Centre *for* Pediatric Pain Research

SCIENCE HELPING CHILDREN

Dr. Christine Chambers' Research Team Newsletter

Fall 2011

New and Noteworthy!

The Chambers' lab in the Centre for Pediatric Pain Research at the IWK Health Centre has definitely had a fun and busy year and we have a lot of exciting news to share!

Since last summer we've presented our research at many conferences, including the *World Congress on Pain* in Quebec, the *National Conference in Pediatric Psychology* in Texas, and the *Joint Scientific Meeting of the British Pain Society* and *the Canadian Pain Society* in Scotland! We've shared our research locally by volunteering with Industry, Technology, and Science for Girls through the IWK and we organized National Pain Awareness Weeks events at the IWK Health Centre last November.

We've published our research and have many new scientific papers in academic journals, such as *Pain,* the *Journal of Pediatric Psychology*, *Health Psychology*, *The Journal of Pain,* and the *Canadian Medical Association Journal*.

This year, our team members have won many awards including the International Association for the Study of Pain's Ulf Lindblom Young Investigator Award for Clinical Science (Christine Chambers), the Eugene Walker Educational Award in Pediatric Psychology & the John T. Goodman Award for Research in Pediatric Pain (Nancy Bandstra), and conference awards for best poster (Katie Birnie & Mark Petter) and best presentation (Mark Petter).

Thank you once again for your assistance with our research and for your continued support as we look forward to another exciting and productive year!

Research Rocks!
Want to participate in our exciting research?

Check out our website!

www.pediatric-pain.ca/content/Chambers_CurrentResearch

Are you a child or teen between the ages of 8 and 18 years old?

If you would like to participate in one of our ongoing studies please call us at **470-6906** or email us at **Leah.Wofsy@iwk.nshealth.ca**

IWK Health Centre

DALHOUSIE UNIVERSITY
Inspiring Minds

"I wasn't scared at all!" Anxiety and children's memories for pain

Melanie was recently interviewed about her research for "Inside your IWK"

Check it out!
www.youtube.com/watch?v=f1wP8YSC29U

As every parent knows, children don't stop thinking about pain when it ends. How children remember painful experiences, like needles, can make future painful situations harder...or better! But what if children are nervous before painful experiences? Are they more likely to remember pain as being scary and really bad? And what happens when those children experience pain again? Will it be even worse than before?

Melanie was interested in seeing whether or not children who were less nervous before a mildly painful experience (putting their hand in a bath of cold water), developed more positive memories of pain than children who were more nervous. When children came to the lab for a visit, half of them believed they would have to give a speech and were a little bit nervous and the other half believed they would watch a nature video and were not nervous. Then, they did the cold water task. We telephoned them 2 weeks later and they shared their memories of the cold water task. Finally, in another 2 weeks, they came back to do the cold water task one more time.

Melanie found that children who were less nervous before the water task remembered it as being not as painful and scary as children who were more nervous. Children who had negative memories thought the second cold water task was even worse than the first time! The good news is that we can change pain memories to be more positive by highlighting what went well and what a good job children did to cope with the pain. This might make them less nervous and experience less pain in the future!

Helping your child make more positive memories of painful experiences

- Re-evaluate the painful experience. Shine your spotlight of attention on what went well and minimize aspects of the experience that did not go well.
- Focus on the helpful strategies that your child used during the painful experience (e.g., deep breathing, facing their fear and conquering it, thinking about other things) rather than the negative things that happened (e.g., crying, complaining).
- When they acknowledge something helpful that they did, praise them for this and talk more about it (e.g., "That was excellent when you used your deep breathing before they gave you the needle! What else did you do that was helpful?").
- Keep the negative in perspective. Help them see that the negative parts lasted for less time than he/she remembered. Then, remind them about the positive things that happened.

Paying attention to pain (mindfully) might help

Mark is continuing his dissertation in this area and was recently awarded an IWK Category A grant to support his future research!

We know that distracting children, whether it's by having them blow bubbles or talking to them about something fun they did last week, helps them deal with pain. But we wanted to know if we could get kids to pay attention to pain in a way that actually helps.

To do so, Mark looked at whether having children do a brief mindfulness exercise, by asking 10-14 year olds to focus on pain in a specific way, would help them deal with pain as much as distraction. Mindfulness involves focusing your attention on what is taking place moment-to-moment in an accepting way.

In this study, children were instructed to use either mindfulness or distraction while they went through a cold water task where children put their hands in a cooler of cold water. Mark found that children who were asked to pay attention using mindfulness showed similar benefits to those who used distraction. Thank you to all the children and families who took part in our project – Mark is excited about the opportunity to do more research in this area!

