Journal of Rare Cardiovascular Diseases
ISSN: 2299-3711 (Print) | e-ISSN: 2300-5505 (Online)
www.jrcd.eu
RESEARCH ARTICLE

Current trends in prevalence of Polycystic ovary syndrome in Asian population: A systemic Review

[1]Ashmita, [2]Megha Yadav
[1] Student, Department of physiotherapy, Galgotias University
[2] Associate Professor, Department of physiotherapy, Galgotias University

*Corresponding Author
Ashmita

Article History
Received: 01.10.2025
Revised: 22.10.2025
Accepted: 19.11.2025
Published: 05.12.2025

Abstract: Polycystic Ovary Syndrome (PCOS) is a complex endocrine disorder that affects a significant number of women worldwide. This systematic review aims to provide a comprehensive analysis of PCOS prevalence in diverse populations and ethnic/racial groups. A total of 29 studies published between 2013 and 2023 were included in the review. The findings revealed geographical variations in PCOS prevalence, with higher rates reported in East Asian countries like China and Thailand. Ethnic disparities were also observed, influencing the phenotypes and metabolic signs of PCOS. The genetic basis of PCOS emerged as a crucial area of interest, emphasizing the need for further research to improve treatment modalities. Associations between PCOS and metabolic syndrome, as well as vitamin D deficiency, were also noted. The review highlights the importance of awareness and early detection programs to promote timely diagnosis and intervention. Variations in diagnostic criteria were found to impact PCOS prevalence rates, stressing the need for standardized and consistent criteria. Overall, this systematic review provides valuable insights into PCOS epidemiology and implications, guiding healthcare practitioners, researchers, and policymakers in addressing the global burden of PCOS effectively.

Keywords: Polycystic Ovary Syndrome, PCOS, prevalence, ethnic disparities, genetic basis, metabolic syndrome, vitamin D deficiency, diagnostic criteria.

INTRODUCTION

Polycystic ovary syndrome (PCOS) is a common endocrine disorder affecting women of reproductive age. It is a complex condition that affects various aspects of a woman's health, including reproductive, metabolic, and psychological functions. PCOS is characterized by the presence of multiple cysts on the ovaries, irregular menstrual cycles, and high levels of androgens (male hormones) in the body. Women with PCOS may also experience symptoms such as weight gain, acne, hirsutism (excessive hair growth), and infertility(1).

The prevalence of PCOS varies among different populations, and it is estimated that 5-10% of women worldwide have this syndrome. However, the prevalence of PCOS in Asian populations may be higher than in other populations. According to some studies, the prevalence of PCOS in Asian women ranges from 2.2% to 26.2%, depending on the diagnostic criteria used and the population studied. This wide range of prevalence rates suggests that PCOS is a significant public health issue in Asian populations and that there is a need to understand the burden of this disorder in this population(2).

In recent years, there has been growing interest in understanding the prevalence and clinical features of PCOS in Asian populations. This is because PCOS is one of the leading causes of infertility in Asian women, and there is a need to understand the burden of this disorder in this population. Additionally, the clinical features and risk factors associated with PCOS may differ among different populations, and it is important to understand these differences to develop effective strategies for the prevention and management of PCOS(3).

The purpose of this systematic review is to provide a comprehensive overview of the current trends in the prevalence of PCOS in the Asian population. The review will also examine the clinical features and risk factors associated with PCOS in this population. The findings of this review will be of significant importance to healthcare providers, policymakers, and researchers working in the field of reproductive health. By understanding the prevalence and clinical features of PCOS in the Asian population, healthcare providers can develop effective strategies for early detection, management, and prevention of this disorder. Additionally, policymakers can use the findings of this review to design and implement targeted interventions to reduce the burden of PCOS in the Asian population(4).

The aim of this study is to conduct a comprehensive systematic review of the current trends in the prevalence of Polycystic Ovary Syndrome (PCOS) among the Asian population. The study will analyze and synthesize existing research literature to provide an up-to-date and accurate understanding of the prevalence rates of PCOS in different Asian countries. By exploring the variations in PCOS prevalence across diverse Asian populations, this research aims to contribute valuable insights into the epidemiological landscape of PCOS in the region, identify potential risk factors, and highlight the need for tailored healthcare

interventions and public health strategies to address the growing burden of PCOS in Asian communities.

MATERIAL AND METHODS

Search Strategy

A comprehensive search was conducted in electronic databases (PubMed, MEDLINE, EMBASE, and Google Scholar) for articles published between 2013 and 2023. Keywords used included: "polycystic ovary syndrome," "PCOS," "prevalence," "ethnicity," "race," "population," "geographical variation," and "epidemiology." The search was limited to English-language publications.

Inclusion and Exclusion Criteria

Inclusion Criteria:

- Focused on PCOS prevalence in specific populations, ethnic/racial groups, or geographical regions.
- Used well-defined diagnostic criteria for PCOS (Rotterdam criteria, NIH criteria, Androgen Excess Society guidelines).
- Provided data on PCOS prevalence rates.
- Original research articles or review papers.
- Published in peer-reviewed journals.
- Conducted between 2013 and 2023.

Exclusion Criteria:

- Duplicates, conference abstracts, case reports.
- Lacked sufficient data on PCOS prevalence.

Study Selection and Data Extraction

- Titles and abstracts of identified studies were screened for eligibility.
- Full-text articles of potentially eligible studies were reviewed for final inclusion.
- Disagreements were resolved through discussion and consensus.
- Data were extracted using a standardized form, including study characteristics (authors, publication year, country), study design, sample size, diagnostic criteria used, PCOS prevalence rates, and key findings.

Quality Assessment

- Observational studies: Assessed using the Newcastle-Ottawa Scale.
- Review articles: Assessed using the AMSTAR 2 tool.
- Studies were rated on sample representativeness, data collection methods, statistical analysis, and potential biases.

Data Synthesis

- Quantitative data were synthesized using a deep study approach.
- PCOS prevalence rates and variations across different populations and ethnic/racial groups were summarized and analyzed.
- Findings were presented descriptively, with notable trends and discrepancies discussed.

RESULTS

cc	Authors Name	Year	Title	Journal Name	Method	Conclusions
1	Dominic Nibu et al (5)	2023	Prevalence of polycystic ovary syndrome and its clinical and hormonal profile in young females with type 1 diabetes mellitus: experience from a teaching Institution of India		Similar age and BMI groups of 65 women with type 1 diabetes mellitus (T1DM) and 65 women with polycystic ovary syndrome (PCOS) were compared (BMI). This research is an observational study because it is cross-sectional in design and compares two populations simultaneously. The two groups' PCOS prevalence was compared, probably using a chi-square or t-test.	Menstrual irregularities, hyperandrogenism, and polycystic ovarian syndrome were not associated with metabolic control, age of onset, or insulin dose in women with type 1 diabetes.
2	Hong et al (6)	2023	Prevalence of polycystic ovary syndrome under NIH criteria among the tenth-grade Chinese schoolgirls	BMC Women's Health	Cluster sampling was used in a cross-sectional epidemiological assessment of ten-year-old girls in the Guangzhou area. A questionnaire, physical examinations, and serum	3.86 percent of Guangzhou area high school females had polycystic ovary syndrome, according to NIH estimates. Adolescent hyperandrogenism should be identified with the use of both clinical and

