

5TH INTERNATIONAL CONFERENCE ON
Self-Determination Theory

2013
CONFERENCE GUIDE

Rochester
New York

Thursday June 27 -
Sunday June 30



Acknowledgements

There are many individuals and organizations that have contributed their time, resources, and energy to making this conference possible, and we are extremely thankful to all of them.

In particular, we gratefully acknowledge our Platinum-Level Sponsors:

The University of Rochester



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We also thank AchieveGlobal
for their generous contribution.



Many staff members, graduate students, & undergraduates from the University of Rochester, Department of Clinical & Social Sciences in Psychology have devoted considerable time and attention to helping in many ways. In particular we thank Cody DeHaan and Barbara Njuguna for their extraordinary work on this Conference Program, as well as Loretta Pratt, Margaret Parisi, and April Engram for working on the organizing and budgetary activities. And we express our gratitude to friends of Self-Determination Theory, Michael Cerasoli and Betsy Hoefen for many behind-the-scene activities.

Finally, we are most thankful for the two people who were primarily responsible for all types of work that brought this event from seeds to fruition — Jennifer La Guardia & Shannon Robertson Hoefen. Quite simply, without the two of them this conference would not have happened.

And, to all of you, thanks for your attendance...and to many of you, we thank you for your talks and posters. We hope you all find the conference both enlightening and enjoyable.

Richard Ryan and Edward Deci

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Welcome Message

We are excited to welcome you to the 5th International Conference on Self-Determination Theory (SDT), in Rochester, NY! This year's conference brings us back to the place where the first conference was held in 1999. We have come a long way since then. In the last 15 years we have witnessed extraordinary growth of the theory, both in the elaboration and the depth of SDT basic research and in the breadth of areas in which the theory is being applied.

The growth and interest in SDT is a testament to the international community of researchers and practitioners who have adopted this framework and have worked hard to elaborate it. Clearly the theory has been engaged, with passion and rigor, by a new generation of scholars and practitioners who continue to sustain and expand the SDT tradition.

We are excited to come together for this 5th International conference on SDT to share the latest developments in research and practice.

SDT Conferences: Past & Present

The 1st International Conference on Self-Determination Theory welcomed 99 people in 1999 to the University of Rochester (Rochester, NY) where 30 faculty presented their work and exchanged ideas about the future of the theory. The first *Handbook of Self-Determination Research*, edited by Deci and Ryan (2002) was one of the many things that grew out of this first gathering.

The 2nd conference, held in 2004 at the University of Ottawa in Canada (hosted by Luc Pelletier and colleagues), drew 200 participants from over 13 countries. The 3rd conference, held in 2007 in Toronto (hosted by Jennifer La Guardia, Edward Deci, Shannon Robertson-Hoefen, and Richard Ryan) brought together over 300 people from 23 countries. And the 4th, held in Ghent Belgium in 2010 (hosted by Maarten Vansteenkiste, Bart Soenens, and the University of Ghent team) attracted over 500 attendees from nearly 30 nations.

This year's conference thus marks the 5th time researchers and practitioners have convened to discuss Self-Determination Theory. Originally this conference was slated to be held in Montreal and was shifted late to Rochester, with a different date from the one announced for Montreal. There were challenges in coming together and, sadly, competing activities for many important colleagues at this time. We especially acknowledge our colleagues who were already committed to the *International Positive Psychology Association* in LA this week, and to all the SDT scholars within the *Promoting Adolescent Physical Activity* (PAPA) Project, who are gathering in Valencia. But despite these challenges, this promises to still be the largest SDT conference yet—approaching 600 participants from 38 countries.

Featured this week will be cutting-edge research and practice from an SDT perspective. There is much to share and learn. There are also forums in different subject areas where you can connect with others sharing your specific interests. Beyond that, we have social events to enhance dialogue and collaborations.

As much as work dominates the scene, we also like to have fun. So work hard, debate hard, and we'll see you on the dance floor on Saturday evening. Welcome to Rochester!

The 5th International Conference on SDT Organizing Team



Edward L. Deci
Jennifer G. La Guardia
Shannon Robertson Hoefen
Richard M. Ryan



General Information

Conference Venues

All events including the Saturday dinner reception will be held at the Rochester Riverside Convention Center (123 E Main Street, Rochester, NY 14604).

Please see the back of the Conference Program Guide or the following pages for a floor plan of the building.

Information & Registration

For questions or to register for the conference, please see the reception/registration table, which is open all day Thursday, and on Friday and Saturday mornings and during all of the lunch breaks.

Internet Facilities

Internet will NOT be provided in the Rochester Riverside Convention Center but there may be wifi hotspots in the building. However, both the Radisson and Hyatt Hotels do offer Internet access.

From the Rochester Conference Team

Welcome to the 5th International Conference on Self-Determination Theory. We hope you have a great time here in our hometown of Rochester, NY. Here are just a few of our favorite places...

**Shannon
Robertson Hoefen**

Favorite Places:
*a walk down East
Avenue & drinks/dinner
at Pier 45 on Lake
Ontario*



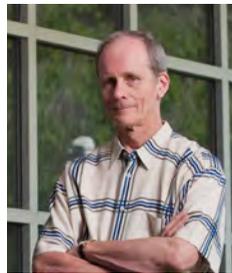
**Jennifer
La Guardia**

Favorite Places:
*Rocco's Restaurant &
Wegmans*



Richard Ryan

Favorite Places:
*Rooney's
Restaurant on
Henrietta St. &
High Falls*



Edward Deci

Favorite Places:
*Max of Eastman &
Pomodoro's on
University Ave.*



Cody DeHaan

Favorite Place:
*Cheshire on
South Avenue*



**Barbara
Njuguna**

Favorite Place:
Trader Joe's

Places of Interest

Within Walking Distance

The Rochester International Jazz Festival

June 21-29 in downtown Rochester (60 Gibbs Street, on the corner of Main St. accessible from East Avenue)

Website: <http://rochesterjazz.com/>

Dinosaur Bar-B-Que (to eat)

