



POSTER PRESENTATION

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Does perceived stress in pregnant immigrant women predispose their infants to allergic disease development? - a work-in-progress

Miki Peer^{1,2,3}, Meir Steiner^{1,2,3,4}, Susan Waserman⁵, Claudio N Soares^{2,3,4*}

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Background

"Canada's Immigration Program" [1] reports that Canada has the highest per capita immigration rate in the world. Given the finding that pregnant immigrant women display higher prevalence of depression and anxiety disorders [2], the investigation of health *outcomes* in this population is warranted. The present study will examine whether prenatal perceived stress and/or physiologic maternal stress responses are associated with the development of allergies in infants, in a diverse group of immigrant women.

Methods

Sixty immigrant women will be recruited early in pregnancy and followed up to 1 year postpartum. Three study visits (<24 weeks gestation, 32-36 gestation, and 1 year postpartum) and two brief phone calls (at 3- and 6-months postpartum) will be used to collect information about maternal health including perceived stress, depressive symptoms, social support, and biomarkers of stress reactivity (salivary cortisol). Information on infant birth outcomes and cord blood (for measurement of IgE) will be collected at the time of delivery. Infant atopy (assessed via skin-prick testing and clinical history) will be assessed at 1 year of age, along with information on the infant's health and stress response (salivary cortisol).

Results

To date, forty-eight women have been recruited into the study. Preliminary data illustrate a wide range of

depressive symptoms, perceived stress, and social support. Ten women reported high levels of depressive symptoms (>11 on the EPDS) *or* high levels of perceived stress (>19 on the PSS-10), and an additional four women reported both during early- to mid-pregnancy. Thus, stress and depressive symptoms appear to be distinct phenomena in this population. Women who experienced a very large number of negative life events in the previous 6 months or reported low levels of perceived social support tended to endorse either high levels of stress or depression in early pregnancy. Participant recruitment and testing are on-going.

Conclusions

A large portion of our (diverse) sample of immigrant women reported high levels of perceived stress and/or depressive symptoms during early- to mid-pregnancy. Whether these adverse perinatal mental states (and their associated dysregulated stress responses) contribute to the development of allergic disease in infants is under active, prospective investigation. A better understanding of the effects of perinatal factors on susceptibility to allergic disease in the infant can lead to development of interventions when plasticity in physiologic development is still relatively abundant [3].

Author details

¹Institute of Medical Science, University of Toronto, Toronto, Canada.

²Women's Health Concerns Clinic, St. Joseph's Healthcare Hamilton, Hamilton, Canada. ³Brain-Body Institute, St. Joseph's HealthCare Hamilton, Hamilton, Canada. ⁴Psychiatry & Behavioural Neurosciences, McMaster University, Hamilton, Canada. ⁵Department of Medicine, McMaster University, Hamilton, Canada.

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* Correspondence: csoares@mcmaster.ca

²Women's Health Concerns Clinic, St. Joseph's Healthcare Hamilton, Hamilton, Canada

Full list of author information is available at the end of the article

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