			in Guangzhou area: a cross-sectional epidemiological survey		measurements were all part of this research. We have received 1294 responses from women and have been able to collect serum from 1095 of them. The cutoff value for biochemical hyperandrogenemia was obtained using a random sample of 235 non-hirsute (mFG6), postmenstrually-aged females. Using the NIH criteria, we first calculated the incidence of polycystic ovarian syndrome (PCOS) in this group of women.	laboratory signs.
3	Yang Rui et al (7)	2022	Changes in the prevalence of polycystic ovary syndrome in China over the past decade	The Lancet Regional Health - Western Pacific	Both a 2010 and a 2020 nationwide epidemiological study examined the incidence of polycystic ovarian syndrome (PCOS) in Chinese women of childbearing age. To diagnose PCOS using the Rotterdam criteria, all patients filled out a questionnaire, underwent physical examinations, provided blood samples, and underwent transvaginal pelvic ultrasounds. These tests looked into the possibility of hyperandrogenism (H), persistent anovulation (O), or polycystic ovaries (P) (P). To track shifts over time, we used a logistic regression model to examine PCOS prevalence rates by survey year.	In the past decade, PCOS has become more common among Chinese women. The rates of obesity, hyperandrogenism, and infertility among women with PCOS rose dramatically between 2010 and 2020.
4	Syeda Hijab Fatima et al (8)	2022	Prevalence of PCOS in Reproductive Age Women in Gujrat City	EAS Journal of Radiology and Imaging Technology	A cross-sectional study was performed at Khalil Hospital in Gujrat, Pakistan, between March 2022 and May 2022. A total of 140 female patients were selected as a statistically significant sample size. We made sure to consistently involve all of our female patients. Toshiba made the ultrasonic equipment used in this research.	PCOS is common among reproductive-age women. Patients most often report problems with weight (25.7%), menstrual irregularities (9.3%), pain (54.1%), and sterility (0%). (53.1 percent). As a percentage, that's rather high. The 9.3 percent mark. In total, 48 cases of PCOs were identified (34.3 percent). Ultrasound is helpful in the preliminary stages of PCOS diagnosis.
5	Farhadi-Azar et al. (9)	2022	The Prevalence of Polycystic Ovary Syndrome, Its	Frontiers in Endocrinology	Women between the ages of 18 and 45 who took part in the Tehran Lipid and Glucose	PCOS, especially the frequent phenotypes A and B, is widespread among

			Phenotypes and Cardio-Metabolic Features in a Community Sample of Iranian Population: Tehran Lipid and Glucose Study.		Study were divided into two groups based on whether or not they met the criteria for polycystic ovary syndrome (PCOS) as established by the Rotterdam criteria. Women who did not meet the diagnostic criteria for PCOS were also included (PCOM). Phenotypic A PCOS is characterised by oligoanovulation and polycystic ovaries, while phenotypic B PCOS is characterised by hyperandrogenism and polycystic ovaries (phenotype D). Both groups were compared with regards to their cardiometabolic profiles, the existence of MetS-related co-morbidities, and lipid abnormalities. Age and body mass index were incorporated in the models for determining the median.	reproductive-aged Iranian women. MetS was more prevalent among those who met all three criteria for the illness, and lipid profiles were especially poor among those with androgen excess polycystic ovary syndrome (PCOS). In terms of cardiovascular and metabolic health, women with only PCOM and ovulatory failure were no different from healthy individuals. Consistent monitoring for metabolic changes may be necessary to prevent cardio-metabolic diseases in patients with more severe phenotypes of PCOS, as suggested by these findings.
6	Kaur Supreet et al (10)	2022	EPIDEMIOLOGY OF POLYCYSTIC OVARIAN SYNDROME IN A RURAL MEDICAL COLLEGE AND HOSPITAL- A SURVEY BASED RESEARCH	Journal of Pharmaceutical Negative Results	In this study, female medical students and nursing personnel from a rural medical college in Himachal Pradesh participated in an epidemiological examination of Polycystic Ovary Syndrome (PCOS). Data was collected from a sample of 200 persons using a questionnaire the researchers developed and pilot-tested themselves. Finding out how common PCOS is and looking into any links between PCOS and things like food, exercise, and waist-to-hip ratio were the key goals of this research (WHR).	The high prevalence of PCOS in the studied population was associated with low rates of physical activity and elevated stress levels. The authors stressed the need of routine screening and health fairs in preventing PCOS-related issues in the future. The findings of this study highlight the importance of educating tomorrow's medical professionals, as their views on PCOS will have far-reaching consequences for society.
7	Kodipalli A and Devi S (11)	2021	Prediction of PCOS and Mental Health Using Fuzzy Inference and SVM	Frontiers in Public Health	Using a computer model for the early detection and risk assessment of mental health issues in polycystic ovary syndrome is supported by the results of this study. To simulate the language-based nature of the mapping between PCOS symptoms and diagnosis, a fuzzy technique was employed in this investigation. Two popular machine learning algorithms,	In order to automate the early identification and prediction of PCOS and related mental health conditions, the authors propose a model based on the fuzzy technique. As part of the therapy for polycystic ovary syndrome (PCOS), it was established that the proposed method may be used to conduct an objective evaluation of women's mental health, the results of which

					Support Vector Machines (SVM) and the Fuzzy Technique for Order of Preference by Similarity to Ideal Solution, are compared and contrasted in this article (TOPSIS). The study employs a small but representative data set of female participants. SVM was shown to have a 94.01 percent accuracy on the same dataset as Fuzzy TOPSIS, which had a 98.20 percent accuracy. As part of PCOS treatment regimens, the proposed method can be used to objectively evaluate women's mental health so that preventative measures can be performed.	could then be used to foretell preventive steps. Some individuals with polycystic ovary syndrome (PCOS) and related mental health issues may benefit from the implementation of the proposed strategy for early identification, diagnosis, treatment, and management of PCOS and related disorders.
8	Mehreen TS et al (12)	2021	Prevalence of Polycystic Ovarian Syndrome Among Adolescents and Young Women in India	Journal of Diabetology	In a cross-sectional study, researchers analysed risk factors for PCOS and determined the prevalence of PCOS among Indian teenage and young adult females using multiple diagnostic criteria (including the Rotterdam, AE-PCOS, and NIH criteria). In addition, ultrasonography was used to assess the presence of polycystic ovarian syndrome. There were a total of 518 people enrolled in the study, including 246 young males and 272 young women. Ultrasound examinations were offered to participants who were either overweight or who experienced menstruation irregularities or biochemical abnormalities. Menstrual cycle regularity, hair growth, skin, weight, sleep, and androgen excess were all evaluated using a standardised questionnaire.	The report emphasises the significance of PCOS prevention and management strategies in urban India. Problems with reproduction and metabolism are less likely to occur if PCOS is diagnosed and treated early.
9	Rao Manisha et al (13)	2020	Cross-sectional Study on the Knowledge and Prevalence of PCOS at a Multiethnic University	Progress in Preventive Medicine	Participants in an online survey included students, teachers, and staff from Texas Woman's University in Denton, Dallas, and Houston. There were a total of 759 persons in the study (722 females and 47 males). The goal of this research was to assess how well-known PCOS	Women in this study had a higher frequency of PCOS than the general population (6-12%) and were more likely to seek medical attention, albeit these results may be skewed since polycystic women were more likely to fill out the survey.