99 Court Street, Rochester, NY 14604

Website: <http://www.dinosaurbarbque.com/>

Cornhill Landing Restaurants & Taverns

290 Exchange Boulevard, Rochester NY, 14608

Website: http://rocwiki.org/Corn_Hill_Landing

Rochester Contemporary Art Gallery

137 East Ave., Rochester, NY 14604

Website: <http://www.rochestercontemporary.org/>

In the Rochester Area

George Eastman House

900 East Avenue, Rochester, NY 14607

Website: <http://www.eastmanhouse.org/>

Memorial Art Gallery

500 University Avenue, Rochester, NY 14607

Website: <http://mag.rochester.edu/>

Lake Ontario Beach Park

4650 Lake Avenue, Rochester, NY 14612

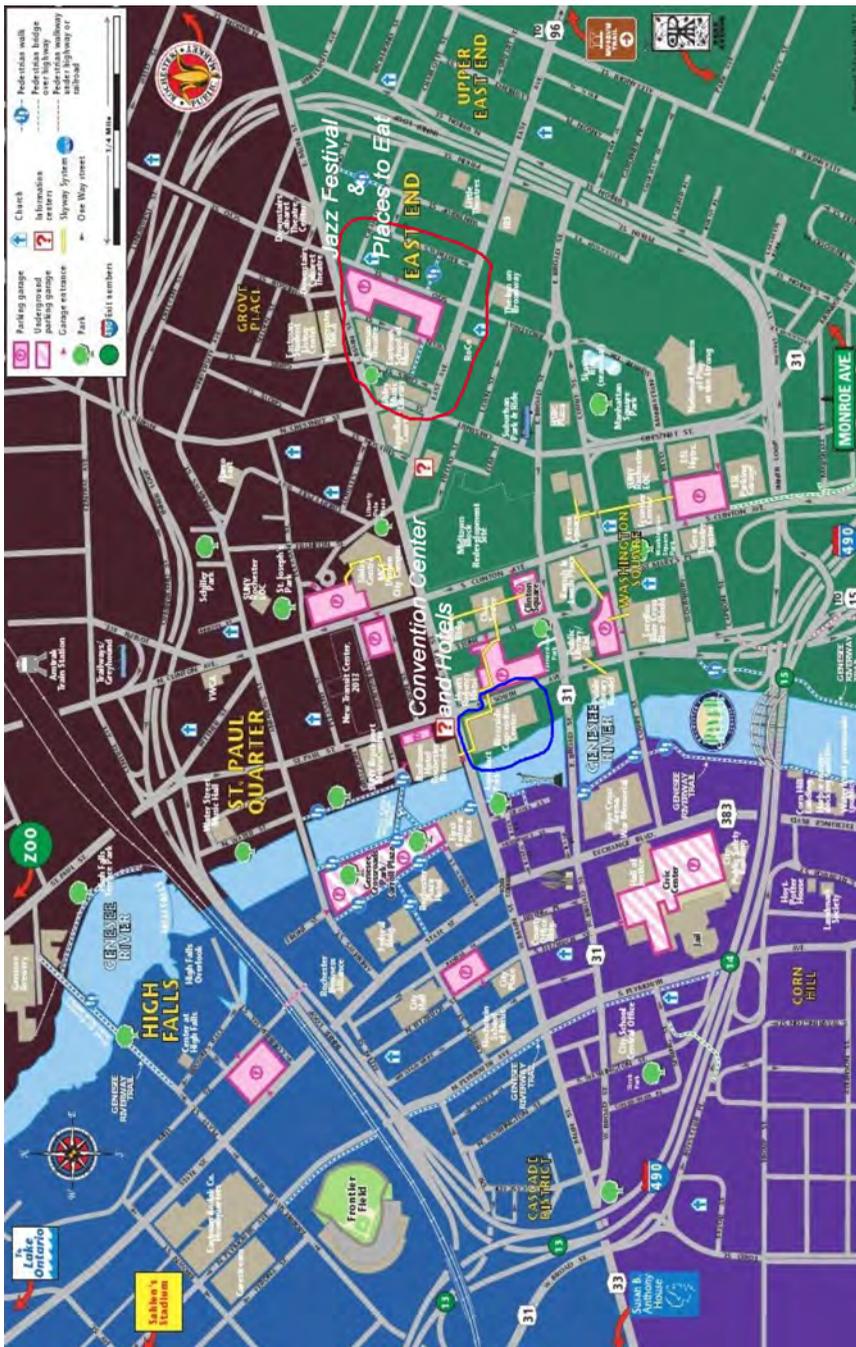
Website: <http://www.monroecounty.gov/parks-ontariobeach.php>

Finger Lakes Wine Trail

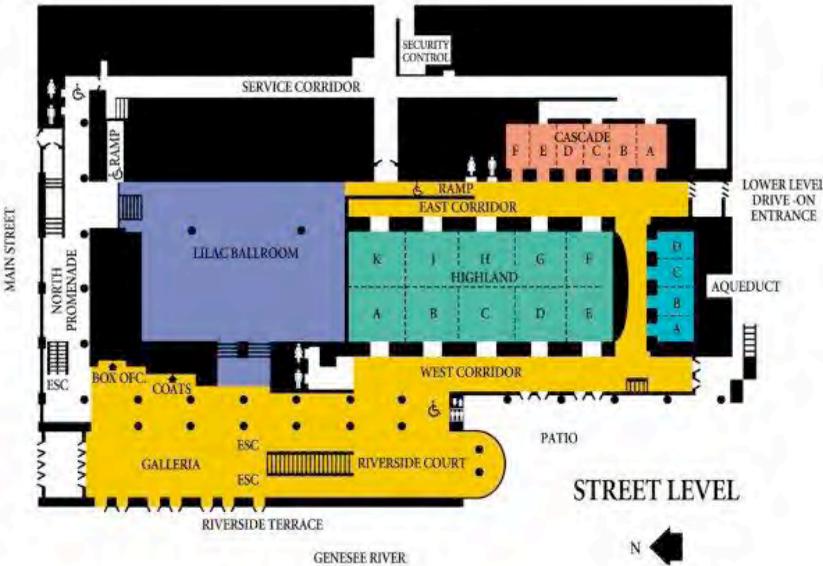
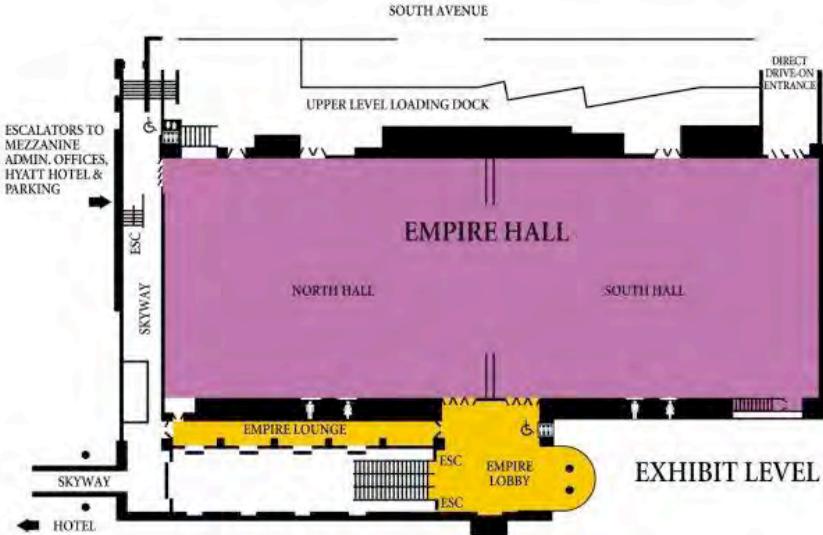
Website: <http://www.fingerlakeswinecountry.com/>

Check out www.visitrochester.com for a list of many more things to see and do and places to eat around town.

Maps | Downtown Rochester



Maps | Rochester Riverside Convention Center



Conference Schedule At-A-Glance

Thursday June 27th		Friday June 28th		Saturday June 29th		Sunday June 30th	
		8:30 – 9:35	Sessions 1A – 1D	8:30 – 9:35	Sessions 5A – 5E	8:45 – 9:15	Coffee
10:00 – 1:00	Registration Opens	9:45 – 10:50	Keynotes 1A & 1B	9:45 – 10:50	Keynotes 3A & 3B	9:15 – 10:20	Keynotes 4A & 4B
1:00 – 1:30	Opening Remarks	10:50 – 11:10	Coffee Break	10:50 – 11:10	Coffee Break	10:30 – 11:35	Sessions 9A – 9C
1:30 – 2:45	New Directions in SDT Research	11:10 – 12:15	Sessions 2A – 2E	11:10 – 12:15	Sessions 6A – 6E	11:35 – 1:30	Lunch & Poster Session C
2:45 – 3:00	Break	12:15 – 2:15	Lunch & Poster Session A	12:15 – 2:15	Lunch & Poster Session B	1:30 – 2:30	Closing Remarks and Q & A with E. Deci & R. Ryan
3:00 – 3:50	New Directions in SDT Research (Continued)	2:15 – 3:20	Sessions 3A – 3E	2:15 – 3:20	Sessions 7A – 7D	Conference Concludes Depart or enjoy Rochester area	
3:50 – 4:15	Coffee Break	3:20 – 3:40	Coffee Break	3:20 – 3:40	Coffee Break		
4:15 – 6:15	Plenary Address: Richard Ryan & Edward Deci	3:40 – 4:45	Sessions 4A – 4E	3:40 – 4:45	Sessions 8A – 8E		
6:15 – 8:00	Opening Reception	4:55 – 6:00	Keynotes 2A & 2B	4:55 – 6:00	Workshops		
Dinner on your own		Dinner on your own		Reception & Dinner			

Program Overview

Thursday, June 27th

10:00 am – 1:00 pm
Convention Center **Registration Opens**

1:00 – 1:30 pm
Lilac Ballroom **Opening Remarks**

1:30 – 2:45 pm
Lilac Ballroom **New Directions in SDT | Part 1**
Lisa Legault Christopher Niemiec Bart Soenens

2:45 – 3:00 pm **Break**

3:00 – 3:50 pm
Lilac Ballroom **New Directions in SDT | Part 2**
Kou Murayama Netta Weinstein

