

# Health Notes

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## Message from the Chair !

### A New Era in Behavioral Intervention Design !

Kim Lavoie, PhD

Health Psychology and Behavioral Medicine Section Chair

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More than ever, traditional medicine is increasingly acknowledging the importance of behavioral factors in both the development and progression of many chronic diseases, including cardiovascular disease, diabetes, cancer, and chronic respiratory diseases. Behavioral factors are also increasingly recognized as important determinants of self and child vaccination, practicing safe sex, and preventing excess sun exposure. However, our field has been plagued with sub-standard intervention trials that have failed to adhere to trial design and reporting guidelines (e.g., CONSORT), seriously limiting their update and impact. In order to address this, a group of International experts, led by Simon Bacon, PhD of Concordia University and Gregory Ninot, PhD of the University of Montpellier, came together to found the **International Behavioural Trials Network** ([www.ibtnetwork.org](http://www.ibtnetwork.org)). The goals of this network including facilitating the improvement of the quality of behavioral trials; increasing global capacity to undertake more and higher quality trials; and developing a series of practical tools and resources for researchers. Simon is pleased to announce that IBTN will be hosting its 1<sup>st</sup> international meeting in Montreal from May 19<sup>th</sup>-21<sup>st</sup> in Montreal. In addition to a full day of plenary sessions given by world experts (e.g., Susan Michie, PhD - UCL; Ken Freedland, PhD – U Wash; and Susan Czajkowski, PhD – NIH), IBTN will be hosting a day of interactive workshops where leaders in the field of behavioral medicine design will provide practice support and advice. For more information, see <http://ibtnetwork.org/conf2016/>. Hope to see you in Montreal!

## Senior Investigator Award Winner 2015

### The Ups and Downs of Stress- Related Blood Pressure

Blaine Ditto, PhD  
(Montreal)



Occasionally, while teaching undergraduate Health Psychology, I walk over to a switch and turn a bank of lights off and on to illustrate historical conceptions of the stress response. The genius of early stress researchers such as Walter Cannon and Hans Selye was to notice similarities in the physiological responses to many challenging stimuli (e.g., Cannon, 1929). The fact that many different stimuli can elicit similar demanding physiological responses was an antidote to the very specific patterns proposed by psychoanalytic theorists and popularized the idea that life stress may contribute to physical illness (e.g., Selye, 1956).

That said, research towards the end of the 20<sup>th</sup> century began to notice differences as well as similarities in patterns of physiological response elicited by different stressors. Not all of the lights go on at the same time, or shine as brightly. This research complements work on basic stress mechanisms and helps explain the huge diversity of

stress-related illness. In part, this is why our research has focused on two very different but clearly stress-related cardiovascular disorders: essential hypertension and the vasovagal response. How/why does life stress lead, in one case, to a sustained increase in blood pressure that can contribute to cardiovascular disease whereas in other people blood pressure drops to the point of unconsciousness?

To some degree, the differences are related to perceived adaptive behaviours in different contexts such as the need for continued struggle vs. to focus on an injury. For example, in relation to risk for high blood pressure, we found that middle-class individuals who grew up in low socioeconomic status households had smaller drops in blood pressure while sleeping (more sustained blood pressure) than comparable people who grew up in middle-class households (Campbell et al., 2013). In contrast, blood donors who reported more dizziness and

faintness (associated with larger decreases in blood pressure) felt that they had lost significantly more blood than people who reported fewer vasovagal symptoms despite equal objective blood loss (Ditto et al., 2012). Examining specific stress-related patterns may lead to the development of tailored interventions such as Applied Tension for vasovagal responses (Holly et al., 2012) and deepens theoretical understanding of fundamental human responses to challenge (Ditto et al., 2014).

