



Finding New Ways to Treat Pain and Stress for Infants in the Neonatal Intensive Care Nursery

Worldwide, almost 15 million babies are born preterm (< 37 weeks of gestation) (Blencowe et al, 2010). Most require specialized health care provided in neonatal intensive care units (NICU). Part of this intensive care involves diagnostic and therapeutic procedures, such as blood tests, which are necessary, but which may be painful. Some infants may experience as many as 10-15 painful procedures each day particularly when they first enter the NICU. Importantly, researchers at UBC are amongst the first to show that the cumulative effect of pain and stress the infants experience in the NICU can change their developing brains and is associated with developmental impairments seen later in childhood.

Whereas in adults, pain related to intensive care procedures can be treated with pain relieving medications, such as morphine, these are less effective in infants born preterm. Instead, more natural strategies, such as providing parental skin-to-skin holding, can be used. However, for many reasons, strategies such as skin-to-skin holding may be challenging to implement. For example, parents may not be available to provide continuous holding or the infants may be too medically fragile.

Dr. Holsti, Associate Professor in the Department of Occupational Science and Occupational Therapy, Scientist with the Child and Family Research Institute and Canada Research Chair in Neonatal Health and Development, and Development, is working on the front lines of neonatal intensive care finding new, natural ways to treat the pain and stress in these vulnerable infants.

Working with computing science experts (Dr. Karon Maclean, UBC) and mechanical engineering students and technology development experts at British Columbia's Institute of Technology, Dr. Holsti has invented and pilot tested a new medical device which simulates the aspects of skin-to-skin holding which are thought to reduce pain in these infants.

The device called "Calmer" fits directly inside each infant's bed and has a breathing motion, a simulated heart beat sound and a skin-like surface. The breathing and heart rate can be programmed to match each infant's parent's resting rates so the device can provide individualized treatment. Dr. Holsti found in her pilot testing that infants who received Calmer during a blood test required for clinical care showed up to 90% better stress reduction than infants who received the standard care. With this success, Dr. Holsti and her team have received funding from the Canadian Institutes of Health Research to conduct a randomized trial evaluating Calmer for pain reduction in preterm infants in the NICU at BC Women's Hospital.

By providing pain and stress relief for the smallest infants, Dr. Holsti's goal is to help protect the brain and improve long-term developmental outcomes in these infants in BC and in NICUs worldwide.



Dr. Holsti in the BC Women's
Hospital NICU

Do Your Clients Require Help Using Their Wheelchair?



Referring your clients could augment the activities you already provide; lead to better outcomes and increased quality of life for your clients; and reach people who may not otherwise have access to rehabilitative resources. **Dr. William Miller** and his research team are currently seeking participants for 2 **manual wheelchair intervention studies** for individuals 50+ years:

[Wheelchair self-efficacy enhanced training program to improve wheelchair use in older adults](#) is evaluating a peer-led intervention designed to develop an individuals' wheelchair mobility goals.

WheelSeU

EPIC Wheels



[Enhancing Participation in the Community by improving Wheelchair Skills](#) is evaluating an individualized tablet based, home training program with remote access to a trainer.

If you feel your clients could benefit from more training than you have been able to provide (due to competing rehab priorities) or if you think these studies may be of interest to them, please contact: **Kate Keetch** at **604-714-4108** or kate.keetch@ubc.ca

Rehabilitation Science Online Program News

[10th Anniversary Brings New Online Continuing Education Opportunities](#)

The MRSc Leadership Webinar series is fully subscribed and new continuing education opportunities will follow. [Contact us](#) to be on our Continuing Professional Development mailing list.



[MRSc Graduate Karen Hurtubise Starts PhD](#)

Increasingly, prospective MRSc learners ask whether MRSc graduates can go on and do a PhD. Karen's experience is evidence this can occur with the appropriate course and career planning. If you want to know more, please contact us at info@mrsc.ubc.ca

[10th Anniversary Research Relay 2015-16 Webinars](#)

Please watch the [Research Relays page](#) and register for the free June 2015 webinars.