3:50 – 4:15 pm
Galleria **Coffee Break**

4:15 - 6:15 pm
Lilac Ballroom **Plenary Address**
Richard Ryan & Edward Deci

6:15 – 8:00 pm
Galleria **Opening Reception**

Dinner on your own

Program Overview

Friday, June 28th

8:30 – 9:35 am Session 1

Highland A

Session 1A | Classroom-Based Applications in Education

Tomas Jungert

Woon Chia Liu

Highland B

Session 1B | Needs in the Workplace

Claude Fernet

Kaspar Schattke

Anja Van den Broeck

Highland C

Session 1C | Coaching Elite Athletes

Koon Teck Koh

Nikola Medic

Robert Swoap

Highland D

Session 1D | High-Quality Close Relationships

Yaniv Kanat-Maymon

Tamarha Pierce

Juan E. Wilson

9:45 – 10:50 am Keynotes 1

Lilac Ballroom A

Keynote 1A

Avi Assor

Johnmarshall Reeve

Lilac Ballroom B

Keynote 1B

Tim Kasser

C. Scott Rigby

10:50 – 11:10 am

Galleria

Coffee Break

11:10 am – 12:15 pm

Session 2

Highland A

Session 2A | Need Supportive Environments

Arif Hassan Haya Kaplan Barbara Otto

Highland B

Session 2B | Authenticity in Work

Mia Reinholt Fosgaard Hannes Leroy Maree Roche

Highland C

Session 2C | Philosophy of Autonomy

Richard Ryan Randall Curren Valery Chirkov

Highland D

Session 2D | Interventions

Nikos Ntoumanis Anne Elisabeth
Münster Halvari J. Steven Lamberti

Highland E

Session 2E | Spirituality, Coping, and Well-Being

Youngmee Kim Krzysztof Szadejko Karl Bailey

12:15 – 2:15 pm

Empire Hall – North

Lunch & Poster Session A

2:15 – 3:20 pm

Session 3

Highland A

Session 3A | Teaching and New Technology for
Education

Mark Garrison Giann Mendes
Ribeiro Marianne Miserandino

Highland B

Session 3B | Worker Compensation and
Management Practices

Fall Amar Jacques Forest Jian Zhang

Highland C

Session 3C | Parental Autonomy Support

Sook Ning Chua Eugene Chew Ikhlas Ahmad

Highland D **Session 3D** | Values and Aspirations
Helga Dittmar Frederick Grouzet Caroline Pulfrey

Highland E **Session 3E** | Teachers and Learners
Idit Katz Ahyoung Kim Pamela Crary

3:20 – 3:40 pm
Galleria **Coffee Break**

3:40 – 4:45 pm **Session 4**

Highland A **Session 4A** | Policy/Philosophy
Charles Partridge John Wang Kenneth Whaley

Highland B **Session 4B** | New Teachers
Franz Hofmann Giang-Nguyen Nguyen Heidi Olivadoti

Highland C **Session 4C** | Promoting Healthy Behaviors
Sam Hardy Robert Plant T. Cameron Wild

Highland D **Session 4D** | Autonomy in Multiple Cultures
Elise Klein Joan Miller

Highland E **Session 4E** | Physical Activity & Health
Nadia Leroy Irimi Parastatidou Damien Tessier

4:55 – 6:00 pm **Keynote 2**

Lilac Ballroom A **Keynote 2A**
Wendy S. Grolnick Hyungshim Jang

Lilac Ballroom B **Keynote 2B**
Heather Patrick Luc Pelletier

Dinner on your own

Program Overview

Saturday, June 29th

8:30 – 9:35 am Session 5

Highland A **Session 5A** | Multiple Disciplines in Education
Paul Evans Kimberly Noels Spyridoula Vazou

Highland B **Session 5B** | Motivations and Aspirations at Work
Stefan Tomas Guentert Oana Negru Anastasios Pagiaslis

Highland C **Session 5C** | Basic Needs in Youth & Middle Age
Lauren Banting Thomas Curran Patrick Gaudreau

Highland D **Session 5D** | Achievement Goals
Sonja Bieg Aikaterini Michou Gera Noordzij

Highland E **Session 5E** | Unique Student Populations
Hayder M. Yaqoob Al-Jouranj Gina Riley

9:45 – 10:50 am Keynote 3

Lilac Ballroom A **Keynote 3A**
Richard Koestner Maarten Vansteenkiste

Lilac Ballroom B **Keynote 3B**
Nikos Ntoumanis Kennon M. Sheldon

10:50–11:10 am Coffee Break

Galleria

11:10 am – 12:15 pm

Session 6

Highland A

Session 6A | Teaching Quality & Student Motivation

Frederic Guay Catherine F. Ratelle Ron Rogge

Highland B

Session 6B | Community Applications of SDT

Marlien McKay Kathleen Rice David Wadley

Highland C

Session 6C | Prosocial, Materialism, & Religion

Brad Elphinstone Frank Martela Eivind Meland

Highland D

Session 6D | Sport & Physical Activity

Martyn Standage Arlen C. Moller

Highland E

Session 6E | Basic Needs at Work Across the World

Elena Mandrikova Evgeny Osin Drea Zigarmi

12:15 – 2:15 pm

Empire Hall - North

Lunch & Poster Session B

2:15 – 3:20 pm

Session 7

Highland A

Session 7A | Teaching Practices and Stress

Isabelle Green-Demers Martin Lynch Daniela Niesta Kayser

Highland B

Session 7B | Manager/Executive Practices in Motivation

David Facer Laura Graves

*Highland C***Session 7C** | Nursing, Health, and Human Services Systems

Diane Lauver

Etty R. Nilsen

Deborah Wasserman

*Highland D***Session 7D** | Autonomy Support for Children

Mireille Joussemet

Geneviève A. Mageau

3:20 – 3:40 pm**Coffee Break****3:40 – 4:45 pm****Session 8***Highland A***Session 8A** | Modeling in Longitudinal Studies

Julien Chanal

Athanasios
Mouratidis

Sami Yli-Piipari,

*Highland B***Session 8B** | Elementary School Practices

Sherry R. Crow

Bruce Gilberg

Stephen Tonks

*Highland C***Session 8C** | Measurement and Methods

Kathryn Douthit

Masato Kawabata

Carne Viladrich

*Highland D***Session 8D** | Special Topics in SDT

Irene Garrick

Tadashi Hirai

David Webb

*Highland E***Session 8E** | Cognitive and Reflective Processes in Motivation

Ying Hwa Kee

Dmitry Leontiev

4:55 – 6:00 pm**Workshops:***Aqueduct C/D***Behavioral Interventions** | Bert Plant & Cameron Wild*Cascade A***Cross Cultural Issues** | Valery Chirkov*Highland D***Developmental/ Identity Issues in SDT** | Maarten Vansteenkiste & Bart Soenens*Lilac Ballroom A***Education** | Johnmarshall Reeve*Cascade E***Environment & Society** | Luc Pelletier & Fred Grouzet*Lilac Ballroom B***SDT, Motivational Interviewing, & Health** | Geof Williams & Pedro Teixeira*Cascade F***Large-Scale Educational Interventions** | Jim Connell*Cascade B***Mindfulness** | Kirk Warren Brown*Cascade C***National Institutes of Health Grant Process: Tips for Everyone** | Heather Patrick*Empire Lobby***Parenting** | Wendy Grolnick & Avi Assor*Cascade D***Psychotherapy** | Martin Lynch*Highland C***Relationships** | Yaniv Kanat Maymon & Netta Weinstein*Highland E***SDT & Mentoring** | Jennifer La Guardia*Highland B***Sport & Physical Activity** | Martyn Standage*Aqueduct A/B***Virtual Worlds** | Scott Rigby*Highland A***Work & Organizations** | Jacques Forest & Claude Fernet**7:00 pm –****12:00 am****Reception & Dinner***Empire Hall - South*

Program Overview

Sunday, June 30th

8:45 – 9:15 am*Galleria***Coffee Break****9:15 – 10:20 am****Keynote 4***Lilac Ballroom A***Keynote 4A**

Kirk Warren Brown

Guy Roth

*Lilac Ballroom B***Keynote 4B**

Geoffrey C. Williams

Pedro J. Teixeira

10:30 – 11:35 am**Session 9***Highland A***Session 9A** | Motivation and Physical Activity

Malek Ahmadi

Tomás García Calvo

Vali Khalkhali

*Highland B***Session 9B** | Goal Pursuits

Åge Diseth

Marina Milyavskaya

*Highland C***Session 9C** | Need Satisfaction and Energy

Frederick L. Philippe

Idit Shalev

Boon San Coral Lim

11:35am–1:30 pm*Empire Hall - North***Lunch & Poster Session C****1:30 – 2:30 pm***Lilac Ballroom***Closing Remarks and Q & A**

Edward Deci and Richard Ryan

Conference Concludes

Speaker Abstracts

New Directions in SDT

Room: Lilac Ballroom

No Pain, No Gain: Neurophysiological Evidence that Autonomy Boosts Performance by Increasing Error-Related Distress

Lisa Legault, *Clarkson University* ✉ llegault@clarkson.edu

Although SDT research has produced compelling evidence that autonomous motivation promotes self-regulatory success in a wide-range of tasks and life domains, there has been little investigation into the precise mechanisms involved in this fundamental effect. In this research, I explore the relationship between autonomy and goal regulation by assessing an important neuroaffective signal of self-regulation failure – the Error Related Negativity (ERN). Across several studies using various instantiations of autonomy, data converge to demonstrate a link between autonomy and brain-mediated distress in response to self-regulation failure. That is, autonomous motivation predicts heightened error sensitivity, which in turn is related to better self-regulation. Drawing from past and current findings, I suggest that autonomy (but not control) facilitates mindful receptivity to negative affect and threat, which serves to remediate self-regulation efforts and optimize performance.

