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The emotional states and hormones are an interesting field of study, where the changes associated with hormones could be related with possible implications for mental health. Additionally, ovulatory dysfunctions are a single most cause disorder and infertility by changes of sexual hormones levels in women with emotional tension that conduce to a psychosocial stress. Also, recent evidence which implicates the role of hormones and depressive states in patients that use contraceptives open windows to understand the potential role of the hormone as a new field of interest to evaluate possible markers as endocrine disorders and emotional states. However, exist a reduced research of these topics to understand a possible relationship between the role of hormones and their effects in emotional states. Here, we analyzed a data bank of a group of women with ovulatory dysfunction between 13 to 36 years old to evaluate changes in hormonal levels (Prolactin, Follicle-Stimulating Hormone (FSH), Thyroid-Stimulating Hormone (TSH), Estradiol and Testosterone) and a possible association with mood states by the use of 2 psychological test: POMS (Profile of Mood States) which evaluate 6 states: Tension, Depression, Anger, Vigor, Confusion and Fatigue, and as a control the use of FMPS (Frost Multidimensional Perfectionism Scale) which evaluate scales of perfectionism as concert to mistakes, pressure, order, organization, etc. As a result, we found that exist a positive correlation between levels of FSH and tension variable. Additionally, the normal values considered for a population are not representative to use as a diagnostic, therefore this evidence needs to be considered to future investigations. This is the first evaluation in the neuroendocrinology field that correlates moods states with hormonal level dysfunction suggesting potential implications for women health to the future.

MATERIALS & METHODS

Among 119 woman study participants with different hormonal alterations and ovulatory dysfunction between 13 to 36 years old were evaluated by a psychological questionnaire called Profile of Mood States (POMS) which evaluate 7 conceptual dimensions: Tension, depression, anger, vigor, fatigue, confusion, and sympathy. As a control we use FMPS (Frost Multidimensional Perfectionism Scale) test which evaluate scales of perfectionism as concert to mistakes, pressure, order, organization, etc. With this evidence, we determinate a relationship between mood state with hormonal imbalance.

