



## 2008 CYHRNet Student Interns in Child and Youth Health Research FINAL REPORT

### **Virginia Russell – Child Pain Reactivity as an Indicator of Health Vulnerability**

#### **Description**

Virginia worked on the project 'Pain reactivity in children as an indicator of health vulnerability and healthcare utilization' to evaluate the role of pain reactivity and temperament as markers of exaggerated risk for a wide range of potential health problems.

#### **University/Institution**

Department of Psychology, University of Northern British Columbia, Prince George

#### **Supervisor**

Dr. Kenneth Prkachin, Professor, Health Psychology

#### **Report**

The goal of this project was to examine relationships among child health, temperament, and pain reactivity as evaluated by acoustic analysis of children's crying responses to immunization injections. In other words, is there a link between the quality and duration of a child's cry, parental reported temperamental and behavioural features and overall health of the child?

This is a prospective epidemiological study which examines the extent to which illness vulnerability in children can be predicted by simple observations that can be made at the time of the child's immunizations. Pain reactivity (the magnitude of the child's behavioural reaction to the immunization) is a significant predictor of contemporaneous and prospective measures of illness behavior.

My role in this project consisted of three stages. 1a) Using software (Adobe Premiere 2.0) in the Affect Science laboratory to transfer video files of children receiving immunizations; 1b) further separating these files in order to convert them to both PNG and WAV file formats for use in ICODE (facial action coding system) and Multi-Speech (wave form analysis) software; 2) The cry files (WAV) were edited and analyzed using the wave form analysis software; 3) the questionnaire data regarding temperaments and reported health of children who cried or responded aversively is currently being analyzed statistically. Results for this study will be complete and presented at the *CYHRNet Third Annual Conference and AGM: Leaders, Innovators & Healers in Child and Youth Health Research* in November 2008.

I would like to express my deepest gratitude to the Child and Youth Health Research Network, Dr. Ken Prkachin and his team for giving me such a wonderful opportunity to be so closely involved in this project. It has very much contributed to my passion of health research as well as given me a greater appreciation for the importance of such research in the implementation of prevention health strategies for children. The team that I worked with throughout my internship was very influential and supportive. I believe that team atmosphere, faculty mentorships and financial support are important for academic growth – all of which I received this summer.

It is my hope that I will be able to be involved in my graduate work to assist in the three and five-year follow-up studies for this project in order to derive objective measures of child behavioural responses in health-care utilization. In addition, I genuinely look forward to my continued partnership and involvement with your organization for the many years of research I have ahead of me.

Thank you for all your support.