Congratulations to 2015 MRSc Spring Grads

Physical therapists, [Alison Evans](#) (February 2015), [Anne Pistawka](#) (May 2015) and kinesiologist [Adam Cornett](#) (May 2015) completed the MRSc research option this Spring, along with course-based graduates, chiropractor, [Dr. Tarrah Sloan](#) (May 2015) and kinesiologist, [Joanna Zervas](#) (February 2015). MRSc and UBC PT BSc (PT) graduate, [Anne Pistawka](#) writes about her experience returning to studies almost 25 years after entering PT practice, in the [Spring 2015, UBC Department of Physical Therapy Newsletter](#).



Research and Course-Based Options

Even though the Fall 2012 saw the addition of a 100% course-based MRSc option, many prospective and current learners are still drawn the MRSc research or major project option. The decision to choose the research or course-based option can be made after taking several courses giving plenty of time to talk with us and learners who have completed each option. A common question is “How is the MRSc research project different from a research thesis.” A key difference is that the research is related to and usually takes place in the learners’ workplace. Not sure, what this ‘looks like’? Take a look at the story of [Jan Chan's MRSc workplace research](#) that led to a 2014 ‘Above and Beyond’ award from Fraser Health.

It's time... Your Master's is Just a Click Away!

Check out course-based and research study options at www.mrsc.ubc.ca or email us at info@mrsc.ubc.ca

MRSc: Apply by April 30 for September entry; September 30 for January entry

GCR: May 15 for September entry; October 15 for January entry

10 years of Online Master's Study

Save the Date!

*** NEW LOCATION ***

Celebrating the 10th Annual
Capstone Conference

**At the Centre for Interactive Research on
Sustainability (CIRS) —UBC**
Wednesday July 29, 2015

KEYNOTE SPEAKER:
DR. KAREN WHALLEY HAMMEL

Guest Speaker: Min Trevor Kyi

A student-led conference ...

featuring 26 MOT research projects from our 2015 graduating class.

More information at: capstoneconference.ca



Michael Lee in China

Keynote speaker in China's national Conference on Humanism

Visiting China is not something entirely new to me, but being invited to be a keynote speaker to speak in a national conference was an entirely different experience. This April, I had the honor of being a keynote speaker for a Chinese national conference that brings scholars on humanism together to deliberate on how best to apply and advance humanistic psychology in a country with thousands of years of history and traditions. In addition to enjoying spicy hot-pot in hot weather (35°C under the sun) and seeing lovely pandas, I was also invited to have dialogues with researchers and local students to foster knowledge exchange and to allow me to better understand their scholarly work, as well as their daily life.

The National Conference on Humanism was hosted in Chengdu of Sichuan. Sichuan was the cradle of civilizations that can be dated back to at least 3500 years ago. Chengdu, being the capital city of the province, is a place where ancient history can be found everywhere. The city is the epitome of cultural richness, with museums that were built in the middle of the city where archeologists found burials from ancient civilizations, as well as many shrines of ancient Chinese styles of living such as Daoism and Confucianism. I found it interesting to speak on the notion of humanism while surrounded by long history of civilizations and ancient traditions, and decided to take the challenge and addressed it through exploring the meaning of empowerment and various ways to foster inclusiveness in the context of humanism. At the same time, the engaging with local scholars opened my eyes to see the wonderful work that they have been doing in China while

engaging in contextualizing humanistic psychology to their culture, and the potentials of China to further advance and embrace the spirit of humanism with the rich culture of this civilization.