In Their Own Words: Naturally Emerging Themes of Need Support in Written Narratives across Life Domains

Christopher P. Niemiec, *University of Rochester* ✉ niemiec@psych.rochester.edu

Self-determination theory (SDT) takes interest in how phenomenological experiences shape individuals' thoughts, feelings, and behaviors. Qualitative assessments—when combined with quantitative methods—may provide valuable insight into how such first-person perspectives affect health and wellness. Yet it is interesting to note that very little research within the SDT tradition has used mixed methods to address fundamental questions on the importance of support for basic psychological need satisfaction. I will present results from three studies that used a mixed qualitative-quantitative approach to examine naturally emerging themes of need support in written narratives across life domains. In Studies 1 and 2, coded content associated with need support was most apparent in written narratives about motivating friendships and teachers. In Study 3, coded content associated with need support from the university was predictive of less alcohol use among undergraduates. These findings suggest new methods to assess motivation and well-being within the SDT tradition.

A Crushing Sense of Responsibility: An Examination of the Dynamics Involved in Parental Child-Invested Contingent Self-Esteem

Bart Soenens, *Ghent University, Belgium* ✉ Bart.Soenens@ugent.be

The concept of parental child-invested contingent self-esteem refers to the degree to which parents invest their ego in their child's performance and development. In this presentation I will present data from a program of research examining the correlates, antecedents, and outcomes of parental child-invested contingent self-esteem. We hypothesized that this orientation would relate to more use of controlling parenting tactics in the domain of achievement which, in turn, would relate to maladaptive motivational and well-being outcomes in children and adolescents. In terms of antecedents, we hypothesized that both parental personality features (e.g., a controlled causality orientation) and features of the social environment (e.g., social pressure to be an achievement-promoting parent) would predict an orientation of parental child-invested contingent self-esteem. I will present data relevant to these hypotheses from studies with a diversity of methodological approaches, including multi-informant assessment, observational ratings of parental behavior, and experimental induction of pressure to be an achievement-promoting parent. Together, the findings of this program of research suggest that parental child-invested contingent self-esteem is a relatively common yet motivationally harmful parental orientation.

New Directions in SDT | Continued

Room: Lilac Ballroom

How can Self-Determination Theory and Neuroscience Inform Each Other?

Kou Murayama, *UCLA* ✉ murakou@orion.ocn.ne.jp

Both in psychology and neuroscience, the topic of motivation has recently attracted considerable attention. However, the way to conceptualize and study motivation is fundamentally different between neuroscience and psychology. I call the neuroscientific view of motivation a commonality view, as it posits a common single mechanism to produce motivated behavior. In the first part of the talk, I will present a study on the undermining effect using functional magnetic resonance imaging (fMRI) to illustrate how self-determination theory could challenge and inform neuroscience's commonality view. In the second half of the talk, I turn to the possibility that the neuroscientific perspective could offer some insights into our understanding motivation. Specifically, I will present another fMRI study on self-determined choice to illustrate how neuroscience sheds light on the psychological mechanisms that would have gone undetected by relying only on questionnaire or experimental methodologies. Taken together, these examples highlight how the neuroscientific and self-determination theory perspectives might inform each other in future research.

Autonomous Motivation in a Relational World

Netta Weinstein, *University of Essex* ✉ netta@essex.ac.uk

Autonomy versus control oriented individuals are less defensive and more responsive in new and close relationships, leading to more satisfying interactions with others. This talk will present recent findings that examine in more depth the relational consequences of autonomous motivation, and through these, implications for well-being. These studies use experimental, longitudinal, diary, and correlational designs, and both "objective" and "subjective" indicators in relationships. I will discuss research on adaptive responses in relationships, with findings on inappropriate aggression and prejudice, and on projection of goals. I will also discuss findings on autonomous versus controlled individuals' satisfying relationships in the long term. In addition, I will discuss how autonomy supportive interactions can facilitate individuals' sense of identity and self-coherence. Finally, I will examine how these relational constructs impact on health and well-being, including effects on blood pressure. These findings will be contextualized within the broader self-determination theory literature.

Plenary Address

Room: Lilac Ballroom

Richard Ryan, Edward Deci, *University of Rochester*

Self-determination theory, above all, is concerned with the necessary supports for healthy development, effective learning and performance, and psychological wellness. In this jointly presented talk, the speakers will provide an overview of self-determination theory (SDT), discussing the theory's development; the exponential rise in empirical work testing the theory; and the current, though ever-changing, state of the theory and its evidential base. They will review the theory's six mini-theories: cognitive evaluation theory, organismic integration theory, causality orientations theory, basic psychological needs theory, goal content theory, and relationships motivation theory. They will also comment on various new directions in research, and on the growing applications of SDT across a wide range of domains. Finally, they will reflect on the value of empirically supported theory in the promotion of human flourishing.

Session 1A | Classroom-Based Applications in Education

Room: Highland A

The Benefits of Peer Autonomy Support for Teachers

Tomas Jungert, *Linköping University* ✉ tomas.jungert@liu.se

Nathalie Houlfort, *Université de Québec à Montréal*

Richard Koestner, *McGill University*

In self-determination theory (Ryan & Deci, 2000) autonomy support describes an interpersonal style where a manager takes the perspective of a subordinate into account, presents rationales for decisions, and provides opportunities for choice (Baard et al., 2004). We have recently shown that autonomy support from peers may be more influential than from supervisors (Jungert et al., 2012). In the present study, we sought to distinguish the effects of autonomy support and competence support from peers versus supervisors. Along with measures of support, we measured self-reported work satisfaction and signs of burnout prospectively over one semester in a sample of 177 Canadian teachers. Changes in autonomy support from peers and in competence support from principals over time were significantly related to work satisfaction and burnout signs at T2, when controlling for T1 values. Our findings provide evidence for the importance of both sources and types of support.

E-portfolio In Teacher Education: Can We Motivate Student Teachers To Develop Their Portfolios If They Are Not Graded?

Woon Chia Liu, *National Institute of Education, Singapore, & Motivation in Educational Research Lab (MERL)* ✉ woonchia.liu@nie.edu.sg

Caroline Koh, Stefanie Chye, Ming Ming Zhou, *National Institute of Education, Singapore, & Motivation in Educational Research Lab (MERL)*

This paper looks at how the National Institute of Education, Singapore, conceptualize the NieFolio, a developmental portfolio that is not graded, to develop autonomous thinking teachers. In addition, the paper examines the fulfillment of their basic psychological needs in doing their NieFolio (N = 330). The findings suggest that there are distinct clusters of preservice teachers in terms of the fulfillment of their basic needs. The preservice teachers in the clusters differed in terms of their motivation, perceived level of interest, effort, and value they ascribed to NieFolio, as well as their perceived usefulness of the NieFolio in helping them develop their capacity for reflection, make theory-practice link, and crystallize their beliefs and teaching philosophy. Practical implications of the findings are discussed together with suggestions for NieFolio coordinators and tutors in developing strategies which promote the fulfillment of preservice teachers' basic psychological needs.

Session 1B | Needs in the Workplace

Room: Highland B

On the Motivational Effects of Transformational Leadership: Examining Perceived Working Conditions and Motivation as Key Mechanisms in Employee Functioning

Claude Fernet, *Université du Québec à Trois-Rivières* ✉ claudio.fernet@uqtr.ca

Sarah-Geneviève Trépanier, *Université du Québec à Trois-Rivières*

Stéphanie Austin, *Université du Québec à Trois-Rivières*

Jacques Forest, *Université du Québec à Montréal*

Marylène Gagné, *Concordia University*

This study aims to increase our understanding of the motivational effect of transformational leadership on employee functioning. Drawing on the transformational leadership literature, the job demands-resources model, and self-determination theory, we propose a model in which transformational leadership is related to employee attitudes (occupational commitment, intention to quit), performance (at the individual and organizational level) and psychological health (burnout and psychological distress) through two explanatory mechanisms: perceived working conditions (job demands and resources) and employee motivation (autonomous and controlled). This research was conducted in two occupational settings (nurses and school principals) using different variable operationalizations and types of assessment (self-reported and objective). Results from both studies provided support for the proposed model. They suggest that transformational leadership has a favorable impact on employees' perception of their working conditions, thereby affecting their motivation, which in turn predicts their functioning. Theoretical and practical applications, as well as directions for future research will be discussed.