#### References:

1. Cannon, W.B. (1929). *Bodily changes in pain, hunger, fear, and rage*. New York: Appleton-Century-Crofts.
2. Selye, H. (1956). *The stress of life*. New York: McGraw-Hill.
3. Campbell, T.S., Séguin, J.R., Vitaro, F., Tremblay, R.E., & Ditto, B. (2013). Childhood socioeconomic position is associated with blood pressure dipping in early adulthood: a longitudinal study. *Annals of Behavioral Medicine*, 46, 227-231.
4. Ditto, B., Balegh, S., Gilchrist, P.T., & Holly, C.D. (2012). Relation between perceived blood loss and vasovagal symptoms in blood donors. *Clinical Autonomic Research*, 22, 113-116.
5. Holly, C., Balegh, S., & Ditto, B. (2012). Applied tension and coping with blood donation: a randomized trial. *Annals of Behavioral Medicine*, 43, 173-180.
6. Ditto, B., Byrne, N., Holly, C., Balegh, S. (2014). Social contagion of vasovagal reactions in the blood collection clinic: a possible example of mass psychogenic illness. *Health Psychology*.

## Connections Abroad

### Studying Cannabis Use and Brain Maturation: A Case of Data Sharing.

Tomas Paus<sup>2,3</sup>, MD, PhD  
L. French.  
(Toronto, New York)

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<sup>2</sup>Departments of Psychology and Psychiatry, University of Toronto, Toronto, Canada; <sup>3</sup>Child Mind Institute, New York, USA.

Across the world, over 177 million people use cannabis<sup>1</sup>. As with any other illicit substance, cannabis use emerges during adolescence; lifetime prevalence of cannabis by about 16 years of age varies across countries (e.g., 20% in Canada<sup>2</sup>, 35% in the USA<sup>3</sup>, 25% in the United Kingdom<sup>4</sup> and 39% in

France<sup>4</sup>). Epidemiological evidence points to a robust association between cannabis use<sup>5</sup> and abuse<sup>6</sup> and the higher probability of schizophrenia (and other psychotic disorders) later in life. Schizophrenia begins about five years earlier in men compared with women<sup>7</sup>. In our previous work on the adolescent brain, we noted a striking re-structuring of both grey and white matter during male adolescence<sup>8</sup>. For all the above reasons, we decided to investigate the relationship between early cannabis use, polygenic risks score for schizophrenia

and brain maturation during adolescence – with a particular focus on male adolescents.

As reported in our article, we observed that maturation of the cerebral cortex (its age-related thinning) proceeds differently in male adolescents who used cannabis before age 16 and had higher (above median) polygenic risk score for schizophrenia; this group differed from everyone else<sup>9</sup>. This work was carried out in three cohorts: (1) the Saguenay Youth Study based in Canada; (2) Avon Longitudinal Study of Parents and Children (ALSPAC) based

“Maturation of the cerebral cortex proceeds differently in male adolescents”

in the United Kingdom; and (3) the IMAGEN Study based in Germany, France, the United Kingdom and Ireland. Having access to these samples allowed us to test for the replication of our original observation made in the Canadian sample. We were able to do so thanks to our long-standing involvement in the other cohorts, as co-investigators who contributed to their design, data collection and funding of these efforts. In our experience, such international collaborations are helpful

for many reasons, including opportunities for replication and generalization, as well as increases in statistical power and pooling of relevant expertise and knowledge of many colleagues.

The work described in our article benefited from two other initiatives: (1) Psychiatric Genomics Consortium (<http://www.med.unc.edu/pgc>) and; (2) the Allen Human Brain Atlas (<http://www.brain-map.org/>). These initiatives generated publicly available

data that we have used to calculate the polygenic risk scores for schizophrenia and to relate our brain findings to regional differences in the expression of the cannabinoid receptor 1 (*CNR1*) gene. As pointed out over 10 years ago “... data-sharing will be the currency for progress in neuroscience”.<sup>10</sup> The above work could not have been done in any other way.



