

Prevalence of Polycystic Ovary Syndrome by the International Evidence-based Guidelines: A Nationwide Cross-sectional Survey

Illiyas SB¹, *Morshed MS², Hasan M³, Tofail T⁴, Banu H⁵, Sultana N⁶, Siddika MA⁷, Islam MR⁸, Mahrukh H⁹, Ferdousi T¹⁰, Roy I¹¹, Aktar Y¹², Yasmin H¹³, Rahman F¹⁴, Akter N¹⁵, AN Bhuiyan¹⁶, Airi K¹⁷, Ratul RH¹⁸, Chowdhury P¹⁹, Ashraf K²⁰, Mollah RA²¹, Hasanat MA²²

¹Samirah Binte Illiyas, ²Md. Shahed Morshed, ³Mashfiqul Hasan, ⁴Tania Tofail, ⁵Hurjahan Banu, ⁶Nusrat Sultana, ⁷Munira Afroz Siddika, ⁸Md. Rafayel Islam, ⁹Hafsa Mahrukh, ¹⁰Tahmina Ferdousi, ¹¹Indira Roy, ¹²Yasmin Aktar, ¹³Hilary Yasmin, ¹⁴Farhana Rahman, ¹⁵Nazia Akter, ¹⁶Abdullah Al Noman Bhuiyan, ¹⁷Krishna Airi, ¹⁸Rifat Hossain Ratul, ¹⁹Prodipta Chowdhury, ²⁰Koushik Ashraf, ²¹Rayhan Ali Mollah, ²²Muhammad Abul Hasanat
PCOS study group, Department of Endocrinology, Bangladesh Medical University, Dhaka, Bangladesh

Abstract

Background: Data regarding the nationwide prevalence of polycystic ovary syndrome (PCOS) in Bangladeshi women is scarce. Additionally, a prevalence study using the stepwise decision-making approach, incorporating antimüllerian hormone (AMH), was also not reported.

Objectives: To determine the prevalence and characteristics of PCOS and its isolated diagnostic features among Bangladeshi women aged 10-45 years, using the 2023 International Evidence-based Guidelines, including AMH.

Methods: From April to September 2024, 1201 females were sampled across eight divisions of Bangladesh by history, physical examinations, and blood collection. Total testosterone (TT) and AMH levels were assessed, with specific cut-offs established from a healthy control group. Thyroid dysfunction and hyperprolactinemia were excluded.

Results: Of 1201 participants, 403 were excluded. Among 798 eligible women, 38 (4.8%) had both irregular cycles and significant hirsutism, 75 (9.4%) had only significant hirsutism, 141 (17.7%) had only irregular cycles, and 544 (68.2%) had neither. After TT and AMH evaluation and excluding two hyperprolactinemia cases, a 6.9% (55/798) prevalence was found among 57 women with probable PCOS. Familial predisposition, unhealthy sleep behaviour, and higher androgenic and metabolic features were observed in women with PCOS versus controls. Metabolic syndrome frequency was higher among adult PCOS (33.3% vs. 4.0%) than adolescent PCOS.

Conclusions: The prevalence of PCOS among Bangladeshi women was 6.9%, with distinctive features compared to controls. Women with isolated diagnostic criteria require further evaluation and long-term follow-up. [*J Assoc Clin Endocrinol Diabetol Bangladesh, 2025;4(Suppl 1): S37*]

Keywords: Antimüllerian hormone, Hirsutism, Irregular menstrual cycle, Polycystic ovary syndrome, Prevalence

***Presenting Author:** Dr. Samirah Binte Illiyas, Resident, Department of Endocrinology, Bangladesh Medical University.

***Corresponding author:** Dr. Md. Shahed Morshed, PhD researcher, Department of Endocrinology, Bangladesh Medical University. E-mail: shahedk62@gmail.com.