The Impact of Autonomy and Competence Support on Achievement Motivation Depends on the Job Context

Kaspar Schattke, *John Molson School of Business, Concordia University, Canada* ✉

k_schatt@jmsb.concordia.ca

Tomas Jungert, *Linköpings Universitet, Sweden*

Marylène Gagné, *John Molson School of Business, Concordia University, Canada*

Locke and Latham (1990) suggested that intrinsic motivation is often confused with achievement motivation and proposed to distinguish them. Two recent studies indicated that these constructs can be separated into distinct factors (Schattke et al., 2012) that each predict different outcomes (Gagné et al., 2012). The goal of this research was to examine whether both constructs were affected differently by the same antecedents, namely autonomy and competence support. In four consecutive vignette experiments

(N=657), we manipulated either autonomy or competence support in either a restaurant or an office vignette. Studies 1 and 2 (restaurant-vignettes) showed that autonomy and competence support fostered intrinsic but not achievement motivation. In Studies 3 and 4 (office-vignettes), autonomy and competence support fostered achievement and intrinsic motivation. The studies show once again that intrinsic and achievement motivation can be distinguished but also show that, depending on context, they are differentially affected by autonomy and competence support.

The Role of Basic Psychological Need Satisfaction in the Relations of Job Hindrances, Job Challenges, and Job Resources

Anja Van den Broeck, *KU Leuven & HUB* ✉ anja.vandenbroeck@ppw.kuleuven.be

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Job design is considered as one of the most important factors impacting on employees' motivation. Researchers have tapped into various processes through which different job characteristics may execute their influence. Based on Self-Determination Theory, we suggested that satisfaction of the basic psychological needs for autonomy, competence and relatedness may represent a unifying mechanism through which job characteristics grouped as job hindrances, job challenges and job resources relate to work related well-being. Results in a heterogeneous sample of 1,282 employees confirmed that need satisfaction plays a (partial) mediating role in the health-impairing associations of job hindrances and the health-enhancing relations of job challenges and job resources. Particularly the satisfaction of needs for autonomy and relatedness carried these results. Diary data is currently being selected to further scrutinize this process on the daily level. The discussion centers on the importance of need satisfaction as a route to employees' thriving.

Session 1C | Coaching Elite Athletes

Room: Highland C

Relationship Between Structured Reflection And Changing Coaching Behavior: A Case Study of High Performance Basketball Coaches

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The importance of reflective practice has been underscored in many life contexts including sports coaching, however, there is a paucity of literature related to high performance coaching. The purpose of the present study was to examine the relation between reflection and behavior change using self-report notes and formal feedback from using a coach behavior measure. Specifically, 2 head basketball coaches and 29 players of elite youth teams participated in the study. The Singapore Coaching Behavior Scale for Sport (Basketball) (Koh, Mallett, & Wang, 2009) and semi-structured interviews were used to obtain data about the coaches' coaching behaviors. Results showed that behavior change was found to be contingent upon the coach's 'open mindedness' to improve coaching practice. Coaches were centered mainly on 'technical' and to a lesser extent 'practical' reflections as these aspects were closely related to their work. This study partially supported the potential of using structured reflection to increase high performance coaches' self-awareness level and improve coaching practices.

The Effect of Passion on Persistence and Dropout Behaviours of Masters Track and Field Athletes Over an Eight-Year Period

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Bradley Young, *University of Ottawa*

The purpose of this study was to examine how harmonious and obsessive passion affect sport dropout behaviours of masters athletes. Participants (M age at baseline = 55.6 years, SD = 9.8; males = 70, females = 31) at annual national masters championships for USA track and field completed the Passion Scale (Vallerand et al., 2003). High harmonious passion was associated with higher attendance at championships in the third subsequent year and across the eight following years (all ps < .05). Low obsessive passion was associated with lower probability of attending championships after the first subsequent year of competition (p < .05). Supplementary results showed that masters athletes who reported high obsessive passion showed disrupted participation patterns at national championships (p < .05), but only when they were relatively-older (i.e., when in constituent year 3, 4, and 5) and potentially at a competitive disadvantage in an age grouping.

Inside Elite: The SDT-Based Strategies of Highly Effective Athletes

Robert Swoap, *Warren Wilson College* ✉ bswoap@warren-wilson.edu

Based on my research and applied work in health and sport psychology, I argue that elite athletes differ from most of us in behavior, practice, habit, motivation and ability to persist under adversity. Using case studies of Olympic, professional, and other elite athletes, I examine how athletes successfully set up conditions that facilitate autonomy, competence, and relatedness. The skills and strategies they use are associated with increased performance, growth, consistency, persistence, and resilience. Further, we can apply this knowledge to inspire and instruct others on how to deepen and improve their own lives—at work, at home and on the playing field. Specific examples in the fields of behavioral medicine and sport psychology will be used to illustrate applications of elite athletes' approach to motivation and effective goal pursuit.

Session 1D | High-Quality Close Relationships

Room: Highland D

The Harmful Effects of Conditional Regard on Relationship Quality

Yaniv Kanat-Maymon, *Interdisciplinary Center (IDC) Herzliya* ✉ [ymaymon@gmail.com](mailto:yamaymon@gmail.com)

Four studies demonstrated the harmful effects of Conditional Negative and Positive Regard (CNR and CPR respectively) on relationship quality. Study 1 involved romantic partners and revealed that perceived CNR was associated with poor relationship quality. Study 2 involved a multilevel design which demonstrated that CPR was associated with relationship dissatisfaction within and between 4 dyadic relationships (e.g., father, mother, friend, & romantic partner). In study 3, diary data showed that CNR and CPR predicted relationship dissatisfaction at the person level. Across days, CNR predicted relationship dissatisfaction while CPR predicted relationship satisfaction. Study 4 explored sexual relationships. Results indicated that perceived conditional sex predicted lower sexual frequency, poor sexual desire, and more sexual anxiety which in turn predicted relationship dissatisfaction. The unique possible effects of CNR and CPR to relationship quality will be discussed.

Mothers' and Fathers' Self-Determination toward Childcare and Need Satisfaction Within the Couple

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Catherine F. Ratelle, *Department of education, Laval University*

Valerie Demers, Veronique Beaudoin, Caroline Martin, Linda Xiang Wang, Joelle Dube, *School of psychology, Laval University*

Becoming a parent is a life transforming event in adulthood, a source of much joy and many challenges. New coparents must learn to “negotiate” their parental roles and responsibilities. This study examines how partners can support or thwart each other's psychological needs during this process, thereby promoting or hindering their partner's autonomous motivation toward childcare. In 6 focus groups (3 per gender; 6- 8 participants each), mothers and fathers (child 0-3 years) are asked to discuss how their partner influences their childcare motivation. Preliminary content analyses of two groups suggest similarities between mothers and fathers, but also highlight differences in partner behaviors associated with parental need satisfaction. These resonate with gendered differences in societal expectations of parents, their presumed competence in caring for young children and the centrality of parenthood in their identity. Findings also highlight the interconnected nature of parenthood with other life domains, like education, work and leisure.

Personal Autonomy and Preferred Characteristics in a Dating Partner: A SDT Approach to Mate Preferences Tested in Chile

Juan E. Wilson, *Universidad de Chile* ✉ juan.enrique.wilson@gmail.com

Fernanda Barrera, Eduardo A. Mora, Marion P. Garolera, Denise V. Gerber, Michele Dufey, Valeria V. González, *Universidad de Chile*

Dispositional autonomy is a general motivation for personal and interpersonal growth. Two studies with Chilean university students tested the hypothesis that autonomous individuals prefer growth-supporting over image-promoting characteristics in a romantic partner. Autonomy was indexed by a predominance of intrinsic over extrinsic life goals in Study 1 ($n = 200$, 69% females), and an autonomous over a controlled causality orientation in Study 2 ($n = 92$, 60% females). Participants in both studies completed a questionnaire about the value they attached to different characteristics in a potential dating partner. Factor analyses showed that these valued characteristics were organized in eight domains within two supra-ordinated categories: the growth-supporting factor included acceptance, competence support, altruism, and authenticity, whereas the image-supporting factor included popularity, financial resources, competitiveness, and (for female respondents) beauty. Significant associations in the expected directions were found for all domains in Study 1, and for seven of them in Study 2.

