**“Effect of gender differences on pain parameters and galvanic skin resistance in response to acute cold pain.”**

1Dr. Shah Swati H, 2 Dr. Nahar Pradeep S , 3Dr. Balasubramanium P,

**Abstract:**

**Introduction:** Pain is complex neuro-physiological and psychological process. Several animal studies have also shown an association between pain parameters, galvanic skin resistance and gender.

The present study was planned to study and compare pain threshold, pain tolerance and galvanic skin resistance in male and females.

**Methods and Material:** Our study was a cross sectional study with the sample size of 100 including 50 male and 50 female from first MBBS students. Acute cold pain was induced by cold pressor test. Pain threshold was measured as the time interval between exposure to painful stimulus and first reporting of pain sensation by the subject. Pain tolerance was measured as the time interval between exposure of painful stimulus and withdrawal of hand from water. Change in GSR was recorded by the instrument known as Psychogalvanoscope. Statistical analysis was done by using Paired‘t’ test.

**Results:** Results showed that females have statistically significant lower pain threshold but significantly higher pain tolerance than males (p < 0.05). When we analysed GSR, we found statistically significant fall in GSR and the mean fall in GSR in females (628.5 ± 300.83) was higher than the mean fall in males (457.14 ± 194.99 ).

**Conclusions:** Our GSR findings point towards autonomic adjustments suggesting more of sympathetic over activity during cold induced acute pain. Also from our findings it appears that the sympathetic system is more dominant in females than males.

**Key-words:**

Gender difference, pain parameters, galvanic skin resistance, acute cold pain