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# TITLE: HORMONAL SHIFTS AND MENOPAUSAL STRUGGLES: THE FSH-**ESTRADIOL LINK IN INDIAN WOMEN**





#### INTRODUCTION

- •FSH and estradiol, key markers of menopause, exhibit complex interactions beyond reproduction.
- •Their relationship with BMI, symptom severity, and metabolic conditions in Indian women remains underexplored.

#### **OBJECTIVES**

- correlations between FSH levels and-
  - Severity of menopausal symptoms
- Relation with cardiovascular and metabolic risk factors
- 2. Assess estradiol levels in relation to these variables.
- 3. To explore the potential of these hormones as predictors for menopausal symptom severity, metabolic syndrome, and required interventions

## MATERIAL AND METHODS

- Cross sectional study of 60 women 30 menopausal and 30 non menopausal done
- Data collection with measurement of sr FSH and E2 values done
- Correlation done using IBM SPSS software

#### Inclusion criteria –

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- Women >40 years and <65 years without menopause
- PostmenopausaL women >40 yrs and <65 years not on hormone replacement therapy, glucocorticoids

### **Exclusion** criteria -

- Surgical menopause
- Premature ovarian insufficiency

#### **RESULTS**

- Mean age was 51.14 ± 4.43 years
- FSH, and Estradiol (E2) levels showed no correlation with symptom, severity (p value-0.197 and 0.558 resp)
- Comparing estradiol levels between individuals with and without HTN T2DM showed no significance(pvalue- 0.892)
- Likewise, FSH levels did not significantly differ in people with or without HTN or DM (n value - 0.49)

### CONCLUSION

Menopause requires individualised care.

FSH and estradiol show limited predictive power as standalone markers of menopausal outcomes. Future research should integrate psychosocial, genetic, and environmental factors

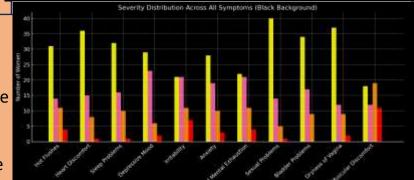
#### DISCUSSION

Estradiol variability, not static levels, influences symptoms,

Specially mood (Joffe et al., 2020). Psychosocial and lifestyle factors outweigh FSH levels in symptom manifestation.(2)Some studies suggest estradiol's protective effects against metabolic syndrome, while others report limited associations

# REFERENCES

This is a part of multicentric study and there is no conflict of interest Joffe H, de Wit A, Coborn J, et al. (2020). Impact of Estradiol Variability and Progesterone on Mood in Perimenopausal Women With Depressive Symptoms. Mitchell ES, Woods NF. (2015). Hot flush severity during the menopausal transition and early



■ mild ■ moderate ■ none ■ severe

40-60

Sr FSH levels and

symptom severity

60-80 80-100 >100