Mark's research was supported by an IWK Category A grant and a CIHR Doctoral Award

Teaching teachers about students with chronic pain

Rebecca graduated with her Masters degree in School Psychology at Mount Saint Vincent University — Congratulations Becca!

Chronic pain is common among children and adolescents, but many people do not have a clear understanding of the cause and extent of disability resulting from chronic pain. This study looked at how teachers respond to kids with chronic pain in the classroom. Specifically, we wanted to know whether a letter from a doctor would affect how teachers respond to a student with chronic headache pain.

Teachers were recruited from the Halifax Regional School Board and the Chignecto-Central Regional School Board to participate in this study. We found that teachers who received a letter from a doctor about the student's pain thought that the pain was more severe than teachers who did not receive the letter. Teachers who received the letter were also more likely to reduce the student's workload and alter deadlines for tests and assignments.

This study advances our knowledge of how pediatric chronic pain is understood and responded to in the school setting. It is hoped that results of this study will help lead to better classroom experiences for students with chronic pain conditions and their teachers.

A sincere thank you to all of the teachers who participated in this study!

Is the hospital a "painful" place?

Katie was recently awarded a prestigious Vanier Scholarship from CIHR to conduct her dissertation research—Congratulations Katie!

Having to stay in hospital is an experience that many children and their families encounter. Regardless of why a child is hospitalized, there are a number of potential sources of pain during their stay, such as illness, injury, or pain from a medical procedure. Several studies from other children's hospitals in Canada suggest that 21-64% of children report moderate-severe pain while in hospital. A similar study was done at the IWK Health Centre in the early 1990s. Since then, the IWK has made some important improvements in how children's pain is assessed and treated and we wanted to see how the hospital is doing now.

On four days, we interviewed 107 children who were hospitalized at the IWK Health Centre and/or their parents. We learned that pain is still a common experience for hospitalized children (approx. 94% reported some pain), 24% indicated they were usually in pain they wanted help with. When children had pain they wanted help with, most received medication they believed helped to reduce their pain. Nurses and parents were key providers of help for the child's pain and commonly did things like distract, praise, and reassure the child while they were in pain.

Katie presented some of these preliminary results at the Joint British and Canadian Pain Society meeting in Scotland in June.

Can you tell if kids have pain or not?

Katelynn is a 2nd year student in the Clinical Psychology Program at Dalhousie and was recently awarded the McCarlie Graduate Student Award from the IWK!

Both parents and health professionals use children's facial expressions to help them make decisions about their pain. Although sometimes children may not want to show that they are in pain, it is important for parents and health professionals to know how much pain the child is *actually* feeling to make sure they get the help they need.

In this study, Katelynn asks pediatricians, nurses, physiotherapists, and parents to watch videos of children's facial expressions where the children are either hiding their pain, faking pain, or genuinely feeling pain. After watching each video, participants are asked to tell us what expression they think they saw, rate how confident they are in their guess, and tell us how much pain they thought the child was actually feeling.

We are interested in seeing if there are differences between different types health professionals and parents, what facial features they were looking at to make their decisions, and if they found some expressions harder to identify than others. We are excited to see what we find... stay tuned for the results!

Data collection is ongoing...please contact us at **470-6906** if you are a parent of an 8 -12 year old or a health professional.

How to help your child during a painful medical procedure

These techniques have been scientifically shown to *reduce* pain and anxiety in children when they are undergoing a medical procedure:

- **Use Distraction:** It could come from a physician/nurse, a parent, or the child but distraction works! For example, younger kids will enjoy games and stories and older children can listen to music or read a book. Talking about something other than the needle/procedure works well too!
- **Encourage Deep Belly Breathing:** Relaxing breathing comes from the belly not from the chest so encourage your child to breathe deeply and slowly and feel their belly move in and out while their shoulders stay still. Younger children may enjoy blowing bubbles!
- **Be Honest:** Reassuring your child and telling them things like "it won't hurt" will *not* reduce the pain your child feels.

How did my child do when they completed that test?

Have you ever participated in a study where your child received psychological testing and wondered what the results were? More and more researchers are offering children and families the opportunity to receive their own testing results after participating in a study, however, little is known about the best way to deliver this information.

Our lab offered parents the results from the language and development testing that their children participated in as part of two recent studies. Those who wanted to receive the results were sent a letter in the mail with the results from their child's testing along with contact information, should they have any questions. In this study, Dr. Kelly Cox, a Dalhousie University pediatric resident, also mailed these parents a survey asking how they felt when they received the results in the mail.

The feedback was extremely positive and almost all parents said they wanted to receive results again in the future. Most parents felt a mailed letter was a good way to communicate the results and a few even suggested that email would be good too! Several parents commented that the results they received were too general and said that they were hoping to learn more specific information about their children's testing. Most parents did not pursue any more testing or discuss the results with anyone other than family.

