

- Intrauterine Insemination (IUI)
- In Vitro Fertilization (IVF)
- Intracytoplasmic Sperm Injection (ICSI)

## IVF Process

- Ovarian stimulation
- Oocyte retrieval
- Laboratory fertilization
- Embryo culture
- Embryo transfer

## Why was this study necessary?

- **Limited data on IVF outcomes in Bangladesh**
- **No national ART registry**
- **Need to identify demographic and clinical factors influencing IVF success**

## General Objective

### To evaluate:

**Demographic characteristics,  
Clinical characteristics &  
Outcomes of IVF treatment  
among infertile couples attending HOPE  
IVF Clinic and Lab Aid IVF Center.**

## **Type of Study**

**Cross-sectional observational study**

## **Duration**

**January–December 2024**

## **Study place**

**HOPE IVF Clinic &**

**Lab Aid IVF Center, Dhaka, Bangladesh**

## **Sample Size**

**126 infertile couples**

## **Age**

**Range 18–45 years**

## **Mean Age**

**32.6 ± 6.8 years**

- **Primary or secondary infertility**
  - **Infertility  $\geq 1$  year**
- **Completed IVF workup**
- **Informed consent obtained**

- **Anatomical abnormalities requiring surgery**
- **Previous IVF at another center**
- **Severe medical comorbidities**
- **Significant psychiatric illness**
- **Substance abuse**

## **Structured questionnaire covering:**

- **Socio-demographic profile**
- **Infertility history**
- **Hormonal profile**
- **IVF protocol**
- **Treatment outcome**

## Software:

SPSS Version 25

## Methods:

Mean  $\pm$  SD

# Socio-Demographic Characteristics

- **Mean Age: 32.6 years**
- **Housewives: 60.3%**
- **SSC Education: 35.7%**
- **HSC Education: 36.5%**
- **Obese: 20.6%**

- **Primary infertility: 71.4%**
- **Secondary infertility: 28.6%**
- **Mean Duration**
- **Marriage: 10.3 years**
- **Infertility: 8.9 years**

- **Lack of knowledge: 44.4%**
- **Lack of facilities: 23.8%**
- **Financial constraints: 16.7%**
- **Superstition: 15.1%**

## **Key Finding**

**Knowledge deficit was the major barrier**

- **PCOS/Anovulation: 38.9%**
- **Bilateral tubal block: 12.7%**
- **Endometriosis: 11.9%**
- **Premature ovarian failure: 6.3%**

## **AMH**

**Favorable (2–4 ng/ml): 77%**

**Unfavorable (<2 ng/ml): 23%**

## **Estradiol**

**≥50 ng/ml: 50%**

**<50 ng/ml: 50%**

# Associated Medical Conditions

- **Diabetes Mellitus: 15.1%**
- **Hypothyroidism: 13.5%**

## **Follicle Quality**

**Good follicle: 69%**

**Poor follicle: 31%**

## **Oocyte Retrieval**

**3–4 oocytes: 35.7%**

## **Embryo Transfer**

**2 embryos transferred: 23.8%**

- **Severe oligospermia: 23%**
- **Obstructive azoospermia: 0.8%**
- **Hypogonadal azoospermia: 0.8%**
- **OATS: 0.8%**

# | Results (Pregnancy Outcomes)

- **Conceived: 47 (37.3%)**
- **Not conceived: 79 (62.7%)**
- **Clinical Pregnancy: 35.7%**

- **Full-term singleton: 40.4%**
- **Multiple pregnancy: 4.2%**
- **Spontaneous abortion: 27.7%**
- **Blighted ovum: 17.0%**
- **Ectopic pregnancy: 6.4%**
- **Preterm labor: 4.2%**

- **21 pregnancies reached term**  
**Overall Live Birth Rate: 16.7%**  
**(21 out of 126 couples)**

## Global

- **Clinical Pregnancy: 37.3%**      **40–50%**
- **Live Birth Rate: 16.7%**      **25–35%**

### **Observation**

**Outcomes lower than international benchmarks**

- **Contemporary Bangladeshi data**
- **Real-world clinical practice**
- **Comprehensive demographic assessment**
- **Evaluation of both male and female factors**

# Limitations of the Study

- X Small sample size**
- X Only two IVF centers**
- X No control group**
- X No multivariate analysis**
- X No neonatal follow-up**

- **Promote early infertility evaluation**
- **Improve public awareness**
- **Expand IVF services**
- **Develop infertility counseling programs**
- **Establish national ART registry**

- **Primary infertility predominated**
- **Knowledge gap caused delayed treatment**
- **Clinical pregnancy rate was acceptable**
- **Live birth rate remained lower than global standards**
- **Further research is needed to improve IVF outcomes**

- **Infertility remains a significant public health issue**
- **Lack of awareness is the major barrier to IVF access**
- **IVF achieved pregnancy in 37.3% of couples**
- **Overall live birth rate was 16.7%**
- **National ART surveillance is urgently needed**

- **Mean age was 32.6 years and 71.4% of couples had primary infertility, indicating that infertility remains a significant reproductive health problem in Bangladesh**
- **The average duration of infertility was 8.9 years, suggesting delayed healthcare-seeking behavior**

- **Lack of knowledge (44.4%) was the leading cause of delayed IVF initiation, followed by inadequate facilities (23.8%) and financial constraints (16.7%)**
- **Female factors such as PCOS/anovulation (38.9%), tubal blockage (12.7%) and endometriosis (11.9%) were common indications for IVF**

- **Male-factor infertility, particularly severe oligospermia (23%) also contributed substantially to infertility burden**
- **The clinical pregnancy rate was 37.3% while the overall live birth rate was 16.7%, which is lower than reported international IVF success rates**

- **The relatively poor outcome may be related to advanced maternal age, prolonged infertility duration, delayed referral and resource limitations**
- **A considerable proportion of pregnancies ended in spontaneous abortion (27.7%), blighted ovum (17%) or ectopic pregnancy (6.4%), emphasizing the need for careful monitoring**

- **The study highlights the importance of infertility awareness programs, early fertility evaluation, improved access to IVF services and establishment of a national ART registry in Bangladesh**
- **Larger multicenter studies are needed to identify factors affecting IVF success and improve reproductive outcomes**

- **Why was the live birth rate lower than global averages?**
- **How can infertility awareness be improved in Bangladesh?**
- **Should Bangladesh establish a national IVF registry?**
- **What factors should be targeted to improve IVF success rates?**



**THANK**

**YOU!**