

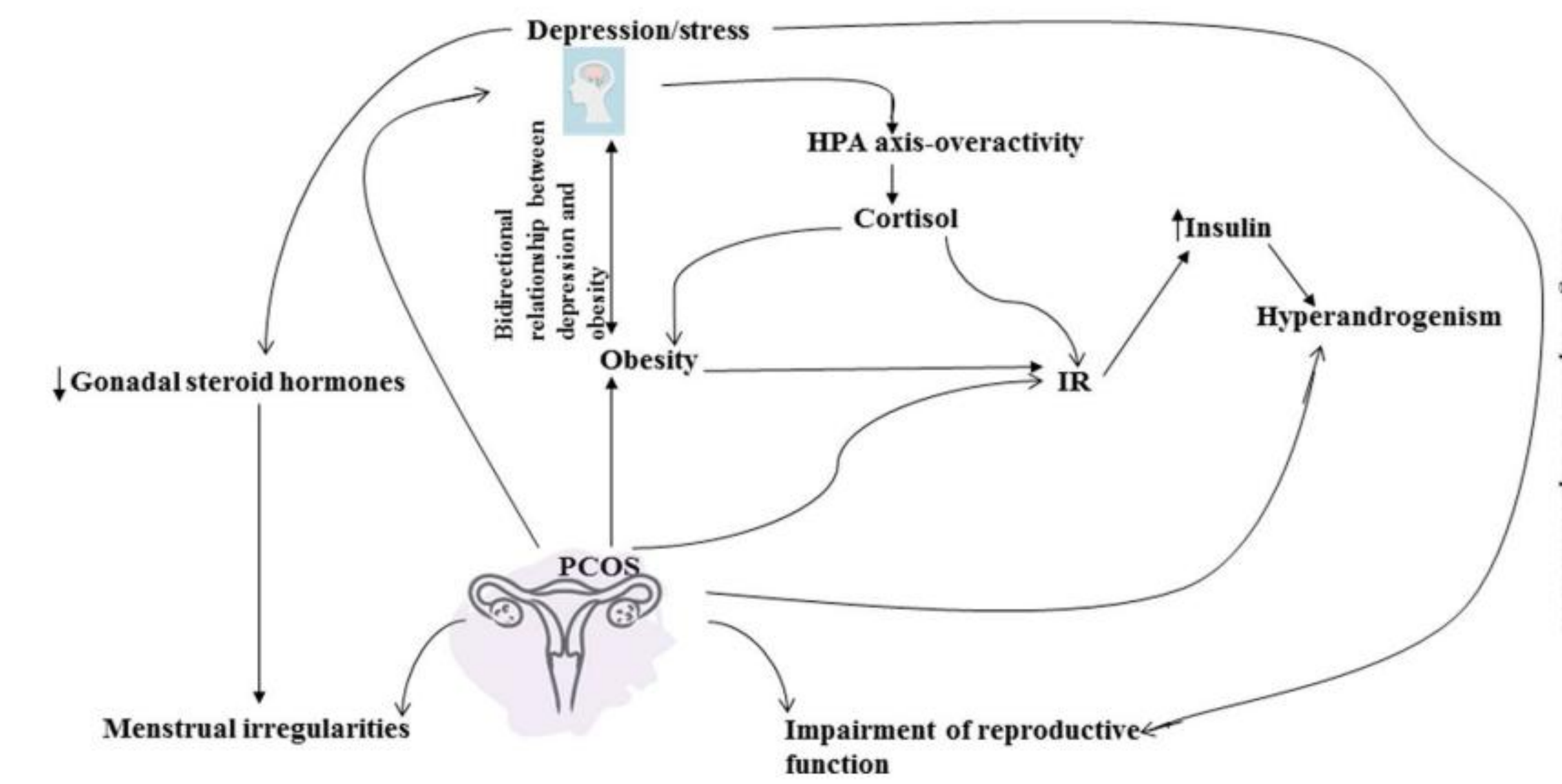
Polycystic Ovarian Syndrome and its association with Depression- A Systematic Review

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Objective: This review aimed to focus on the association of depression in patients with Polycystic Ovarian Syndrome (PCOS) and to show the relationship between various confounding factors like Insulin resistance, Quality Of Life (QOL), dyslipidaemia and Waist-to-Hip Ratio (WHR) on depression and PCOS disease activity.

Design: This is a systematic review of observational studies based on the guidelines proposed in the Cochrane Handbook. The review focuses on studies that monitor how depression is associated with PCOS, along with its influencing factors. The studies selected were based on this predetermined research question.

Method: A thorough literature search was conducted using various electronic databases, adhering to the inclusion and exclusion criteria. Quantitative studies that reported the association of depression in patients diagnosed with PCOS (using Rotterdam Criteria) with relevant influencing factors were reviewed using the PRISMA flow chart diagram. After the final screening, a total of eleven articles with various study designs were selected. Quality assessment was done using the Newcastle-Ottawa scale (NOS) and Mixed Methods Appraisal Tool (MMAT). A risk assessment of included studies was done using Quality Assessment of Diagnostic Accuracy Studies (QUADAS-2).



Schematic diagram representation of the clinical symptoms between PCOS and depression overlap. (Kolhe et al., 2021)

Results: The highest direct prevalence of depression in PCOS women noted was 64.1%. The direct association reported ranges from OR:1.10- 6.1. Various validated screening tools were used in the included studies like HADS-9, BDI/BDI-FS, PHQ-9, DASS-21, Reynold's Adolescent Depression Scale, MADRS-S and Hamilton Depression rating scale. A significant ($p=0.05$) relationship between insulin resistance, obesity and depressive symptoms in PCOS was noted, along with a reduction in depression upon the use of metformin (OR=0.302, $p=0.045$). QOL, dyslipidaemia and WHR can contribute to this association.

Conclusions: Women diagnosed with PCOS have a higher likelihood of developing depression. Insulin resistance, QOL, dyslipidaemia and WHR are positive predictors of depression in PCOS. Whilst there has been literature that illustrates the increased psychological burden on women with PCOS, this review further reiterates the need for mental health screening in PCOS patients.