This information is very helpful, as many researchers are interested in the most effective ways to return results to parents and families!

Thank you to Dr. Conrad Fernandez for his collaboration on this project!

Dr. Sara King is now an Assistant Professor at Mount Saint Vincent University in the School Psychology Program.

"She thinks I'm weird": Social abilities in children with chronic illness

About 10%-30% of children have a chronic illness (e.g., juvenile arthritis, inflammatory bowel disease) and this can affect their social abilities in many ways. For example, they may not be able to participate in activities at school or with friends and may miss out on social events due to doctor's appointments; however, very little research has looked at social abilities of children with chronic health conditions.

In this study, Sara asked 8 to 12 year olds, some who were healthy and some who had a chronic illness what they would do in several common social situations (e.g., someone bumps into you while you're wearing your new sneakers) . She also looked at children's thinking styles to help understand how they act in social situations. We have just started looking at the results of this study, but so far we have found that children with chronic illnesses interpret social situations in almost the same way as healthy children, which is great news! However, many parents of children with chronic illnesses told us that their children sometimes have a hard time making friends, so we are now focusing research on how to teach other children about their peers with chronic illness so that they can be more supportive and understanding.

Sara's postdoctoral research was funded by the Canadian Child Health Clinician Scientist Program.

Can young children use a faces scale to accurately rate pain?

Faces scales are a common and easy way for children to tell doctors about pain. Most children 5 years of age and older can use them effectively, however, younger children may have difficulties. For Samantha's project, we wanted to change a common faces scale to make it easier for 3-4 year olds to use.

Samantha will be joining our lab again in the fall to complete her 4th year Honours project .

In this study, children hear some short stories about situations that may cause some pain (e.g., touching a hot stove) and some that would not (e.g., reading a book). They are then asked to pick a drawing of a face on a scale that shows how much pain they would be in that situation. Different children are shown different scales with different numbers of faces to see if some scales are easier to use than others.

Data collection is still ongoing but early results look like some of the changes that we made to the traditional faces scale may help younger children better identify different levels of pain.

If you have a child 3 to 5.5 years of age and are interested in participating, please call us at 470-6906 to see if you are eligible!

We are particularly grateful to **Dr. Carl von Baeyer**, from the University of Saskatchewan, for his collaboration on this project.

In the news and on the web...

- Melanie Noel's dissertation research was featured in "Inside Your IWK". Check it out online at http://www.iwk.nshealth.ca/index.cfm?objectid=9157A8C0-0B82-215D-33C99816B519CDA3
- Melanie Noel and her dissertation research were featured in the Spring issue of the Society of Pediatric Psychology's (Division 54 of the American Psychology Association) newsletter, Progress Notes.
  Check out the article: "*An Experimental Investigation of the Role of Anxiety on Children's Memories of Pain and Their Subsequent Pain Experiences*" (pg. 9) online at http://www.societyofpediatricpsychology.org/downloads/236
- Christine Chambers was recently profiled by the IWK Health centre: *Alleviating children's pain: Dr. Christine Chambers explores how parents and professionals help children cope with pain*
  Check it out online at http://www.iwk.nshealth.ca/index.cfm?objectid=E42870C6-9147-0C4E-97E2B2CCC7F19871
- Dr. Chambers and our research team were featured in the IWK Health Centre's 2010 Research Report!
  Download the article "*Dr. Christine Chambers takes creative approach to easing children's pain*" at http://www.iwk.nshealth.ca/index.cfm?objectid=C17245DE-AD4A-A4ED-A7D66E9C5F1D5743

Team Updates

Nancy graduated with her PhD in Clinical Psychology in October and is currently working at a clinically focused Postdoctoral Fellowship at the **Cleveland Clinic Children's Hospital** in Cleveland, Ohio.

Erin graduated with her PhD in Clinical Psychology in October and is working at a clinically focused Postdoctoral Fellowship at the **BC Children's Hospital** in Vancouver, British Columbia.

Leah joined our team as an Research Administrative Assistant.

A sincere THANK YOU from all of us to everyone who participated or volunteered their time to take part in our studies.

Centre for Pediatric Pain Research

SCIENCE HELPING CHILDREN

Tel: (902) 470-7706
E-mail: Christine.Chambers@dal.ca
Website: www.pediatric-pain.ca/Content/Christine_Chambers

Dr. Christine Chambers
Centre for Pediatric Pain Research
IWK Health Centre
5850/5980 University Ave.
P.O. Box 9700
Halifax, NS B3K 6R8

If you had fun taking part in one of our studies and would like to participate again, or know someone else who would, please contact us!

Junior Scientist Challenge

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scientist
psychology
fun
science
pain
teaching
experiment
exciting
knowledge
help
learning

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Pain In Child Health
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