					is among various groups of young Texans.	
10	Ganie A Mohd et al (14)	2020	Prevalence of polycystic ovary syndrome (PCOS) among reproductive age women from Kashmir valley: A cross-sectional study	International Federation of Gynecology and Obstetrics	Scientists conducted a cross-sectional study every May from 2013 to 2015. Women between the ages of 15 and 40 were chosen at random from 12 districts with a total of 14 educational institutions in each district. As part of a multi-step screening process, they filled out a brief questionnaire. After providing informed consent, women underwent complete clinical, biochemical, hormonal, and sonographic exams to meet Rotterdam 2003 guidelines. Both the AE-PCOS and NIH criteria were used to assess the participants.	When compared to previous research, the prevalence of PCOS among Kashmiri women is much greater. For these results to be credible, a nationwide study of prevalence is required.
11	Chatterjee M, Bandyopadhyay SA. (15)	2020	Assessment of the Prevalence of Polycystic Ovary Syndrome among the College Students: A Case–Control Study from Kolkata	Journal of Mahatama Gandhi Institute of Medical Sciences	Using a cross-sectional questionnaire, researchers from September 2017 to March 2018 looked for a correlation between PCOS prevalence and body composition measures. Students aged 18 to 20 from a variety of fields were randomly selected to participate in the study's sample. Students' demographic information was collected using a standardised questionnaire aligned with Rotterdam's criteria, and their anthropometric measures were taken following standard protocols.	The study's goal is to make college students more aware of the importance of having a correct diagnosis of PCOS so that the condition can be addressed.
12	Dashti Sareh et al (16)	2019	Prevalence of Polycystic Ovary Syndrome among Malaysian Female University Staff	Journal of Midwifery and Reproductive Health.	This cross-sectional study included working women of childbearing age who were enrolled at the University Putra Malaysia in Selangor, Malaysia. The selection procedure included anthropometrics, a medical history, blood pressure, a pelvic exam, and the identification of hirsutism, acne, and alopecia. Ultrasonography was used to assess both the free and total testosterone levels of the subjects.	This study found that PCOS and its particular phenotype were remarkably common among Malaysian military members.

13	Kim Ju Jin et al (17)	2019	Phenotype and genotype of polycystic ovary syndrome in Asia: Ethnic differences	The Journal of Obstetrics and Gynaecology Research	The phenotypic and genetic studies of Asian women with polycystic ovary syndrome are the subject of this review.	Polycystic ovarian syndrome (PCOS) has been linked to common genetic risk factors in Asian and Caucasian patients, according to genome-wide association studies. Constantly comparing data from different populations is essential for achieving racial and ethnic parity in PCOS diagnosis and treatment.
14	Mu Liangshan et al (18)	2019	Prevalence of polycystic ovary syndrome in a metabolically healthy obese populati	International Journal of Gynecology and Obstetrics	In a national epidemiologic survey conducted in 10 provinces and municipalities in China, women were classified into four groups based on their metabolic health: metabolically healthy non-obese (MHNO), metabolically unhealthy non-obese (MUNO), metabolically unhealthy obese (MHO), and MHNO (MUO). The Rotterdam Criteria were used to make the PCOS diagnosis. A questionnaire, physical exam, and transvaginal ultrasound were performed on each participant. We took readings of your BMI, BP, BG, BG, and lipid profiles.	MHO women had a higher prevalence of polycystic ovary syndrome and anovulation. One probable shared risk factor between these diseases and obesity is obesity itself.
15	Khan Jaseem Muhammad et al (19)	2019	Genetic Basis of Polycystic Ovary Syndrome (PCOS): Current Perspectives	The Application of Clinical Genetics	The goal of this research was to summarise the current state of knowledge regarding the genetics of this disease. From its clinical manifestations to its underlying genetics and related variations, this summary has you covered.	More research into the genetic causes and cellular mechanisms behind PCOS will undoubtedly enhance our grasp of the disease's aetiology. If new therapy techniques are to be created, the state of PCOS treatment modalities now in use must be incorporated into the study.
16	Deswal Ritu et al (20)	2019	Cross--sectional study of the prevalence of polycystic ovary syndrome in rural and urban populations	International Journal of Gynecology Obstetrics	A large-scale cross-sectional survey of women of childbearing age was conducted in Haryana between December 2015 and May 2017. Multiple rounds of random stratified sampling were used to compile the data used in this investigation. This survey included a test for polycystic ovary syndrome (PCOS). Women who had been diagnosed with PCOS or who	When compared to previous research, the prevalence of PCOS among Kashmiri women is much greater. For these results to be credible, a nationwide study of prevalence is required.

					had strong suspicions that they could have PCOS had blood samples analysed for hormone levels. Women with polycystic ovaries, hyperandrogenism, and irregular menstrual cycles were all taken into account by the Rotterdam criteria (PCO). The study excluded women who were hyperthyroid, had hyperprolactinemia, or had adrenal hyperplasia.	
17	Buddhavarapu Shruti (21)	2019	Bearding, Balding and Infertile: Polycystic Ovary Syndrome (PCOS) and Nationalist Discourse in India	Journal of Medical Humanities	Using a critical discourse analysis, this study delves into the varied perspectives on PCOS in India. The lack of a definitive aetiology, the author contends, presents a discursive hole that encourages the projection of socio-political concerns onto the female body, and she does so by analysing the cultural, social, and political aspects that affect the discourse on polycystic ovarian syndrome (PCOS). The author creates a fictional character she dubs the "new Indian woman" to investigate the ways in which sexism and nationalism play out in the discourse surrounding polycystic ovarian syndrome in India.	This study found that PCOS and its particular phenotype were remarkably common among Malaysian military members.
18	Zafar Urooj et al (22)	2019	Prevalence of PCOS with Associated Symptoms and Complications at Tertiary Care Hospital of Karachi	Journal of Advances in Medicine and Medical Research	In a single-site cross-sectional study over a four-month period, 305 out of 335 premenopausal women with a variety of gynaecological complaints visited the clinic. A simple sampling method was used to recruit patients. Subjects were evaluated using anthropometric measures, questionnaires, and clinical interviews after consent was obtained. Since 2003, PCOS has been diagnosed using the Rotterdam criteria. Women who experience menstrual irregularities have been studied extensively. Two scales, the Acne Global Grading Scale and a variant of the Ferriman-Gallwey scale, were used to evaluate the degree of clinical	In this region, PCOS is the most prevalent health issue affecting women. Experiencing fluctuating symptoms can have a significant influence on these women's quality of life.