RESULTS

DISTRIBUTION OF PATIENTS WITH OVULATORY DYSFUNCTION AND REASON FOR CONSULTATION

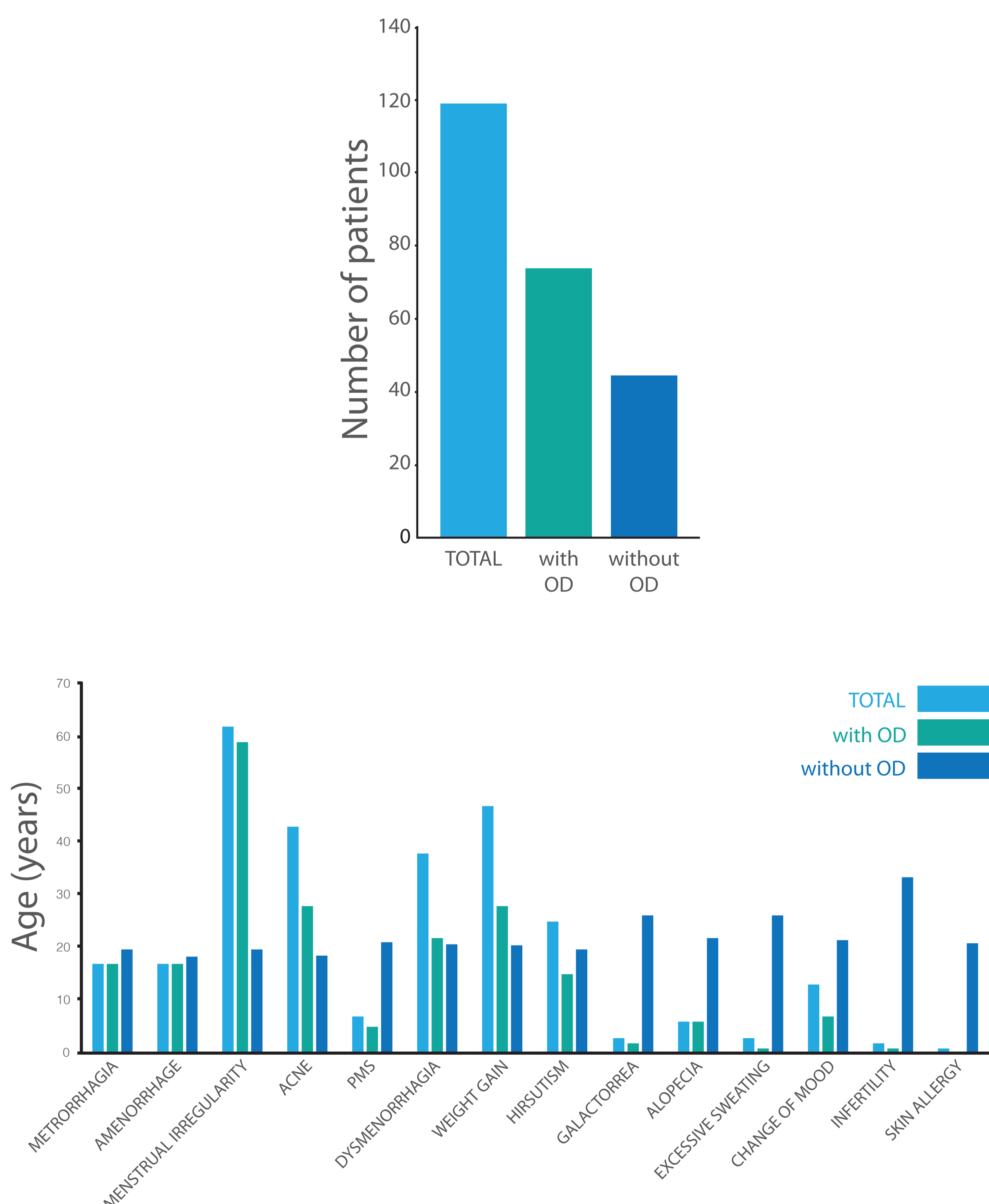


Figure 1. The total population of study. (A) Quantification of patients with ovulatory dysfunction. (B) Age average distribution of patients by reason for consultation.