References: 1.UNODC. *World Drug Report 2014*. United Nations; June 2014 2014. E.14.XI.7.2.Rotermann M, Langlois K. Prevalence and correlates of marijuana use in Canada, 2012. *Health Rep*. Apr 15 2015;26(4):10-15.3.Johnston LD OMP, Miech RA, Bachman JG, Schulenberg JE. *Monitoring the Future national results on drug use: 1975-2013: Overview, Key Findings on Adolescent Drug Use*. Ann Arbor: Institute for Social Research, The University of Michigan;2014. 4.Hibell B GU, Ahlstrom S, Balakireva O, Bjarnason T, Kokkevi A, Kraus L. *The 2011 ESPAD Report. Substance Use Among Students in 36 European Countries*. Stockholm, Sweden May 2012 2012.5.Manrique-Garcia E, Zammit S, Dalman C, Hemmingsson T, Andreasson S, Allebeck P. Cannabis, schizophrenia and other non-affective psychoses: 35 years of follow-up of a population-based cohort. *Psychol Med*. Jun 2012;42(6):1321-1328. 6.Giordano GN, Ohlsson H, Sundquist K, Sundquist J, Kendler KS. The association between cannabis abuse and subsequent schizophrenia: a Swedish national co-relative control study. *Psychol Med*. Jan 2015;45(2):407-414.7.Hafner H, an der HW, Behrens S, et al. Causes and consequences of the gender difference in age at onset of schizophrenia. *Schizophrenia Bulletin*. 1998;24(1):99-113.8.Paus T, Nawaz-Khan I, Leonard G, et al. Sexual dimorphism in the adolescent brain: Role of testosterone and androgen receptor in global and local volumes of grey and white matter. *Hormones and Behavior*. 2010;57(1):63-75.9.French L, Gray C, Leonard G, et al. Early Cannabis Use, Polygenic Risk Score for Schizophrenia and Brain Maturation in Adolescence. *JAMA psychiatry*. Aug 26 2015. 10.Insel TR, Volkow ND, Li TK, Battey JF, Jr., Landis SC. Neuroscience networks: data-sharing in an information age. *PLoS Biol*. Oct 2003;1(1):E17.

## Expert Report

### Self-compassion – A Resource for Health behaviour Change?

Fuschia, M. Sirois, PhD  
(United Kingdom)  
Department of Psychology  
University of Sheffield,

Finding ways to help people successfully engage in health-promoting behaviours and be resilient to the inevitable failures that occur on the journey to a healthier lifestyle are increasingly becoming important goals as the rates of non-communicable or lifestyle-based diseases continue to rise globally. To this end, simple and effective psychological interventions that focus on boosting positive self-evaluations, such as self-affirmation, have shown some promise as potential means to encourage positive health behaviours. Our meta-analysis provides some suggestive but preliminary evidence that another positive self-evaluation, self-compassion, may also play a role in the self-regulation of health behaviours. We found that self-compassion, taking a kind, compassionate and accepting stance towards oneself during difficult times, was robustly associated with more frequent practice of a range of health-promoting behaviours across 15 independent samples ( $N = 3,252$ ). These behaviours included classic

factors for reducing the risk of chronic disease such as eating fruits and vegetables, regular physical activity, and avoiding junk foods, as well as other known contributors to health such as managing stress and getting a good night's sleep. We posited that the reason why self-compassion may be linked to better health behaviours was that it engendered adaptive emotions. When self-compassionate people experience personal failure, rather than engage in harsh and self-critical responses that contribute to negative mood and feeling worse, they acknowledge the failure but do not become embroiled in the negative emotions. This mindful emotional responding coupled with self-kindness, and awareness that they are not alone in their failures generates positive rather than negative emotional responses. From a self-regulation perspective this is crucial for successfully engaging in health behaviours as negative mood is well known to interfere with behaviour regulation. When we tested this proposition using a subset of samples from the meta-analyses, we found that both

higher positive affect and lower negative affect explained why self-compassion was associated with health-promoting behaviours. Although based on correlational data, our findings have several important implications for research and practice. The findings provide preliminary evidence that self-compassion facilitates the self-regulation of health behaviours in part through its association with healthy emotions. A number of studies have also demonstrated that self-compassion can be increased through an array of brief strategies that can be delivered at the group or individual level, or as self-initiated exercises. Clinical and at-risks populations such as those with modifiable disease trajectories may benefit the most from these easy to administer interventions. Clearly longitudinal research, including research on interventions, is needed to further understand and verify the potential value of self-compassion for health behaviour change. We hope that our research will provide the starting point for such research which could demonstrate that self-compassion is as valuable an addition to the repertoire of tools available for facilitating health behavior change as other positive views of the self. Sirois, F. & al. (2015). Self-compassion, affect, and health-promoting behaviors. *Health Psychology*, 34(6),661-9.