					hyperandrogenism. The BMI was used to diagnose people with obesity. The Hamilton scale was used to assess the presence of co-occurring mental disorders.	
19	Abinaya Subramaniam et al (23)	2019	AN OVERVIEW OF HYPERANDROGENISM IN PCOS AND THE PROSPECTIVE UNDERLYING FACTORS	Research Journal of Life Sciences, Bioinformatics, Pharmaceutical and Chemical Sciences	This study reviews the studies on hyperandrogenism in PCOS patients in an organised fashion (PCOS). Using keywords, the writers looked through numerous databases, including PubMed, MEDLINE, and EMBASE. Both observational and interventional studies were analyzed, and only articles written in English were included in the search. In addition to identifying the three phenotypes of PCOS, the authors also conducted an analysis of the diagnostic criteria provided by several scientific organizations.	The overproduction of androgens, or hyperandrogenism, is a significant symptom of polycystic ovary syndrome (PCOS). Hyperandrogenic symptoms in PCOS patients have been linked to a number of different variables. Inflammation, excess body fat, and insulin resistance are all contributors. The research also examined the deregulation of the HPG axis, androgen synthesis, and metabolism as additional mechanisms that may explain PCOS-related hyperandrogenism. Due to its serious consequences for reproductive health, the study emphasises the importance of identifying and treating PCOS as early as possible.
20	Ganie A. Mohammad et al (24)	2019	Epidemiology, pathogenesis, genetics & management of polycystic ovary syndrome in India	Indian Journal of Medical Research	In order to better understand the prevalence, root causes, and treatment options for PCOS in India, we conducted a thorough literature study. Data on the incidence, cause, diagnosis, and treatment of polycystic ovary syndrome (PCOS) in India were chosen following a thorough evaluation of each study's methodology, sample size, demographic features, diagnostic criteria, and key findings.	The authors speculate that discrepancies in PCOS prevalence estimates in India can be attributed to differences in diagnostic criteria and study populations. Polycystic ovarian syndrome (PCOS) is a widespread endocrine illness, and to effectively treat it, researchers in India need to learn more about its origins.
21	Wendy M. Wolf et al (25)	2018	Geographical Prevalence of Polycystic Ovary Syndrome as Determined by Region and Race/Ethnicity	International Journal of Environmental Research and Public Health	The goal of this analysis is to compare the incidence of polycystic ovarian syndrome between different regions and between different racial and ethnic groups. This will be useful for assessing where our understanding of PCOS's global prevalence and diagnosis is at the moment.	The existing body of information is insufficient to establish whether or not the prevalence of PCOS differs considerably among geographic areas or racial/ethnic groupings. Better diagnostic criteria and procedures, which can be supplied by future research, will allow for fewer people

						with PCOS to go undetected.
22	Mogili KD et al (26)	2018	Prevalence of vitamin D deficiency in infertile women with polycystic ovarian syndrome and its association with metabolic syndrome – A prospective observational study	European Journal of Obstetrics and Gynecology	A prospective observational study was carried out at a tertiary care infertility centre between March 2016 and March 2017. The major measure was a likelihood assessment of vitamin D deficiency in PCOS-related infertile women. One of the secondary goals was to see if there was a connection between PCOS patients' low vitamin D levels and the development of metabolic syndrome, obesity, and hypercholesterolemia.	While infertile PCOS women had a significant prevalence of vitamin D deficiency, the current investigation indicated that metabolic syndrome was not related with vitamin D deficit.
23	Rath P. (27)	2018	Management of PCOS through Homoeopathy-A case report	Indian Journal of Research in Homoeopathy	This article presents a case study of a homoeopathic treatment for polycystic ovarian syndrome (PCOS) in a 22-year-old woman. The treatment included the use of Calcarea Carbonicum 30-1M. After 1.5 years of treatment, ultrasounds revealed that the patient's menstrual cycle had returned to normal. Three years after finishing specialised homoeopathic treatment, the patient showed no ill effects.	This case study details the successful homoeopathic treatment of a 22-year-old female with Polycystic Ovarian Syndrome with the use of an individualised formula of Calcarea Carbonicum 30-1M. (PCOS). If three years go by after receiving individualised homoeopathic treatment and symptoms do not recur, it is safe to assume that the treatment was effective. It should be highlighted, however, that this is a case study, and that more research into the efficacy of homoeopathic treatment for PCOS in larger and more varied patient populations is needed.
24	Qadri Sabreena et al (28)	2018	Polycystic Ovary Syndrome in Bipolar Affective Disorder: A Hospital-based Study	Indian Journal of Psychological Medicine	The 200 female patients in this cross-sectional study were diagnosed with BPAD (Bipolar Affective Disorder) between the ages of 15 and 45 using criteria from the DSM-IV-TR. Patients with menstrual irregularities or PCOS symptoms were evaluated by an endocrinologist and given hormone testing during the early follicular phase of the menstrual cycle. Hormones such testosterone, prolactin, FSH, and LH were	PCOS is more prevalent in patients with BPAD, suggesting a link between the two disorders that may emerge as HPG axis abnormalities unresponsive to medical intervention.

					investigated. The National Institutes of Health criteria for diagnosing PCOS were used to arrive at the final conclusion.	
25	Dashti S et al (29)	2018	Prevalence of Polycystic Ovary Syndrome among Malaysian Female University Staff	Journal of Midwifery and Reproductive Health	University Putra Malaysia in Selangor, Malaysia, did a cross-sectional study on working women of reproductive age. The participants in the study were chosen at random. Women who had hyperthyroidism or adrenal hyperplasia were not allowed to take part. Anthropometric data, medical history, blood pressure, a pelvic exam, and the detection of hirsutism, acne, and alopecia were all factored into the selection process. The individuals' free and total testosterone levels were measured through ultrasonography. Using those parameters, we were able to diagnose PCOS. At the 0.05 level of significance, the data was analysed using the Mann-Whitney U test, t test, Chi-square test, and logistic regression.	This research shows that PCOS is highly prevalent among Malaysian service members, and that they exhibit a distinct phenotype of the condition.
26	Kamboj Shynee (30)	2018	Role of Counselling in Creating Awareness about PCOS among Female Medical Students	International Journal of Applied Social Science	Female medical students in the age range of 18 to 24 were surveyed to assess their acquaintance with polycystic ovarian syndrome (PCOS). Participants filled out a questionnaire that was used to compile the data. The symptoms, causes, and therapies for polycystic ovary syndrome (PCOS) were tested in a survey given to the participants. The prevalence of PCOS and the data sources were analysed using descriptive statistics.	The results of this study provide important information about the participants' PCOS knowledge and raise awareness about the need for more research and education.
27	Kaewnin Jetsadaporn et al (31)	2017	Prevalence of polycystic ovary syndrome in Thai University adolescents	Gynecological Endocrinology	Examining the prevalence of polycystic ovary syndrome (PCOS) and identifying risk factors among Thai adolescent females was the focus of this study. Double-checked surveys were provided to 600 Thai women college students aged 17–19 at Bangkok's	5.29 percent of Thai adolescent girls were diagnosed with PCOS. Moderate acne was found to be the biggest predictor of PCOS in a multivariate analysis.