Keynote 1A

Room: Lilac Ballroom A

Studying Conditional Regard and Autonomy Support across Time, Temperament, Communication Channels and Methods

Avi Assor, *Ben-Gurion University of the Negev* ✉ assor@bgumail.bgu.ac.il

The talk will focus on the following topics: 1) Pre-natal parents' conditional-regard (CR) and autonomy-support (AS) orientations and infant temperament as determinants of parents' post-natal behavior toward their first child: A longitudinal study shows that infant's disposition to be easily frustrated enhances parents' pre-natal tendency to use CR with their 18-month child, and reduces parents' pre-natal tendency to use AS practices. 2) Vicarious communication of CR via reactions to siblings: Two studies suggest that parents can cause their children to feel conditionally regarded by: (a) direct reinforcement, and (b) vicarious learning, in which parents' show more regard to siblings when they succeed academically. Each process has a unique contribution to introjected motivation and consequent self aggrandizement and devaluation. 3) Is the use of positive CR problematic also when conceptualized and assessed in ways that are consistent with recommendations of behavioral approaches? Relevant correlational and experimental methods and findings will be presented

New Discoveries from Longitudinally-Designed, Classroom-Based SDT Research

Johnmarshall Reeve, *Korea University, Seoul, South Korea* ✉ reeve@korea.ac.kr

Using longitudinally-designed, classroom-based research, we found support for SDT's basic motivation mediation model but we also found much more. Specifically, we made the three new discoveries about the downstream consequences of changes in students' classroom engagement. These changes mediate and fully explain the otherwise direct effect that motivation has on class-related outcomes, precede and longitudinally cause changes in student motivation, and precede and longitudinally cause changes in teacher-provided autonomy support. Through their acts of engagement versus disengagement, students create the conditions under which they attain or fail to attain sought-after outcomes, motivate or demotivate themselves, and recruit greater or lesser autonomy support. Overall, our longitudinal research shows that teacher activity (i.e., autonomy support vs. teacher control) is important early in the semester, but it is student activity that is important late in the semester, as students become architects of their own outcomes, motivation, and learning environments

Keynote 1B

Room: Lilac Ballroom B

Materialism and Well-Being: A Meta-Analysis

Tim Kasser, *Knox College* ✉ tkasser@knox.edu

Self-determination theory (SDT) was among the first psychological theories to propose that the prioritization of money and associated aims can pose a risk to individuals' well-being. This talk reviews a meta-analysis of 656 effect sizes from 216 independent samples, the results of which reveal a consistent, significant negative association between materialistic values and people's well-being. The strength of the association varied somewhat, depending in particular on the way in which materialism was measured and the types of well-being assessed. Analyses examining other moderators yielded relatively few significant effects, suggesting that the negative association is robust across a variety of study, sample, economic, and cultural factors; materialism was, however, more strongly linked to lower well-being in countries that were wealthier and whose citizens focused on affective autonomy values. Mediation analyses supported the SDT hypothesis that the negative link between materialism and well-being is explained by lack of psychological need fulfilment.

Self-Determination Theory in the Digital World: Creating a Meaningful Model of “Motivational Design”

C. Scott Rigby, *Immersyve, Inc.* ✉ scott@immersyve.com

The growing ubiquity of “connected” devices has resulted in a significant shift in the dynamics of the marketplace: Each individual is now empowered to gather information about their lives and the world and choose amongst a variety of digital activities almost instantaneously using devices tucked into a briefcase, a backpack, or increasingly – even a pocket. An important aspect of this societal shift is the rise of motivation as a key focus in the development of interactive products, devices, and services that address topics including health care, entertainment, education, and a host of commercial concerns. This talk will explore these trends and the central role that self-determination theory is playing as an applied science, including a discussion of how principles drawn from SDT increasingly assist in the development of meaningful and valued experiences in the digital world.

Session 2A | Need Supportive Environments

Room: Highland A

Learning Climate, Basic Need Satisfaction, Perceived Choice, Study Engagement, and Students' Performance

Arif Hassan, *International Islamic University Malaysia* ✉ arifh@iiu.edu.my

The study was conducted on undergraduate students from a University which has strong Islamic culture. It was of interest to examine how the Islamic normative environment enabled or un-abled the basic need satisfaction (Autonomy, Competence, and Relatedness), students' perceived choice, and shaped teachers' motivational strategy. Furthermore, the objective was to examine how these factors contributed to students' study engagement and their CGPA. Sample consisted of 529 undergraduate students (Males = 224; Females = 305) who were randomly drawn from six faculties. The result indicated that autonomy, competence, and relatedness needs were endorsed positively and in that order, however, students' expressed less perceived choice. Satisfaction of competence needs and the learning climate contributed to students' study engagement. Except for satisfaction of relatedness need which contributed negatively to students CGPA no other factor contributed significantly to the students' CGPA scores.

The Effects of Autonomy-Supportive and Suppressive Teacher Educators' Practices on Pre-Service Teachers' Learning Experience

Haya Kaplan, *Kaye Academic College of Education and Ben Gurion University Israel* ✉ kaplanp@bgu.ac.il

Nir Madjar, *Bar-Ilan University*

The present study was conducted as part of SDT-based reform process within a multicultural college of education, comprising half Bedouin (collectivistic culture) and half Jewish (individualistic culture) pre-service teachers. The study examined cultural differences in the effects of teacher educators' autonomy support and suppression on motivation, investment and achievements. Participants were 215 Bedouin and 168 Jewish pre-service teachers, who reported perceptions of the lecturers' practices, and their own motivation and self-investment in learning; grades were obtained from the college's grade records. Applying structural equation modeling with multiple-group analysis revealed that autonomy-suppressive practices predicted controlled motivation, whereas autonomy-supportive practices (i.e., providing choice, explaining relevancy, and allowing criticism) predicted autonomous motivation, which in turn led to higher self-investment and achievements. Two paths were significantly different between Bedouin and Jewish students, indicating that Bedouin students were more affected by teachers' behaviors. These findings inspired a culturally sensitive reform with emphasis on autonomy-supportive teaching.

The Role of the Perceived Learning Context for Prospective Teachers' Intrinsic Motivation

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As the motivation of German prospective teachers is recently discussed, this study aimed at examining the question of whether intrinsic motivation of teacher students can significantly be predicted by their perceived learning context. Theoretically, the present study is based on self-determination theory (SDT) which assumes the social context to play a core role in the development of intrinsic motivation. In all, 109 German teacher students participated. They filled out questionnaires which assessed intrinsic motivation and their perceived learning context. Additionally, cognitive abilities and extraversion were assessed as control variables. Data were analyzed by multiple regression analyses, which revealed a significant impact of the learning context on students' intrinsic motivation. Moreover, it was investigated, whether the learning context can even significantly predict students' intrinsic motivation after controlling for cognitive abilities and extraversion. As expected, the blockwise multiple regression analysis also confirmed the high relevance of the learning context.

Session 2B | Authenticity in Work

Room: Highland B

What Makes Us Behave Prosocially? The Interplay between Institutions, Beliefs about Prosocial Norms, and Autonomous Motivation

Mia Reinholt Fosgaard, *Copenhagen Business School*

Toke Reinholt Fosgaard, *University of Copenhagen* ✉ tf@foi.ku.dk

Nicolai Foss, *Copenhagen Business School*

Research shows that institutions have an impact on individuals' decision to engage in prosocial behaviors. Using a public goods game that simulate a market and a non-market context, we go beyond labeling effects and present additional evidence that prosocial behaviors are performed at lower levels in market contexts compared to non-market contexts. We contribute to extant research by investigating how specific psychological mechanisms and their interplay differ across institutions, and how this impacts prosocial behaviors. Specifically, individuals' beliefs about prosocial norms are more important for prosocial behavior in a market than a non-market context, while the opposite is true for their autonomous motivation to engage in prosocial behaviors. Furthermore, holding high beliefs regarding the prosocial norm reduces the positive effect of autonomous motivation on prosocial behavior in a non-market, while this is not the case in a market

On Being True to Oneself at Work: The Positive Role of Authentic Functioning in Organisations

Hannes Leroy, *University of Leuven* ✉ hannes.leroy@kuleuven.be

This dissertation investigates the positive role of authentic functioning in organizations. This dissertation builds on the conceptual underpinning of authentic functioning (Kernis, 2003) and the theoretical underpinning of Self-Determination Theory (SDT) (Deci & Ryan, 2000). In a first study we demonstrate how authentic functioning of leaders and followers co-produce follower basic need satisfaction as an antecedent of work role performance. The second study investigates how mindfulness relates to work engagement through authentic functioning, and study these relationships cross-sectionally and dynamically as they co-evolve over a training. The third study looks at how leader behavioral integrity (does the leader walk the talk?) reduces treatment errors in hospitals by simultaneously fostering a high priority for safety and a psychologically safe environment where one can admit mistakes. This dissertation sheds more light on our understanding of the concept of authenticity and its role in empowering employees and fostering sustainable outcomes.

Towards a Comprehensive Model of Leader Wellbeing.