“self-compassion  
facilitates the  
self-regulation of  
health  
behaviours”

## Students in Health Psychology : Award Winners

### Excellence in Health Research Award

Maxine Boudreau, PhD Candidate (Montréal)

Dans le cadre de mes études doctorales à l'Université du Québec à Montréal, j'ai eu la chance de mener à terme un projet de recherche expérimental au laboratoire du Centre de médecine comportementale de Montréal. Ce projet de recherche, supervisé par Dre Kim Lavoie et Dr Simon Bacon, avait pour objectif d'approfondir la compréhension des mécanismes psychophysiologiques sous-jacents à la relation entre le trouble panique (TP) et l'asthme. En provoquant une attaque de panique à l'aide de 35% de dioxyde de carbone, ainsi qu'une crise d'asthme par inhalation de méthacholine, il a été possible d'observer la réactivité bronchique et anxieuse des asthmatiques avec et sans TP. Les résultats obtenus soulignaient l'importance du modèle cognitif-affectif au détriment de celui physiologique en illustrant que les asthmatiques

ayant un TP ont tendance à être hypervigilents vis-à-vis leurs symptômes physiologiques et, par conséquent, pourraient exagérer le nombre et l'intensité de ceux-ci, peu importe la sévérité de leur asthme. Puisque la psychologie clinique fait partie intégrante de mon plan de carrière, ces résultats de recherche m'ont confirmé l'importance du travail cognitif lors du traitement de troubles anxieux tel que le TP. Depuis, je porte une attention particulière à l'influence de la perception du monde, des autres et de soi lors du suivi thérapeutique avec de mes clients en pratique privée. Mon parcours doctoral tire à sa fin et plusieurs portes s'ouvriront à moi quant à la poursuite de mon travail en recherche et clinique. Chose certaine, je serai à l'affût du biais que ma propre perception de la réalité et tenterai de m'ancrer le plus

possible dans le moment présent lors de mes futurs choix de carrière.



### Poster Award : Bringing Existential and End-of-Life Concerns to the Fore

Brahm Solomon, PhD Candidate (Ottawa)

Early in my career interest in Psychology I realized that to be effective I needed to reflect on which clinical concerns brought up the greatest trepidation. I noticed the unease with which many, myself included, handled death, pain, and suffering, and so I devoted my work to engaging with them. The study I presented at this year's convention focuses on the "Loss of Dignity in Severe Chronic Obstructive Pulmonary Disease." It examines the prevalence and correlates of loss of dignity among individuals with severe COPD, and suggests that with appropriate rehabilitative intervention a "fractured" sense of dignity can be "repaired;" something of special relevance to Canadians' current considerations of practices and legislation around "death with dignity." More broadly,

this study fits within the larger frame of my doctoral dissertation examining psychological aspects of pulmonary rehabilitation in COPD. Here I discuss the ideas that those with COPD require both rehabilitative and palliative efforts throughout the course of care and that an interdisciplinary pulmonary rehabilitation program can serve as a model for collaboration between these two approaches. Moving forward, I would like to continue examining the recognition and treatment of existential and end-of-life concerns, play a role in fostering greater clinician and researcher comfort with and training around such concerns, and promote greater collaboration between the more traditional biomedical model of rehabilitation and that of palliative care.

## Developing Knowledge Translation Strategies to Increase Physical Activity in Breast Cancer Survivors

Angela Fong, PhD Candidate  
(Toronto)

In many areas of research, knowledge translation is regarded as an afterthought. Yet, health psychology offers an excellent opportunity to bridge the knowledge-to-action gap, defined as the gap between evidence and practice.