					Mahidol University.	
28	Haq Noman et al (32)	2017	Prevalence and Knowledge of Polycystic Ovary Syndrome (PCOS) Among Female Science Students of Different Public Universities of Quetta, Pakistan	"Imperial Journal of Interdisciplinary Research	Quetta's public universities took a mixed-methods approach, with questionnaires playing a significant role in both instruction and assessment. Using a simple stratified sample method, data on 451 female college students aged 18 to 26 was obtained between January and September of 2016.	Despite an increase in the prevalence of PCOS symptoms and signs, few women are aware that they have the disorder. Studies also reveal that the great majority of women wait until they have serious symptoms before visiting a gynaecologist.
29	Upadhye J. Jayshree et al (33)	2017	Awareness of PCOS (polycystic ovarian syndrome) in adolescent and young girls	International Journal of Reproduction, Contraception, Obstetrics and Gynecology	In a cross-sectional survey, 200 female U.S. medical students in their first, second, and third years answered a standardized questionnaire designed to assess their acquaintance with polycystic ovarian syndrome. Students in medical school took the poll in real time to assess their familiarity with the illness.	Adolescent-specific prevention and treatment methods are essential for any programme that seeks to educate the public and inspire them to change their behaviour. A prompt and accurate diagnosis could be of paramount importance.
30	S. Sharma and A.J. Mishra (34)	2017	Tabooed disease in alienated bodies: A study of women suffering from Polycystic Ovary Syndrome (PCOS)	Clinical Epidemiology and Global Health	Information from women with PCOS was collected in the outpatient department (OPD) of a public hospital in Jammu. The majority of responders were college educated, but they still didn't know much about PCOS. Semi-structured interview schedules were used to conduct interviews with OPD patients. Between the dates of November 15 and December 31, 2016, we gathered all of our data. The narrative data used in this inquiry comes from the experiences of the respondents. The comments were analysed using the stigma and social construction of illness theories to see how respondents conceptualised the onset of PCOS.	Women with PCOS in this part of India simply want to get pregnant (in the case of married women) and have normal monthly cycles since they are unaware of their disease and feel pressured to fulfil the socially expected role of a woman (in case of unmarried females). The disorder can be properly treated, but more needs to be done to raise awareness of PCOS and motivate women to alter their attitudes and routines.
31	Sharif E et al (35)	2017	The frequency of polycystic ovary syndrome in young reproductive females in Qatar	International Journal of Women's Health	Polycystic ovarian syndrome (PCOS) prevalence was investigated in this study of 126 college-aged women using a prospective cross-sectional design. In this study, menstrual irregularity (MI), clinical hyperandrogenism, and polycystic ovarian	The significance of hormonal testing in the diagnosis of PCOS was demonstrated by the significant increases in androgens and decreases in sex hormone-binding globulin in the PCOS group. The findings of this study provide important information about

					syndrome (PCOS) were diagnosed using anthropometrics, a questionnaire, and in-person interviews (evaluated by self-assessment of hirsutism using modified Ferriman-Gallwey score). The levels of hormones like prolactin, TSH, and androgens in the blood were measured. This research followed the PCOS diagnostic criteria set out by the US National Institutes of Health.	the incidence of PCOS and the diagnostic criteria for identifying it in young women.
32	R. Vidya Bharathi et al. (36)	2017	An epidemiological survey: Effect of predisposing factors for PCOS in Indian urban and rural population	Middle East Fertility Society Journal	For this cross-sectional study, researchers questioned 502 young women (aged 18-24) in Chennai and 566 women in the rural districts of Thiruvallur and Dindugal. Factors that were reported to have contributed to the onset of the ailment were entered into an Excel sheet and analysed statistically.	It was established that genetic factors significantly contributed to the disease's onset and progression. Researchers have shown that stress can exacerbate PCOS symptoms. We also found that people, especially those in rural regions, possessed a low level of awareness, making them less inclined to reject a diagnosis simply because they did not understand it.
33	Huang Z et al (37)	2016	Ethnic Differences: Is there an Asian Phenotype for Polycystic Ovarian Syndrome?	Best Practice & Research Clinical Obstetrics & Gynaecology	In order to determine whether or whether the observed epidemiological differences reflect actual ethnic variances in PCOS, a study of literature from across ethnic groups is necessary.	East Asians with PCOS are more likely to have polycystic ovary morphology than Caucasian PCOS patients. Only by comparing the phenotypes of people of different races can we evaluate whether or not PCOS has a distinct Asian phenotype and whether or not the observed epidemiological disparities reflect real, biologically meaningful differences in the phenotypes of people of different races.
34	Kudesia Rashmi et al (38)	2016	Elevated Prevalence of Polycystic Ovary Syndrome And Cardiometabolic Disease in South Asian Infertility Patients	Journal of Immigrant Minority Health	To determine whether or not South Asian (SA) women of childbearing age are more likely to develop PCOS than Caucasian (Caucasian) controls, a cross-sectional study was conducted using data from a total of 52 SA and 52 Caucasian (Caucasian) infertile patients from a single institution.	Endometrial hyperplasia and polyps accompanied severe metabolic conditions such insulin resistance, diabetes, and dyslipidemia. There were more cases of polycystic ovary syndrome (PCOS) and higher rates of metabolic and endometrial disease in South Africa.
35	Lizneva	2016	Criteria,	Fertility and	New advances in the	Despite PCOS's widespread

	Daria et al (39)		prevalence, and phenotypes of polycystic ovary syndrome	Sterility Vol. 106, No. 1, July 2016	phenotypic approach are discussed, and the current diagnostic criteria are criticised for their shortcomings, especially in the study of adolescents and women in the perimenopausal and postmenopausal stages. It also clarifies how far we've progressed in our knowledge of PCOS's epidemiology.	occurrence, there is a lot of diversity in how researchers use the Rotterdam 2003 criteria, as this review explains. This is due in part to the constraints of population sampling and the methodology employed to characterise PCOS traits. The epidemiology of polycystic ovary syndrome (PCOS) is discussed, including its prevalence, morbidity, and phenotypes, as well as referral bias.
36	Krishnan A and S Muthuswami (40)	2016	Hormonal alterations in PCOS and its influence on bone metabolism	Journal of Endocrinology	Ten studies in total were included in this meta-analysis. The study's authors described how PCOS-affected women's BMD responds to hormonal interventions. Most studies found that PCOS women had reduced bone mineral density because of hormonal problems. Several trials showed conflicting findings, and it is currently unclear how PCOS medications impact bone health.	Because of hormonal irregularities, women with PCOS are at a higher risk of bone fragility and fractures. There has to be more research on how PCOS drugs affect bone health in order to determine what causes bone-related disorders in women with PCOS and how to treat them.
37	Garg N et al (41)	2016	Carotid intimo-medial thickness: A predictor for cardiovascular disorder in patients with polycystic ovarian syndrome in the South Indian population	Indian Journal of Endocrinology and Metabolism	The cross-sectional case-control investigation was place at a tertiary hospital in southern India. There were a total of 54 participants, 54 of whom had polycystic ovarian syndrome and 54 who were healthy controls. In 2003, the first cases of PCOS were diagnosed using the Rotterdam criteria. Cardiovascular and CIMT testing was performed on both groups of women.	The necessity of evaluating CIMT in PCOS-affected women to evaluate their risk of cardiovascular disease is supported by the finding that women with PCOS had higher CIMT values than the control group. (CVD).
38	Reddy M. Battini et al (42)	2015	Association of type 2 diabetes mellitus genes in polycystic ovary syndrome aetiology among women from southern India	Indian Journal of Medical Research	A panel of 15 SNPs from the nine T2DM genes were genotyped on the Sequenom MassARRAY platform in a total of 248 PCOS patients and 210 healthy controls. The genes TCF7L2, IGF2BP2, SLC30A8, HHEX, CDKAL1, CDKN2A, IRS1, CAPN10, and PPARG all included these SNPs. This study aimed to determine if polycystic ovary syndrome (PCOS) risk in	Findings from this exploratory investigation raise the possibility that the nine T2DM genes previously implicated in PCOS in Indian women are not the key risk factors. Our findings add to the expanding body of literature disproving a link between the T2DM gene and polycystic ovary syndrome (PCOS) in both Caucasians and Han Chinese. To determine the exact impact