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Jarrod Haar, *Massey University, New Zealand*

As few SDT studies test more than one dimension, the present study tests a metamodel of SDT to include three facilitators (aspirations, mindfulness and motivation), the three needs (autonomy, competence and relatedness), and perceived autonomous support (PAS) towards the hedonic wellbeing of 386 New Zealand leaders. Findings showed that global aspirations was negatively related to negative affect, while mindfulness, global motivations and PAS were positively related to life satisfaction and positive affect and negatively to negative effect. Of the three needs, autonomy was positively related to life satisfaction, while competence was positively related to positive affect and negatively related to negative effect. PAS was also tested as a moderator and interacted significantly with relatedness towards life satisfaction and mindfulness towards negative affect. Overall, wellbeing is greater for those with high SDT dimensions and high PAS. As such, this study provides a comprehensive analysis of wellbeing through a metamodel design.

Session 2C | Philosophy of Autonomy

Room: Highland C

Autonomy: On the Importance of its Definition

Richard Ryan, *University of Rochester* ✉ richard.ryan@rochester.edu

The concept of autonomy is central to self-determination theory (SDT), and yet is perhaps the most controversial construct within the theory. Autonomy can be variously defined, and yet the definition of autonomy within the SDT framework is one that is based on philosophical perspectives in both existential-phenomenological and analytic schools of thought, as well as several Eastern philosophical perspectives. In this brief introduction to the symposium, Dr. Ryan will review the definition of autonomy within SDT, distinguishing from concepts such as independence, individualism and separateness. He will also emphasize the functional nature of autonomy, and its groundedness in human nature.

Autonomy and Well-being: Bridging Philosophy and Self-determination Theory

Randall Curren, *University of Rochester* ✉ randall.curren@rochester.edu

The focus of this talk is the relationships between autonomy and well-being. I survey four philosophical conceptions of this relationship, which I call the instrumental, weak intrinsic, eudaimonistic, and perfectionist views. I defend a eudaimonistic view of well-being, autonomy, and the relationship between them as a suitable basis for public policy, including educational policy, in a pluralistic democracy. This defense relies on a unifying conception of the structure of eudaimonistic accounts, which is then used in explaining SDT's eudaimonism and its understanding of the relationship between autonomy and well-being. I then address the nature of autonomy, and defend a eudaimonistic account that assigns importance to both the circumstances of action and the responsibility a person takes for herself as an actor in the world, with respect to three distinguishable dimensions of action. I suggest this account may offer SDT a more elaborated conception of autonomy and new questions to research.

A Theoretical Analysis of Psychological Autonomy: From Stoics to a Self-Determination Theory

Valery Chirkov, *University of Saskatchewan* ✉ v.chirkov@usask.ca

This presentation will provide theoretical as well as historical and philosophical analyses of human psychological autonomy. It will start by paying tribute to the Stoic philosophers, who were the first to draw attention to this phenomenon. Several forms of autonomy will be discussed: personal, motivational and behavioral autonomy/freedom. The presentation will address major components and level of functioning of psychological autonomy and will also try to hypothesise the psychological mechanisms of its execution. A person's experiential self is pronounced as the regulatory centre of all forms of autonomy. Autonomy will be presented as a mind set and a configuration of skills that people may acquire in their lives. Some directions for practical application of the proposed approach to help people reach happiness, acquire resilience and achieve optimal function will be outlined.

Session 2D | Interventions

Room: Highland D

Toward More Empowering Youth Sport Experience: An Introduction to the Aims, Methods, and Initial Findings Stemming from the European-wide 'PAPA' Project

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J.L. Duda, *Project Director, University of Birmingham, UK*

E. Quested, *Project Manager, University of Birmingham, UK*

B. Wold & O. Samdal, *Universitetet i Bergen, Norway*

I. Balaguer, *Universitat de València, Spain*

P. Sarrazin, *Université Joseph Fourier Grenoble, France*

A. Papaioannou, *Panepistimio Thessalias, Greece*

Y. Ommundsen, *NIH, Norway*

H.K. Hall, *York St. John University, UK*

J. Cruz, *Universitat Autònoma de Barcelona, Spain*

Presented on behalf of the PAPA Consortium by N. Ntoumanis

In this brief overview presentation, the background and focus of the European Commission FP7 Health) funded PAPA project (Promoting Adolescent Physical Activity; www.projectpapa.org) will be described. The PAPA project customized for grassroots football and implemented a coach training programme (Duda, in press), that pulls from achievement goal frameworks, Self Determination Theory as well as models of behavioural. Using mixed-methods, we rigorously evaluated the impact of the programme upon the motivational climate operating, motivation regulations, basic need satisfaction and other outcomes (e.g., self esteem, enjoyment, anxiety, physical activity levels, intentions to dropout) among 7769 grassroots players (6641 males, 1020 females, (M age = 11.56, SD = 1.40) from France, Greece, Norway, Spain and UK. Coaches completed questionnaires and sub-samples were observed and/or participated in post-intervention focus groups. Preliminary findings and methodological advancements evolving from the project will be highlighted.

Motivational Predictors of Dental Visits: A Randomized Clinical Trial

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Hallgeir Halvari, *Buskerud University College*

We tested a Self-Determination Theory model of dental visits in which the following variables were hypothesized to be the predictors: (a) patients' relative autonomous perceived locus of causality (RAPLOC); (b) a dental clinic intervention designed to promote dental care competence in an autonomy-supportive way; (c) integrated motivation for treatment; and (d) the interaction of patients' RAPLOC and the dental clinic intervention. A randomized two-group experiment was conducted at a dental clinic with 141 patients. Measures were: Causality orientations at baseline, integrated motivation for treatment at baseline and after 5.5 months, and dental visits after 5.5 months. The results indicated that RAPLOC, changes in integrated motivation for treatment, and the interaction of RAPLOC and the intervention significantly positively predicted dental visits ($R^2=.28$). The interaction means that the intervention strongly positively predicted dental visits after 5.5 months for patients whose RAPLOC was high, but not for patients whose RAPLOC was low.

Using Legal Leverage to Promote Treatment Adherence: Are We Supporting or Undermining Personal Autonomy?

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Catherine Cerulli, *URMC Department of Psychiatry*

Legal leverage is defined as using legal authority to promote participation in treatment. It is widely used within mental health courts, drug courts, mandated outpatient treatment, and other intervention strategies involving individuals with mental illness and/or chemical dependency. Despite its common use, legal leverage represents a contentious issue within the public arena. Critics characterize it as a coercive form of social control that undermines personal growth and autonomy. However, treatment strategies that utilize legal leverage seek to promote these qualities, and medical professionalism standards call for respect for patient autonomy. While opinions on legal leverage abound, there is a dearth of data about its impact on autonomy. This paper presents focus group data obtained from severely mentally ill adults who received legal leverage through forensic assertive community treatment (FACT) programs. Findings are presented in the context of the self-determination theory of human motivation, and social and policy implications are discussed.

Session 2E | Spirituality, Coping, and Well-Being

Room: Highland E

Caregiving Motivation Predicts Long-term Spirituality and Mental Health of the Caregivers

Youngmee Kim, *University of Miami* ✉ ykim@miami.edu

Charles Carver, *University of Miami*

Rachel Cannady, *American Cancer Society*

The salutary effects of autonomous motives on one's well-being over an extended period is hypothesized and tested with cancer caregivers. Family members' caregiving motives were measured two years post-diagnosis (T1) and dimensions of both spirituality and quality of life were measured at five years post-diagnosis (T2). Caregivers' age, gender, income, and subjective and objective caregiving strain were also measured at T1 as covariates. Results from 369 caregivers using SEM testing spirituality dimensions (peace, meaning, and faith) as mediator of the link from caregiving motives (external, introjected, and identified-integrated) to quality of life (mental and physical health) revealed that identified-integrated caregiving motives at T1 related to better mental health at T2 because they led caregivers find peace and meaning in life at T2, whereas introjected motives related to poorer mental health. Findings expand the current knowledge on autonomous motives to cancer caregivers and its lasting impact for an extended period.

Psychological Effects of the Earthquake in Emilia Romagna (Italy)

Krzysztof Szadejko, ✉ k.szadejko@gruppoceis.org

There is a high probability, that after the recent earthquake in Emilia Romagna Region (Italy) in 20 May 2012, significant numbers of survivors will suffer some form of permanent psychological symptoms, most likely proportional to the degree of personal loss suffered. The aim of the study was to examine the impact of the earthquake on general psychological health and anxiety and the function of the satisfaction of the Basic Psychological Needs. Basic Psychological Needs Scale (Deci & Ryan, 2000, Szadejko, 2003), General Health Questionnaire (Goldberg, 1972), Test Anxiety Inventory (Spielberg, 1980) and Impact of Event Scale (Weiss & Marmar, 1996) were administered to verify the impact of the earthquake on survivors. Data were collected in June-October 2012. 200 survivors completed a questionnaire anonymously. The results show the very strong impact of the earthquake on anxiety and general health. Innate needs satisfaction emerged as a protective factor in relation to the anxiety and the general psychological health.