DIAGNOSIS OF WOMEN WITH OVULATORY DYSFUNCTION

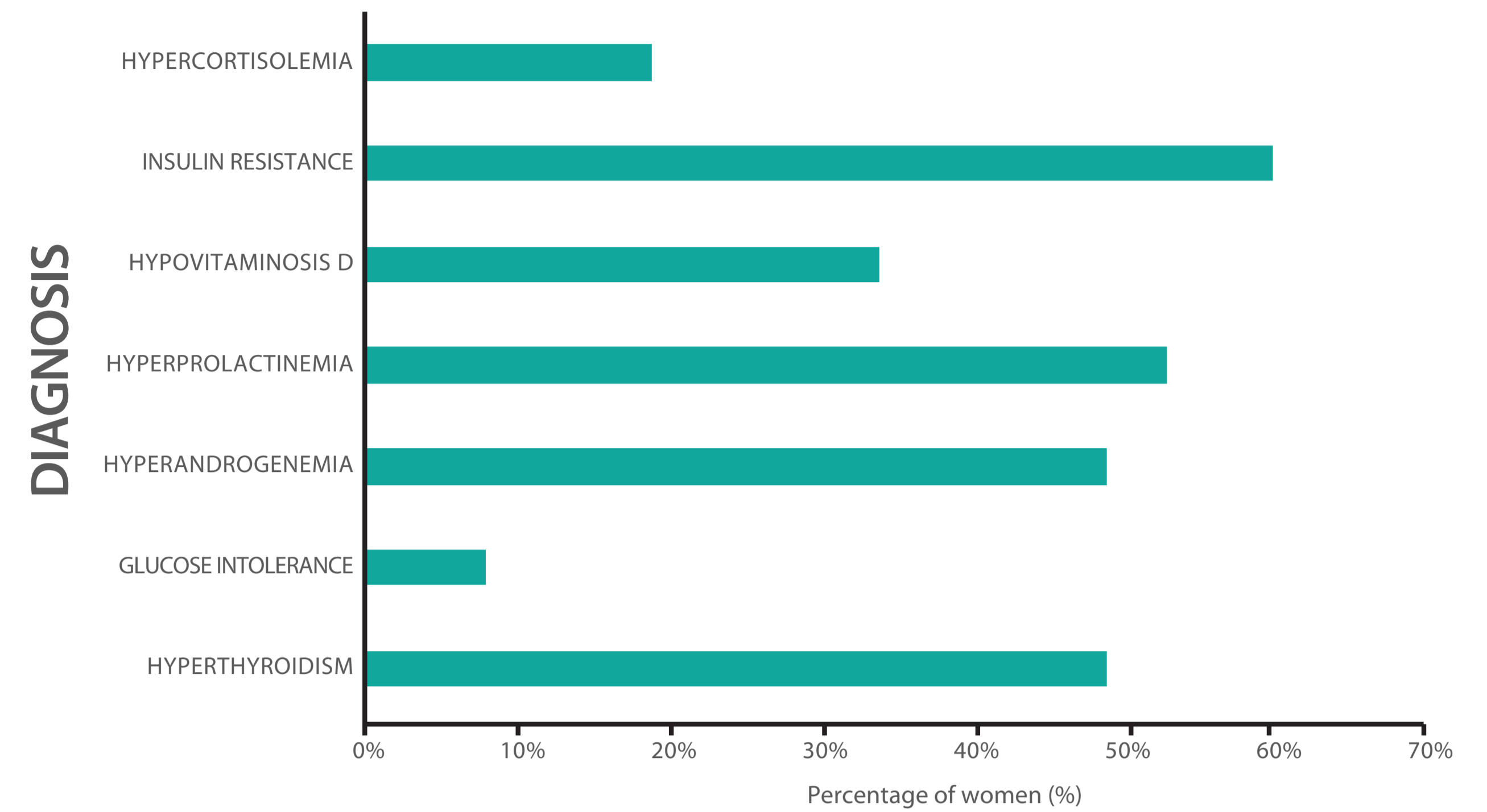


Figure 2. Diagnosis of women with ovulatory dysfunction. Quantification of different diagnosis in a reason for consultation

PSYCHOLOGICAL TEST (FMPS & POMS) EVALUATED IN PATIENTS

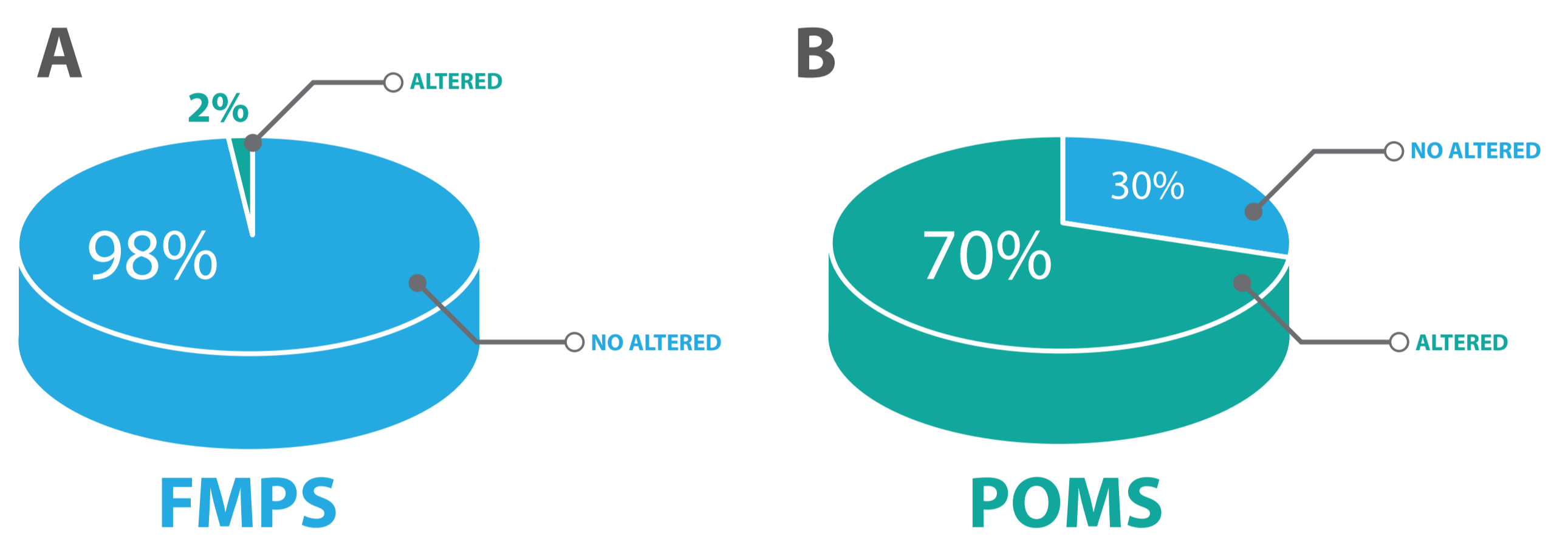


Figure 3. Psychological questionnaires evaluated in patients. (A) The Frost Multidimensional Perfectionism Scale (FMPS) was used as a control to evaluate the physiological state of 119 patients, indicating a 98% without changes or alterations. (B) Profile of Mood States (POMS) was used to evaluate the physiological state of 119 patients, indicating a 70% of alteration.