					women from southern India was influenced by the same genes that influence type 2 diabetes risk.	of the diabetes genes, large-scale, carefully designed trials involving women with T2DM and PCOS are necessary.
39	Sharma S, Majumdar A (43)	2015	Prevalence of metabolic syndrome in relation to body mass index and polycystic ovarian syndrome in Indian women	Journal of Human Reproductive Sciences	A total of 200 females participated in the study: 80 healthy controls and 120 women with PCOS. We found a connection between the prevalence of metabolic syndrome and BMI after analysing data from both groups. Subgroup analysis was performed by classifying everyone into either "lean" (body mass index 23) or "obese" (BMI 23). The numbers of participants in each study group are as follows: There were 80 cases of PCOS who were physically fit, and 40 lean and 40 fat controls. In an effort to make a diagnosis of MBS, all participants were subjected to a physical examination and had blood collected for analysis, with all tests and methods conforming to the standards set by the National Cholesterol Education Program Adult Treatment Panel III (NCEP ATP III) in 2005.	There appears to be a higher prevalence of MBS among women with PCOS. However, obesity is a unique and substantial MBS risk factor. To reduce your risk of MBS and its associated long-term health problems, you should make changes to your diet and exercise routine if your body mass index (BMI) is above 23 (for the general population) or 22.5 (for women with polycystic ovary syndrome, or PCOS).
40	Pathak G. and Nichter M (44)	2015	Polycystic ovary syndrome in globalizing India: An ecosocial perspective on an emerging lifestyle disease	Social Science & Medicine	The authors conducted their ethnographic research in Mumbai, India, between 2012 and 2014. They used ethnography to learn about the cultural understanding of polycystic ovary syndrome (PCOS) and its connection to structural vulnerabilities among middle-class women in metropolitan settings. The authors emphasised the connection between environmental and social elements in shaping health outcomes, an approach known as the ecosocial paradigm. They analysed local communities at length and found the social and cultural variables that contribute to the emergence of middle-class communities' conflicts with	The strains of "modern" identities and aspirations brought on by globalisation were identified as a primary cause of the rise in middle-class lifestyle difficulties. Their results highlight the intricate interplay between social and ecological factors that influence health outcomes, and have implications for public health interventions that try to address these problems.

					"modern" identities and goals and the spread of globalization-related lifestyle difficulties. The authors of this study examined PCOS coverage in Indian media, from the perspectives of both medical professionals and women who have been diagnosed with the condition.	
41	Beena Joshi et al (45)	2014	A cross-sectional study of polycystic ovarian syndrome among adolescent and young girls in Mumbai, India	Indian Journal of Endocrinology and Metabolism	A study was done in Mumbai to find out how common PCOS is among young women (15-24 years old). All clinical, ultrasonographic, and biochemical evaluations were completed by 600 individuals in the community-based cross-sectional study.	Polycystic ovary syndrome (PCOS) has not previously been studied in urban regions of India, much less in preteen and adolescent girls. PCOS seems to be on the rise among teenagers. By screening, this population can be identified and prevented health problems sooner rather than later.
42	Zhuang Jing et al (46)	2014	Prevalence of the Polycystic Ovary Syndrome in Female Residents of Chengdu, China	Gynecologic Obstetric Investigation	A cross-sectional survey of the local population was conducted using cluster-randomized sampling. We included women in the age range of 12 to 44 from Chengdu, as they make up a sizable share of the population in Sichuan province. The prevalence was determined by applying the original NIH criteria from 1990, the amended Rotterdam criteria from 2003, and the Androgen Excess Society's 2006 guidelines for diagnosing PCOS.	This study's prevalence of PCOS was comparable to that of other studies. The rising prevalence of PCOS suggests it may not be a long-term health issue.
43	Kim Min Ju et al (47)	2014	Prevalence of Metabolic Syndrome Is Higher among Non-Obese PCOS Women with Hyperandrogenism and Menstrual Irregularity in Korea	PLOS ONE	A cross-sectional observational study was carried out in Korea between May 2010 and December 2011. Eight hundred and thirty-seven women with PCOS were enlisted from the obstetrics and gynaecology departments of thirteen different medical facilities. There were almost 700 eligible women who had PCOS and either O or PCOS and HA and O. MetS was diagnosed using the modified Adult Treatment Panel III of the International Diabetes Federation (IDF) and the criteria of the National Cholesterol Education	Patients with PCOS who were not obese were found to have a substantial association between MetS and HA and its related markers (FAI and SHBG).

					Program (NCEP).	
44	Malik et al (48)	2014	Management of Polycystic Ovary Syndrome in India	Fertility Science and Research	The study systematically reviewed the literature to build the best possible evidence basis for the development of guidelines for the management of PCOS in the Indian context. Through the use of meta-analyses, systematic reviews, meta-analyses, and major mentioned publications, a team of physicians analysed and established the current guidelines. The group of experts met multiple times to discuss the recommendations; they included dermatologists, endocrinologists, dermatologists, gynaecologists, and physicians.	A thorough literature analysis was performed to develop guidelines for the treatment of PCOS in India. The guidelines were drafted by a committee of medical experts and reviewed by specialists from other fields. The findings of this study were intended to provide helpful guidelines for treating PCOS for medical professionals in India.
45	Li Rong et al (49)	2013	Prevalence of polycystic ovary syndrome in women in China: a large community-based study	Human Reproduction,	Between October 2007 and September 2011, 15,924 Han Chinese women between the ages of 19 and 45 were enrolled in a big epidemiological investigation. Participants filled out questionnaires, were examined physically, and obtained transvaginal ultrasounds. Metabolic indicators and hormones were analysed in the blood of 3,565 out of a total of 3,564 women.	In the research of 15,924 Chinese Han women, 5.6 percent (894 diagnosed, 4,750 suspected) were found to have polycystic ovary syndrome (PCOS), according to the Rotterdam criteria.
46	Miyoshi Arina et al (50)	2013	Ovarian morphology and prevalence of polycystic ovary syndrome in Japanese women with type 1 diabetes mellitus	Journal of Diabetes Investigation Volume 4 Issue 3	Clinical, hormonal, and ovarian ultrasonography data were analysed from 21 people with type 1 diabetes mellitus; average glycated haemoglobin levels were 7.9-1.5%.	PCOM and PCOS werefrequent in premenopausal Japanese women with T1DM. There has never been an Asian population studied before.
47	Wang T. Erica et al (51)	2013	Phenotypic comparison of Caucasian and Asian women with polycystic ovary syndrome: a cross-sectional study	Fertility and Sterility Vol. 100, No. 1, July 2013	The cross-sectional study included 121 Caucasian and 28 Asian women with PCOS, ranging in age from 18 to 44 years old. Transvaginal ultrasounds, comprehensive dermatologic examinations, and blood testing were used to compare the symptoms of polycystic ovarian syndrome (PCOS) in Caucasian and Asian women in the San	In the same area, the prevalence of hirsutism and other signs of androgen excess among Caucasian and Asian women with PCOS was about the same. Further study is required to determine if mFG scores for women with PCOS should take into account ethnic background.

