## Comment

# Is polycystic ovary syndrome undervalued in China?

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Polycystic ovary syndrome (PCOS) is the most common endocrine disorders in reproductive women with major medical and social burden.<sup>1</sup> However, due to different diagnostic criteria and measurements, prevalence of PCOS varies greatly amongst populations and countries.<sup>2</sup> Ethnic variations also contribute to the different prevalence in studies.<sup>3</sup> Moreover, previous studies are mostly of a small-scale and only based on special cohort.<sup>2</sup> In The Lancet Regional Health - Western Pacific, Qiao and colleagues conducted two consecutive nationwide epidemiological surveys to compare the prevalence and clinical characteristics of PCOS in 2010 and 2020 using Rotterdam criteria in representative samples of reproductive women in China.<sup>4</sup> Each survey was conducted by trained researchers via a face-to-face interview. In addition, they used the standardized ultrasound and blood tests in both surveys to enhance the data validity.

The study<sup>4</sup> included 15,924 and 12,815 participants in the respective years, the largest nation-wide PCOS survey to date. They found that the prevalence of PCOS increased from 5.6% to 8.6% only within a decade among women aged 20-44 years. Although the prevalence and the rise are not as high as in Australia (Figure 1), as with diabetes, considering that at least 24 million women are estimated to have PCOS, it immediately raises alarms from China's key national health policies and strategies. However, general interest and research funding for PCOS remain very limited due to its high prevalence, overall health issues and high medical cost.5,6 More importantly, most of the women with PCOS received inadequate information and education, leading to major anxiety. Therefore, health care workers, researchers, policymakers, and clinicians should recognize this growing problem and value more resources to improve the health and life quality of women with PCOS and reduce the economic and social burden.

Qiao and colleagues found the increased prevalence was driven by a large proportion of non-

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hyperandrogenic subtypes,<sup>4</sup> which was associated with moderate metabolic dysfunction.7 However, the percentage of women with overweight, obesity and hyperandrogenism in the study population with PCOS has increased significantly from 2010 to 2020.4 They also found that the prevalence of PCOS dropped sharply with age, 14.0-14.7% in women aged 20 to 29 years while 1.2% in women aged 45-49 years. Since the prevalence of PCOS is high in younger women, the risk of developing long-term morbidities such as obesity, diabetes mellitus and cardiovascular disease may increase later.<sup>8,9</sup> Thereby, lifestyle interventions including healthy diet and regular physical activity should be emphasized as it can improve lipid profiles, abdominal adiposity and androgen status.<sup>10</sup> Screening and diagnosis as preventative measures should also be implemented as early as possible. Further research is needed to investigate the trends in insulin resistance, hyperinsulinemia and metabolic disorders, and to follow up the long-term health morbidities associated with PCOS in these younger women.

In summary, this work suggests that prevalence of PCOS in China increased significantly in 2020 compared with 10 years ago and women with PCOS have a more severe phenotype and comorbidity overall. It provides critical evidence to advance the development of new guidelines and polices for the prevention and management of PCOS. As a preservation measure, more education and early lifestyle modifications should also be prioritized. Future studies should consider the metabolic disorders in women with PCOS, as well as the long-term health morbidities to improve the long-term and overall health of women with PCOS.

#### Contributors

Xu Zheng wrote the original draft of the manuscript. Chi Chiu Wang reviewed and edited the manuscript. All authors have approved the final version of the manuscript.

### **Declaration of interests**

All authors have no competing interest to declare.

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Prevalence of Polycystic Ovary Syndrome in Different Populations and Countries

Figure 1. Prevalence of polycystic ovary syndrome in different populations and countries. Data are extracted from Davis SR<sup>2</sup> and Qiao.<sup>4</sup> Only diagnostic criteria by Rotterdam criteria are presented.

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