

EDL 7510
RESEARCH CRITIQUE

NOTE: A COPY OF THE ARTICLE MUST BE INCLUDED.

Name: Nasser Al Mufarji

1 pt. { Article Title: Relationship of High Sensitivity C-Reactive Protein and Other Biochemical Parameters of Metabolic Syndrome in Women with Polycystic Ovarian Syndrome and BMI Matched Controls.
Author(s): Vaidyanathan Gowri, Gauhar Rizvi and Shabnam Saquib.
Name of Journal: Research in Endocrinology. IBIMA Publishing.
Date of Publication: 12 December 2013.

Directions: For each item below, put your answer on this critique form and mark the appropriate number in the article at the place where you found the necessary information to give you the answer.

NOTE: If you cannot find an item in your article, write, "Item not found". DO NOT LEAVE AN ITEM BLANK!

1 pt. Type of research: Please indicate the specific type of research as discussed in class.

It is idiographic. Experiments conducted for individuals and conclusions are made with respect to individuals. Most medical research are ideographic represented by graphs.

1 pt. Brief statement of problem: (NOTE: In addition to writing the statement, please mark a #1 at the place in the article where you found it.)

Many Women with PCOS have additional features of the metabolic syndrome like diabetes and obesity. Lean women with PCOS were found to have a higher prevalence of hyperinsulinemia and ovarian stimulation by insulin appeared to be independent of luteinizing hormone in these women. (Conway 1990).

- 1 pt. Hypothesis (es) or Research Question(s): State the hypothesis (es) or research question(s). (NOTE: Mark #2 at the place in your article where you found the hypothesis (es) or research question(s).)

Elevated high sensitivity C-reactive protein (hs-CRP) was found to be associated with cardiovascular risk factors in normoinsulinemic PCOS women (Verit 2010).

- 1 pt. What is the population? (Mark #3)

All women from the infertility clinic.

- 1 pt. What is the sample size? (Mark #4)

Sixty women with polycystic ovary syndrome and sixty healthy women were recruited.

- 1 pt. How was the sample selected? (Mark #4)

Random sampling. Not mentioned in the article whether it was random or not.

- 1 pt. Do you feel the sample is representative of the population?
Explain.

Yes, I feel that the sample is the representative of the population.

- 1 pt. Dependent variable(s) (Mark #5) Please identify if the article doesn't.

Sixty women with polycystic ovary syndrome were recruited and sixty healthy women.

- 1 pt. Independent variable(s) (Mark #6) Please identify if the article doesn't.

A significant positive relationship was observed between BMI & hs CRP ($P < .001$); the degree of relationship was stronger among PCOS cases than controls.

- 1 pt. What type of data continuous or discrete? (Mark #7) If the article doesn't specify, what type of data do you think they have?

Continuous data

- 1 pt. What measurement scale(s): nominal, ordinal, interval or ratio? (Mark #8) If the article doesn't specify, what scale(s) do you think they have?

It is ratio. Is indicated by "The mean age of patients was calculated as 27.00 ± 5.21 and for controls it was 27.35 ± 4.87 .

- 1 pt. What are the operational definitions? (Mark #9)

There were various definitions for the metabolic syndrome and the National Cholesterol Education Program (NCEP) definition includes fasting glucose, waist circumference, blood pressure, and lipid criteria pertaining triglycerides and HDL cholesterol (NCEP 2001).

- 1 pt. Are the procedures described in sufficient detail so that the study could be repeated? Explain.

Yes the procedures described in sufficient details. Researchers indicated clearly the background of the research, the method of the research, the results and the conclusions. If the same process is followed, then the research could be repeated.

- 1 pt. State major results and conclusions. (Mark #10)

Results : A significant positive relationship was observed between BMI & hs CRP ($P < .001$); the degree of relationship was stronger among PCOS cases than controls. Relationship of hs-CRP and FBS was stronger among cases ($P < .001$) than controls ($P = 0.03$). A significant relationship was observed between LDL and hs-CRP among cases ($P = 0.001$) and inverse but insignificant ($p = 0.110$) relationship was found among controls. **Conclusion :** Though hs-CRP significantly correlated with obesity, other biochemical parameters like fasting blood glucose and LDL correlated with hs CRP significantly in PCOS women.

1 pt. What are the statistical procedures and significance levels of the results? (Mark #11)

T-test was applied. P value of 0.05 has been taken as significant.

1 pt. Do the conclusions relate to the hypothesis (es) or research question? Explain. (Mark #12)

Yes. It answers the research question that many women with PCOS have additional features of the metabolic syndrome like diabetes and obesity. The researcher concludes that "through hsOCRP significantly correlated with obesity, other biochemical parameters like fasting blood glucose and LDL correlated with hs CRP significantly in PCOS women."

1 pt. Are the generalizations confined to the population being researched? (Mark #13)

Many patients with PCOS also have features of the metabolic syndrome, including insulin resistance, obesity, and dyslipidemia compared to weight matched controls and this contributes to an increased risk for cardiovascular disease (Sharpless 2003).

1 pt. Are limitations discussed? What are they? Can you think of any that were omitted? (Mark #14)

The main limitation of the study is a sample size. It is not clear whether elevated hs-CRP in women with PCOS is due to obesity or the disease itself (Meyer C, 2005).

1 pt. What do the authors suggest for future studies to resolve ambiguities in the present study or to answer questions raised by the present study? (Mark #15)

A larger study is needed to clarify if metabolic syndrome parameters are related only to obesity or PCOS itself.