					Francisco Bay Area.	
48	Rashidi Homeira et al (52)	2013	To what extent does the use of the Rotterdam criteria affect the prevalence of polycystic ovary syndrome? A community-based study from the Southwest of Iran	European Journal of Obstetrics & Gynecology and Reproductive Biology	A stratified, multistage probability cluster sampling approach was used to choose 646, all of reproductive age. According to the Rotterdam criteria, the Androgen Excess Society, and the National Institutes of Health, the prevalence of polycystic ovarian syndrome was determined through a comprehensive assessment of ultrasonographic data, hormonal profiles, and clinical histories.	Compared to the NIH criteria, the Rotterdam criteria resulted in a 2.9-fold increase in the prevalence of polycystic ovary syndrome. So, it's evident that more research is needed to fully understand the effects of the Rotterdam criteria's extra examples.
49	Wijeyaratn e N Chandrika et al (53)	2013	Ethnic-specific polycystic ovary syndrome: epidemiology, significance and implications	Expert Review of Endocrinology and Metabolism	This research analyses data from the past three decades to provide a thorough assessment of each specific ethnic group's causes, effects, heterogeneity, and variance. The metabolic signs of polycystic ovarian syndrome, such as hyperandrogenism, obesity, insulin resistance, and others, manifest differently in women of diverse racial/ethnic origins and geographical locations.	Ethnic phenotype, which includes characteristics like susceptibility to metabolic diseases, skin sensitivity to androgens, and social attitude, might influence a person's health state and desire to seek medical assistance. It is advised that these ethnic disparities be taken into account in normal clinical practise, and that longitudinal data be kept to investigate the true influence of such variances on disease outcomes.
50	Tumu R Venkat et al (54)	2013	An interleukin-6 gene promoter polymorphism is associated with polycystic ovary syndrome in South Indian women	Journal of Assisted Reproduction and Genetics	The purpose of this research was to determine if the -174 G/C SNP in the promoter region of the IL-6 gene is associated with polycystic ovary syndrome (PCOS) in women from South India. There were 156 controls and 104 people with PCOS evaluated. Genomic DNA was isolated from peripheral blood leukocytes and subjected to polymerase chain reaction (PCR) and sequencing analyses to determine IL-6 -174 G/C SNP genotypes. The results of this investigation were analysed to determine whether or not the IL-6 -174 G/C SNP plays a role in the pathophysiology of polycystic ovarian syndrome.	PCOS was shown to be considerably more common in South Indian women who carried the IL-6 174 G/C SNP. In PCO patients, the "G" allele frequency was significantly higher than in controls. However, it is still unknown what effect the frequency of the "G" allele has on PCOS patients.
51	Ramanand	2013	Clinical	Indian Journal	A non-comparative cross-	The authors conclude that

	J. Sunita et al (55)		characteristics of polycystic ovary syndrome in Indian women	of Endocrinology and Metabolism	sectional open-label study was undertaken over the course of 18 months at an endocrinology clinic in western Maharashtra, India. Polycystic ovarian syndrome (PCOS) phenotypes were identified by analysing clinical characteristics of PCOS in Indian women. Acanthosis nigricans (AN) prevalence has been assessed concurrently in women with polycystic ovarian syndrome as a surrogate marker of insulin resistance, obesity, hirsutism, and hypothyroidism.	PCOS is linked to similar numbers of cases of AN and hirsutism, and that it affects women of all sizes. The development of AN has been linked to obesity. In PCOS, hormonal disruptions can happen together or separately. Endocrinological dysfunction or not, women with PCOS can be further classified for improved diagnoses and treatment.

Table 1

DISCUSSION

The systematic review conducted in this study aimed to investigate the prevalence of Polycystic Ovary Syndrome (PCOS) in different populations and ethnic/racial groups, providing valuable insights into the variations and implications of this complex endocrine disorder. A total of 29 relevant studies published between 2013 and 2023 were analyzed, each offering valuable data on PCOS prevalence rates and its association with diverse populations. The review highlighted significant geographic variation in PCOS prevalence rates across different regions, with studies in China and Thailand reporting prevalence rates of 5.6% and 5.29%, respectively, underscoring the burden of the condition in East Asian countries. Furthermore, studies in India revealed variations in PCOS prevalence between rural and urban populations. However, some studies found no significant differences in PCOS prevalence among diverse geographic areas. These findings suggest the importance of considering regional factors and genetic backgrounds when assessing PCOS prevalence.

Ethnic and racial differences were also explored in the review, with studies critiquing the use of Rotterdam criteria across different populations and calling for more tailored diagnostic criteria based on ethnic backgrounds. The impact of ethnicity on PCOS phenotypes was evident, with East Asian women more likely to exhibit polycystic ovary morphology compared to their Caucasian counterparts. Additionally, the metabolic signs of PCOS, such as hyperandrogenism and obesity, varied significantly in women of diverse racial/ethnic origins, underlining the need to recognize ethnic disparities in clinical practice and tailor management approaches accordingly.

The genetic basis of PCOS was another area of focus, with studies emphasizing the relevance of understanding underlying genetics to improve current treatment modalities. Some studies also explored metabolic implications in PCOS, identifying associations between PCOS, metabolic syndrome, and vitamin D deficiency. This highlighted the importance of considering metabolic health in the management of PCOS.

The review also shed light on the awareness of PCOS among women and adolescents, with some studies indicating low awareness of the condition and the need for targeted awareness and early detection programs. Moreover, the diagnostic criteria used in determining PCOS prevalence also showed considerable impact, with the Rotterdam criteria resulting in a significantly higher prevalence compared to the NIH criteria.

This comprehensive systematic review provides valuable insights into the prevalence of PCOS in different populations and ethnic/racial groups. It underscores the importance of recognizing geographic variations, ethnic/racial differences, and genetic and metabolic implications to improve diagnosis and management approaches. Furthermore, the findings emphasize the need for targeted awareness and early detection programs to address the health impact of PCOS in diverse populations. Nonetheless, the review acknowledges certain limitations, such as variations in study designs and diagnostic criteria, which should be considered when interpreting the findings. Overall, this study contributes significantly to the understanding of PCOS, guiding future research, healthcare interventions, and policy-making efforts to address this prevalent endocrine disorder effectively.

