**2016 WOMEN’S HEALTH RESEARCH DAY**

**Title of Poster:** The Young Women's Health and Pain Research Initiative: Scope, Research Core Domains, and Future Directions
**Presenter:** Laura C. Seidman **Institution:**

[ ]  Faculty [ ]  Fellow [ ]  Resident [ ]  Post-doc Research Fellow [ ]  Graduate Student [ ]  Medical Student [x] Other

**Principal Investigator/Mentor:** Laura A. Payne, PhD   **Co-Investigators:** Lonnie K. Zeltzer, MD; Andrea J. Rapkin, MD; Bruce D. Naliboff, PhD

**Thematic Poster Category:**

**Abstract**

Severe dysmenorrhea (painful menstruation) affects up to 25% of girls and women and is associated with significant absences from school and work. However, the causes and underlying mechanisms of dysmenorrhea are not well understood, and there has been very little research into dysmenorrhea, including research of non-drug therapies. With this need in mind, the Young Women’s Health and Pain Research Initiative, under the direction of Principal Investigator Laura A. Payne, PhD, was formed to conduct rigorous, evidence-based research using an interdisciplinary approach to better understand the mechanisms of menstrual pain and possible behavioral interventions for girls and young women with dysmenorrhea. The aim of this poster is to present the Initiative to the campus community, and to broadly define its research goals and directions.

The first domain utilizes a variety of standardized laboratory pain testing paradigms to evaluate pain sensitivity and central excitatory and inhibitory mechanisms across three menstrual cycle phases (menstrual, ovulatory, mid-luteal) in girls and young women with and without menstrual pain. This study also assesses the role of psychological factors, autonomic nervous system measures, and hypothalamic-pituitary axis responses in relation to pain responses in both groups. This study is the first of its kind to explore pain responses in dysmenorrhea across the developmental spectrum, which has the potential to identify individuals at risk for the development of future chronic pain problems and inform new intervention and prevention strategies.

The second domain translates existing and emerging knowledge regarding menstrual pain into non-drug behavioral treatments for girls and young women experiencing moderate to severe menstrual pain. Pilot studies in this domain are evaluating the feasibility, acceptability, and preliminary efficacy of a brief, structured, group cognitive behavioral therapy (CBT) intervention focused on reducing pain catastrophizing and developing appropriate coping skills. The curriculum consists of psychoeducation, mindfulness/acceptance practices, de-catastrophizing, and coping skills modules. Preliminary results demonstrate that the intervention is feasible and acceptable; pilot study participants report successfully using all of the skills they learned in group after therapy ended.

Lastly, the Initiative plans to expand on both of these cores in the upcoming years. Future directions include augmentation pilot studies to enhance the existing laboratory protocol by including structural and functional neuroimaging and assessment of pro-inflammatory cytokines during menstruation. These additions will allow us to analyze expanded relationships between brain structure and function and psychophysiological/inflammatory indices of central pain processing. Furthermore, we plan to expand the lower age limit of the studies to include younger teenage girls ages 14-15, which will enable a more robust analysis of developmental trajectories in pain processing. For Core Domain 2, future steps include conducting a fully-powered controlled trial of the CBT intervention and validating the intervention in the CBT literature.

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