Specifically, up to 90% of breast cancer survivors report not being physically active enough to gain health benefits. Some of these benefits include improved body composition<sup>1</sup>, decreased self-report depression and anxiety<sup>2</sup>, reduced risk for other comorbidities such as cardiovascular disease and type 2 diabetes, and increased quality of life<sup>3</sup>. It is up to researchers to bridge this gap and facilitate physical activity in breast cancer survivors<sup>4,5</sup>.

As a doctoral candidate in the Health Behaviour and Emotion Lab at the University of Toronto (supervisor: Dr. Catherine Sabiston), we are developing novel strategies for translating evidence-based research on physical activity for breast cancer survivors into the community. One key project is assessing contextual factors that influence physical activity in breast cancer survivors. This Canadian Breast Cancer Foundation funded project will involve a cross-sectional needs assessment of breast cancer survivors with regards to physical activity resources (e.g., Please rate your

confidence in your ability to access physical activity experts who understand cancer). Additionally, an environmental scan will be conducted assessing available resources to breast cancer survivors and determining any gaps. Resources will be collected from all levels within Canadian cancer centres from policy, to the built-environment to health care provider. Finally, a website has been developed ([www.icanbeactive.com](http://www.icanbeactive.com)) that will house cancer-specific exercise tutorials, an evidence-based research library for survivors and cancer-specific physical activity guidelines.

I also have strong interests in psychosocial outcomes with respect to physical activity and breast cancer survivorship. Another project is examining the role of dyadic social support for facilitating physical activity in female cancer survivors through an online “match-making” service ([www.activematch.ca](http://www.activematch.ca)). Similar to an online dating service, Active-Match will pair women with their close-to-ideal exercise partner so that they may begin a self-directed exercise program together. Active-Match also offers behavioural counseling materials.

These strategies will aid knowledge translation in this field, and ultimately help to inform future intervention work for breast cancer survivors across the nation.

### References:

1. Battaglini CL, Mills RC, Phillips BL, et al. Twenty-five years of research on the effects of exercise training in breast cancer survivors: A systematic review of the literature. *World J. Clin. Oncol.* 2014;5(2):177-90. doi:10.5306/wjco.v5.i2.177.2. Hutchison SD, Steginga SK, Dunn J. The tiered model of psychosocial intervention in cancer: a community based approach. *Psychooncology.* 2006;15(6):541-6. doi:10.1002/pon.973.3. Sabiston CM, Brunet J. Reviewing the benefits of physical activity during cancer survivorship. *Am. J. Lifestyle Med.* 2012;6:167-177. doi:10.1177/1559827611407023.4. Phillips SM, Alfano CM, Perna FM, Glasgow RE. Accelerating translation of physical activity and cancer survivorship research into practice: recommendations for a more integrated and collaborative approach. *Cancer Epidemiol. Biomarkers Prev.* 2014;23(5):687-99. doi:10.1158/1055-9965.EPI-13-1355.5. Alfano CM, Smith T, de Moor JS, et al. An Action Plan for Translating Cancer Survivorship Research Into Care. *JNCI J. Natl. Cancer Inst.* 2014;106(11):dju287-dju287. doi:10.1093/jnci/dju287.



## We welcome abstract submissions for the June meeting!

We hope that you will join us and enjoy the exciting program we are planning for the annual meeting in beautiful Victoria, BC (June 8-11)! We welcome abstract and symposium submissions in all areas related to health including chronic disease (cancer, cardiovascular disease, diabetes, obesity, lung disease, HIV, hepatitis C), alcohol and substance abuse, pain, sexual health, maternal, infant and child health, psychosomatic disorders (e.g., hypochondriasis, conversion disorder), healthy aging, acute and chronic stress, health behaviors, psychophysiology, and behavioral medicine interventions (e.g., cognitive-behavioral, mindfulness meditation, motivational counselling/communication) for both primary and secondary prevention of chronic disease or health promotion.

We look forward to seeing you in June!