CONCLUSION

In conclusion, the systematic review on the prevalence of Polycystic Ovary Syndrome (PCOS) in diverse populations and ethnic/racial groups provides valuable insights into the epidemiology and implications of this complex endocrine disorder. The review encompassed

29 studies published between 2013 and 2023, examining PCOS prevalence rates in various regions and the impact of ethnicity on the condition. The findings revealed notable geographic variations in PCOS prevalence rates, with higher rates reported in East Asian countries, such as China and Thailand. This emphasizes the burden of PCOS in these regions and highlights the need for tailored healthcare strategies to address the condition's impact effectively. Ethnic and racial differences were also evident in the review, impacting the phenotypes and metabolic signs of PCOS. East Asian women showed a higher likelihood of polycystic ovary morphology, emphasizing the importance of considering ethnic disparities in diagnosis and management. The genetic basis of PCOS emerged as a significant area of interest, with studies stressing the need to comprehend underlying genetics for improved treatment modalities. Additionally, associations between PCOS, metabolic syndrome, and vitamin D deficiency were observed, signifying the relevance of considering metabolic health in PCOS management. The review also underscores the importance of awareness and early detection programs, as some studies revealed low awareness of PCOS among women and adolescents. Targeted educational efforts are crucial to promote early diagnosis and appropriate interventions. The impact of diagnostic criteria on PCOS prevalence rates was evident, with the Rotterdam criteria resulting in higher prevalence compared to the NIH criteria. This calls for standardized and consistent diagnostic criteria to ensure accurate and comparable prevalence data. In conclusion, this comprehensive systematic review provides valuable and diverse information on PCOS prevalence in different populations and ethnic/racial groups. It sheds light on the variations, implications, and challenges associated with this prevalent endocrine disorder. The insights from this study contribute significantly to the understanding of PCOS and will aid healthcare practitioners, researchers, and policymakers in devising effective strategies to tackle the burden of PCOS on a global scale. However, the review acknowledges the variations in study designs and limitations in the available data, calling for further research to enhance our understanding of PCOS and improve its management.

REFERENCES

1. Ganie MA, Rashid A, Sahu D, Nisar S, Wani IA, Khan J. Prevalence of polycystic ovary syndrome (PCOS) among reproductive age women from Kashmir valley: A cross-sectional study. International Journal of Gynecology and Obstetrics. 2020 May 1;149(2):231–6.
2. Ramanand S, Ghongane B, Ramanand J, Patwardhan M, Ghanghas R, Jain S. Clinical characteristics of polycystic ovary syndrome in Indian women. Indian J Endocrinol Metab. 2013;17(1):138.
3. Ganie M, Vasudevan V, Wani I, Baba M, Arif T, Rashid A. Epidemiology, pathogenesis, genetics & management of polycystic ovary syndrome in India. Vol. 150, Indian Journal of Medical Research. Wolters Kluwer Medknow Publications; 2019. p. 333–44.
4. Mu L, Zhao Y, Li R, Lai Y, Chang HM, Qiao J. Prevalence of polycystic ovary syndrome in a metabolically healthy obese population. International Journal of Gynecology and Obstetrics. 2019 Aug 1;146(2):164–9.
5. Dominic N, Gandhi S, Sharma L. Prevalence of polycystic ovary syndrome and its clinical and hormonal prole in young females with type 1 diabetes mellitus: experience from a teaching Institution of India. 2023; Available from: https://doi.org/10.21203/rs.3.rs-2464752/v1
6. Hong Y, Zhou Z hong, Dong Z, Yang D zi. Prevalence of polycystic ovary syndrome under NIH criteria among the tenth-grade Chinese schoolgirls in Guangzhou area: a cross-sectional epidemiological survey. BMC Womens Health. 2023 Dec 1;23(1).
7. Yang R, Li Q, Zhou Z, Qian W, Zhang J, Wu Z, et al. Changes in the prevalence of polycystic ovary syndrome in China over the past decade. 2022; Available from: https://doi.org/10.1016/j.
8. Fatima SH, Naeem MA, Ali A, Asfar R. Prevalence of PCOS in Reproductive Age Women in Gujrat City. EAS Journal of Radiology and Imaging Technology. 2022 Jul 16;4(4):79–83.
9. Farhadi-Azar M, Behboudi-Gandevani S, Rahmati M, Mahboobifard F, Khalili Pouya E, Ramezani Tehrani F, et al. The Prevalence of Polycystic Ovary Syndrome, Its Phenotypes and Cardio-Metabolic Features in a Community Sample of Iranian Population: Tehran Lipid and Glucose Study. Front Endocrinol (Lausanne). 2022 Mar 1;13.
10. Kaur S, Gopal Vohra J, Singh G. EPIDEMIOLOGY OF POLYCYSTIC OVARIAN SYNDROME IN A RURAL MEDICAL COLLEGE AND HOSPITAL-A SURVEY BASED RESEARCH. Journal of Pharmaceutical Negative Results ¦. 13:2022.
11. Kodipalli A, Devi S. Prediction of PCOS and Mental Health Using Fuzzy Inference and SVM. Front Public Health. 2021 Nov 30;9.
12. Mehreen T, Ranjani H, Kamalesh R, Ram U, Anjana R, Mohan V. Prevalence of polycystic ovarian syndrome among adolescents and young women in India. Journal of Diabetology. 2021;12(3):319.
13. Rao M, Broughton KS, LeMieux MJ. Cross-sectional Study on the Knowledge and Prevalence of PCOS at a Multiethnic University. Progress in Preventive Medicine. 2020 Jun;5(2):e0028.
14. Ganie MA, Rashid A, Sahu D, Nisar S, Wani IA, Khan J. Prevalence of polycystic ovary syndrome (PCOS) among reproductive age women from

Kashmir valley: A cross-sectional study. International Journal of Gynecology and Obstetrics. 2020 May 1;149(2):231–6.
15. Chatterjee M, Bandyopadhyay S. Assessment of the prevalence of polycystic ovary syndrome among the college students: A case–control study from Kolkata. Journal of Mahatma Gandhi Institute of Medical Sciences. 2020;25(1):28.
16. Dashti S, Latiff LA, Hamid HA, Saini SM, Bakar ASA, Sabri NAIB, et al. Prevalence of Polycystic Ovary Syndrome among Malaysian Female University Staff. Journal of Midwifery and Reproductive Health. 2019 Jan 1;7(1):1567–75.
17. Kim JJ, Choi YM. Phenotype and genotype of polycystic ovary syndrome in Asia: Ethnic differences. Journal of Obstetrics and Gynaecology Research. 2019 Dec 1;45(12):2330–7.
18. Mu L, Zhao Y, Li R, Lai Y, Chang HM, Qiao J. Prevalence of polycystic ovary syndrome in a metabolically healthy obese population. International Journal of Gynecology and Obstetrics. 2019 Aug 1;146(2):164–9.
19. Khan MJ, Ullah A, Basit S. Genetic basis of polycystic ovary syndrome (PCOS): Current perspectives. Vol. 12, Application of Clinical Genetics. Dove Medical Press Ltd.; 2019. p. 249–60.
20. Deswal R, Nanda S, Ghalaut VS, Roy PS, Dang AS. Cross-sectional study of the prevalence of polycystic ovary syndrome in rural and urban populations. International Journal of Gynecology and Obstetrics. 2019 Sep 1;146(3):370–9.
21. Buddhavarapu S. Bearding, Balding and Infertile: Polycystic Ovary Syndrome (PCOS) and Nationalist Discourse in India. Journal of Medical Humanities. 2020 Sep 1;41(3):411–27.
22. Zafar U, Memon Z, Moin K, Agha S, Hassan JA, Zehra D. Prevalence of PCOS with Associated Symptoms and Complications at Tertiary Care Hospital of Karachi. J Adv Med Med Res. 2019 Jul 31;1–9.