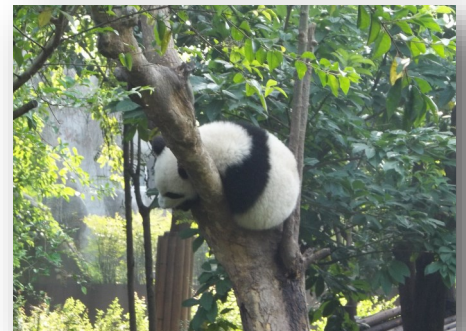


Interacting with local students was another wonderful experience. Being very keen learners, they participated in day-long seminars attentively, longing to explore in great depth the meaning of occupation, as well as its “healing power”. Though occupational science and occupational therapy are fairly new concepts to many of them, students readily picked up the key tenets of occupational science and involved themselves in discussions regarding how occupational therapy could potentially be applied to Chinese culture. Besides immersing myself in engaging dialogues, I also had opportunities to enjoy Sichuan cuisine and visit the Giant Panda Sanctuaries, which is the home to more than 30% of the world's pandas. Sichuan cuisine has strong flavors that have a particular spiciness and tanginess resulting from liberal use of garlic and hot chili peppers. It was quite a steep learning



curve for me to adjust to the strong flavors; but before the end of my 15-day visit, I had fallen in love with this spicy cuisine.

Lastly, I had the privilege of learning about their campus mental health issues from the perspective of university students themselves, which led me to thinking that stress is universal no matter in which part of the world you are acquiring your higher education. In addition, stigma associated with mental health concerns and the lack of help-seeking behavior in people facing mental health issues seem to be prevalent in campuses from both the western and eastern world. Through constant dialogues then, I had opportunities to discuss the “healing power” of occupation in depth - in particular for local adoles-



cences that have faced, or are facing, trauma in their lives. Similar to my personal experience in learning how to enjoy hot spicy food, resilience towards adversity can be a process facilitated through engaging in meaningful occupation. That might be something that worth further research by occupational scientists and might become an area for occupational therapists to pursue.

Michael Lee, Senior Instructor
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Announcements

We are delighted to present Dr. Atiya Mahmood, an Associate Professor at the Department of Gerontology at Simon Fraser University, for her research presentation on **June 25th** from **2:30 to 4 pm**, at **Lab 3**. Details to be announce soon!



2ND INTERNATIONAL

NOVEMBER 12—14. 2015 IN
VANCOUVER, BC

Where's the Patient's Voice in Health Professional Education 10 Years on?

The conference is about practice, innovation and theory that embed the patient/client/service user voice in health professional education. It is an opportunity to share examples of how health professional education can be enriched by patient involvement. Over three days, participants will present examples of collaborative projects between educators and patient/community groups and examine the outcomes of these partnerships for faculty, patients, students and the learning environment.

More information at:

<http://www.interprofessional.ubc.ca/patientsvoice/>

CAOT Conference - 2015 - Congrès de l'ACE
Winnipeg, MB May 27 - 30 mai



Occupational Justice: Rising to the challenge
Relever le défi de la justice occupationnelle

CONGRATULATIONS

To all Faculty and MOT Students ...
presenting at the 2015 CAOT Conference in
Winnipeg, MB.



Congratulations to our clinical faculty members, **Stephanie M. N. Glegg**, **Roslyn Livingstone** and **Ivonne Montgomery** for publishing "*Facilitating interprofessional evidence-based practice in paediatric rehabilitation: development, implementation and evaluation of an online toolkit for health professionals*" in *Disability and Rehabilitation—An international, multidisciplinary journal* posted online on April 29, 2015. For full article: <http://informahealthcare.com/doi/abs/10.3109/09638288.2015.1041616>





JULY 16 12-2PM SIMPLE SOLUTIONS SHOWCASE 2015

Simple Solutions to Everyday Challenges

Come support our MOT students showcasing their simple everyday solutions & innovative OT intervention products.



UBC MOT STUDENTS FIRST ANNUAL SIMPLE SOLUTIONS SHOWCASE

New &
Innovative
Assistive
Devices &
Intervention
Solutions for
Everyday
Challenges

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Occupational Therapy
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The Department of Occupational Science & Occupational Therapy supports three graduate academic programs.

- The Master in Occupational Therapy (MOT) program, for those looking to practice professionally as an Occupational Therapist;
- The Master of Science (MSc) and PhD programs in Rehabilitation Sciences, for those interested in research credentials and the science of occupation; and
- The online Master of Rehabilitation Science (MRSc) for practitioners interested in obtaining a graduate degree that will advance their career