Kim Lavoie, PhD  
Health Psychology and Behavioral  
Medicine Section Chair

## Interventions in Health Psychology

### Managing Cancer and Living Meaningfully

Gary Rodin, MD  
Chris Lo  
Sarah Hales  
(Toronto)

Managing Cancer And Living Meaningfully (CALM) is a brief, semi-structured individual therapy that has been designed to alleviate distress and to promote psychological growth in individuals with advanced disease. This intervention was developed to help individuals with metastatic and advanced cancer manage both the practical and profound issues that arise in the management of their disease and in facing the threat of impending mortality.

CALM supports reflection and problem-solving in relation to four content domains. These are: 1) symptom management and communication with health care providers; 2) changes in self and relations with close others; 3) sense of meaning and purpose; and 4) the future and mortality. Caregivers are invited to one or more CALM sessions in order to support them through this shared problem and to help them address disruptions that have occurred in their relationship as a result of it. CALM therapists are cancer clinicians who have been specially trained in the delivery of CALM and who are supported in this process through weekly workshops and weekly supervision seminars.

CALM may be regarded as a model for a supportive-expressive intervention that is brief and that addresses both practical and existential questions. Clinical trials are being completed in Canada and Germany and are now underway in other European countries. Qualitative research has shown that CALM provides as a safe space for patients and their caregivers to explore and address their fears, to be seen in human terms, and to face the challenges and threats of advancing disease. Phase 1 and 2 trials have shown that CALM leads to a reduction in depressive symptoms and death anxiety and an increase in spiritual well-being. CALM has been shown to have universal relevance and biannual clinical workshops held in Toronto include participants and collaborators from North America, Europe, the Middle East and Asia.



## Help Make Our Section Better!

### A new frontier ..!

Sultan, Serge, PhD  
(Montreal)

Our section has achieved much in recent years. The number of members has sharply increased showing that our visibility and coverage have clearly improved. Members and the executive board have had a key role at the last Ottawa convention. This was reflected, among other activities, by the fantastic one-day workshop on motivational approaches and behaviour change led by Kim Lavoie, not to mention the historic conference given by Blaine Ditto, recipient of the Senior Researcher award in Health Psychology. We need to continue on this track and sustain our growth.

We recently elected a new federal majority at the Parliament.

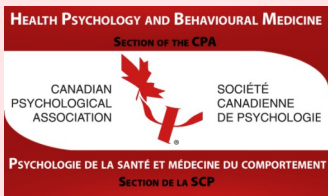
We hope that research, education and health care will be priorities for the future of our country, as we feel especially involved. At the Health Psych section, we believe we have so much potential to expand knowledge, apply psychology to health issues, and change favorably people's well-being. Let us share our hopes and our strengths. It is a good moment to get involved!

Please join the section to make it stronger and let us work as a team to promote our discipline. We need you as contributors to Health Notes, to testify the novelties and improvements you experience in your working environment. Contact us to develop our health psych network. Send an e-mail to the Chair : Kim Lavoie at [kiml\\_lavoie@yahoo.ca](mailto:kiml_lavoie@yahoo.ca), or

myself at :  
[serge.sultan@umontreal.ca](mailto:serge.sultan@umontreal.ca)

À très bientôt,

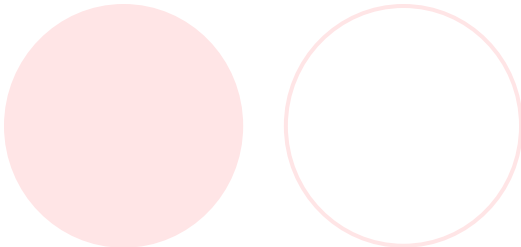
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### *Students - Want to get involved in the CPA Health Section?*

We are presently looking to recruit post-doctorate and undergraduate student representatives. As members of the executive committee, these individuals will be responsible for providing guidance to students at their level of education. If interested, please send us your CV and a letter of intent at [serge.sultan@umontreal.ca](mailto:serge.sultan@umontreal.ca).