REGRESSION PLOT OF FSH AND POMS TENSION

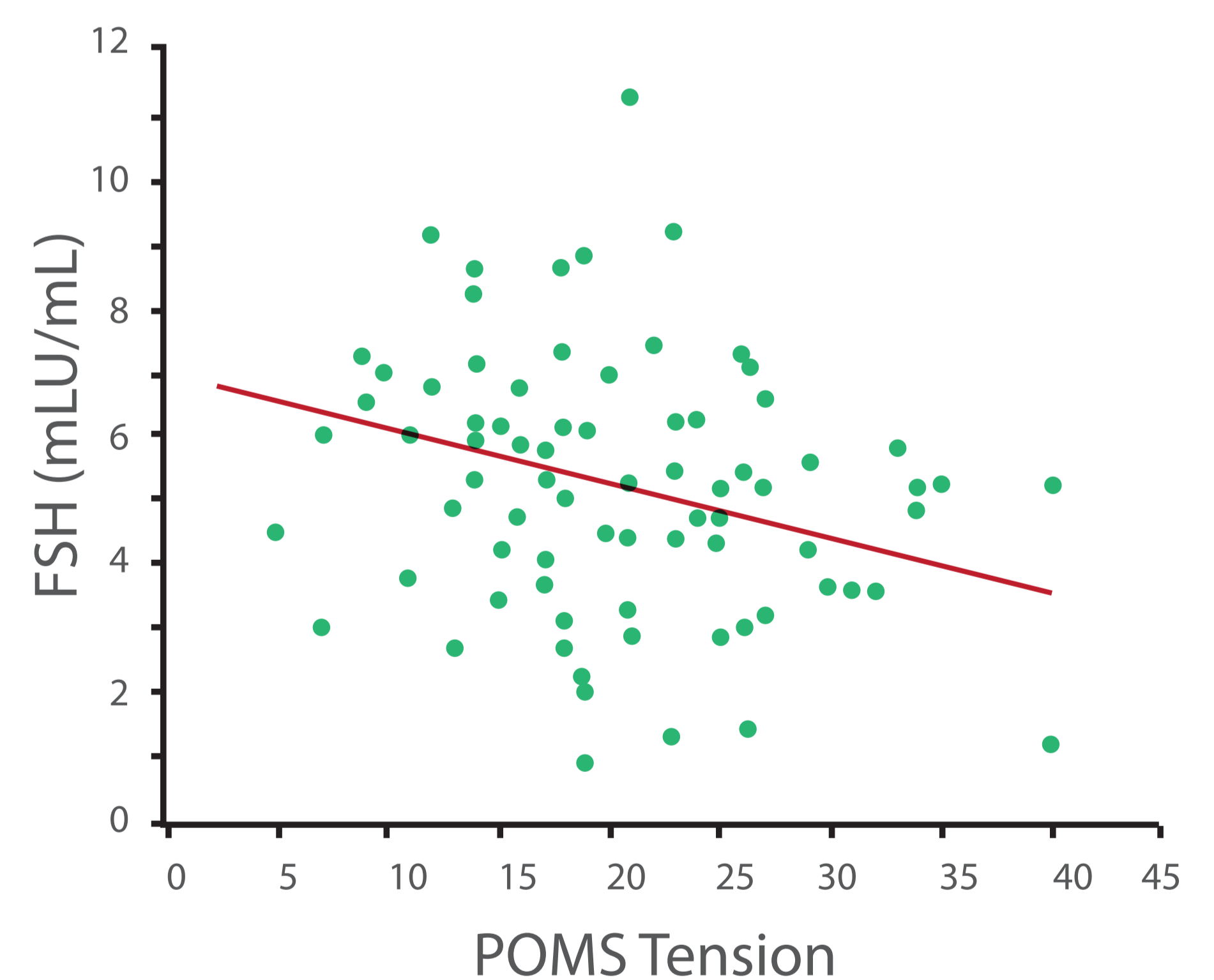


Figure 4. Correlation between FSH and Tension. Regression plot and analysis of variances indicate a relation between FSH and Tension ($p=0,0141$).

CONCLUSIONS

In summary, we have identified a group of patients with alteration in FSH levels with a relation with tension, indicated by the POMS questionnaire. The potential treatment of this hormone imbalance could be an approach to obtain new therapeutics to treat or prevent mood states and other disorders.

The Reproductive Health Research Institute (RHRI) is a research center founded in 2014 and is oriented to the women welfare developing research of forefront to the creation of clinical protocols and academic materials in the area of reproductive endocrinology.