Internalization of Distinctive Religious Practices is Associated with Increased Well-Being

Karl Bailey, *Andrews University* ✉ kgbailey@andrews.edu

Previous research on the internalization of religion across several different Christian samples indicates that internalization is associated with a number of measures of increased subjective well-being. The current study replicates this finding and extends it to a distinctive religious practice, Sabbath keeping. Internalization of Sabbath keeping was measured by a new instrument developed within a Self-Determination Theory framework. A factor analysis of responses from 347 Sabbath-keeping Christians from the same community supported three factors underlying Sabbath keeping experiences, corresponding to introjection of, identification with, and integration of Sabbath keeping practices. Internalization (higher scores on identification and integration, lower on introjection) of Sabbath keeping was associated with higher subjective well-being. Moreover, internalization of Sabbath keeping was more strongly correlated with well-being than was the general measure of internalization of religion. Internalizing distinctive practices within a religious community may play an important role in the overall internalization of religion, and thereby well-being.

Session 3A | Teaching and New Technology for Education

Room: Highland A

A Model for Using Self Determination Theory to Guide Developing Technology Driven Courses in Higher Education

Mark Garrison, *D'Youville College* ✉ garrison@dyc.edu

Faculty are increasingly using a variety of new tools (e.g., online tutorials, wikis, blogs, simulations, video games) in traditional, hybrid and fully online contexts. For realizing the full potential of these technologies, this paper presents a model for developing technology driven courses. The model is based on Self-Determination Theory (SDT) as it has been applied to education, and recent research on technology and motivation (e.g., video games). Guided by SDT, technology may help create social context that lead to deep learning. This model will guide the development of a course that is part of a larger study examining how the application of new technologies within an SDT framework can support student autonomy, competence, and relatedness, leading to increases in students' intrinsic motivation and two forms of extrinsic motivation, identified and integrated regulation.

Self-Determination to Learn Guitar at Distance

Giann Mendes Ribeiro, *UERN/IFRN* ✉ gjannribeiro@gmail.com

Liane Hentschke, *UFRGS*

This communication is part of a research in ongoing doctorates by the Post Graduate music program at the Federal University of Rio Grande do Sul (Brazil). Considering the recent status of information and communication technology and the educational possibilities arising, the online environment has been widely discussed in this decade. This presentation will focus on research aimed to investigate the motivational processes of students in synchronous and asynchronous interactions on guitar lessons at a distance, from the perspective Self-Determination Theory. The used methodology was an active research that includes planning, implementation and evaluation of the computer-based classes given to five students at the State University of Rio Grande do Norte, which is located 4.084 km away from Porto Alegre – RS, where the classes were given. In this study, learners were found to be not primarily intrinsically motivated. Instead, student motivation was found to be complex, multifaceted, and sensitive to situational conditions.

Teaching SDT theory: From Introductory Psychology to Personality and Beyond

Marianne Miserandino, *Arcadia University* ✉ miseranm@arcadia.edu

Self determination theory informs both the practice of teaching and the content matter of psychology at multiple levels and in many courses. In this talk, I will share my expertise and experience of (1) teaching SDT in a personality theories course, a research-based personality course, and as a part of a patient compliance unit within a graduate physical therapy program, and (2) teaching to support students' autonomy in the classroom and in the psychology major. First, I will offer suggestions of discussion topics and key experiments that may be readily incorporated into various courses to pique students' interest. Next, I will present a case study of how we teach an autonomy-based senior capstone course in the psychology major at a small liberal arts college. I will end with practical suggestions for how to teach SDT, including active learning exercises, suggested readings, and more.

Session 3B | Worker Compensation and Management Practices

Room: Highland B

Compensation Systems and Work Motivation According to Self-Determination Theory

Fall Amar, *Université de Pau et des Pays de l'Adour - France* ✉ amar.fall@univ-pau.fr

This research focuses on the results of an empirical study conducted among 249 employees of a company based in France, on the effects of compensation systems on autonomous work motivation. It provides a clear view of the relationship between four compensation systems and this dimension of work motivation (autonomous motivation). Our results, derived from correlation and multiple regression analyzes showed that three of the four compensation systems, highlighted through our study, act positively on autonomous motivation of employees. These are individual performance compensation systems, individual skills base-pay systems and discretionary compensation systems. This result calls into question the aspect of controlling remuneration emphasized by cognitive evaluation theory, an underlying theory of the Self-Determination Theory. However, it joins the most recent work on this issue and allows confirming the evolution of Self-Determination Theory regarding the influence of compensation systems on autonomous work motivation.

The Study of Work Compensation using Self-Determination: Empirical Evidence from Greece and Canada

Jacques Forest, *ESG-UQAM* ✉ forest.jacques@uqam.ca

Sarah Girouard, Laurence Crevier-Braud, *UQAM*

Konstantinos Papachristopoulos, *Athens*

Marylène Gagné, *Concordia University*

Nicolas Gillet, *Université de Tours*

Nathalie Houlfort, *UQAM*

The goal of this presentation is to study work compensation through the lens of self-determination theory and, more specifically, to test assumptions made in the theoretical paper published on this topic by Gagné and Forest (2008). Using data from 836 Canadian workers and 138 Greek workers, we show that need satisfaction and/or need frustration explains various performance, ill-being and well-being indicators as well as turnover intentions differently and that they do so over and above the four dimensions of pay satisfaction (salary, raise, benefit and administration). Moreover, results show that contingent reward can have adverse effects, such as lower performance in the public sector in Canada. This helps put in perspective the claims made in the compensation literature that “No other incentive or motivational technique comes even close to

money” (Locke et al., 1980, p. 379). Implications for research and interventions in compensation strategy and practices will be discussed.

Internalization of Extrinsic Motivation: Effective Path Promoting Work Performance via Satisfaction of Basic Psychological Needs

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Yahui Song, *University of Science & Technology, Beijing*

In management practice, it's often occurred that extrinsic rewards undermine the intrinsic motivation. The dissatisfactory motivating effects leave managers with a difficult problem, which is how to effectively transform extrinsic motivation into intrinsic, instead of undermining it. Basing on Self-Determination Theory (SDT), we hypothesized that the satisfaction of basic psychological needs (BPN) would promote the internalization of extrinsic motivation, and promote work performance. Our empirical study results showed that internalized motivation was a mediator. Autonomous motivation, a higher level of internalization, was more important than controlled motivation, which is a lower level of internalization, in the process of promoting work performance.

Session 3C | Parental Autonomy Support

Room: Highland C

Autonomy Support and Political Engagement

Sook Ning Chua, *HU* ✉ sook.ning@help.edu.my

Frederick Philippe, *UQAM*

In the current studies, we examine the consequences of parent autonomy support on the larger system, the government. We hypothesized that parent autonomy support will influence the child's political engagement by affecting the child's perception of government. We also predicted that the political and civil freedom of the country will moderate the effects of autonomy support. When a country is free, we expected to replicate past findings that people tend to see the environment more positively if their parents were high in autonomy support and therefore be less likely to push for change. In contrast, we expected that when a country is not free, parent autonomy support enables the child to see the government less positively and thus be empowered to be more politically engaged. We will present results from Canada, India and Malaysia on different social issues that provide support for this theoretical framework.

Parenting Dimension and Subjective Well-Being: Do Needs Satisfaction and Life Aspirations Mediate These Relationships?

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Chee Keng John Wang, *Nanyang Technological University, National Institute of Education*

Research findings and the tenets of self-determination theory suggest that psychological needs satisfaction and life aspirations may explain the relation between perceived parenting dimensions and subjective well-being. The current study examined the mediational effects of psychological needs satisfaction and life aspirations in the relationships between parenting dimensions (autonomy support, warmth, structure, coercion, rejection, chaos) and life aspirations (intrinsic life aspirations, extrinsic life aspirations) in a sample of adolescent athletes (N = 866). Mediation analyses were conducted using the Mplus 6 statistical software. Eighteen mediation paths or indirect effects were tested in the multiple-step, multiple-mediator model. For all parenting dimensions, the specific indirect effects through the multiple-steps mediation path via psychological needs satisfaction and extrinsic life aspirations were not statistically significant. On the other hand, all other specific indirect effect estimates and total indirect effect estimates related to the parenting dimensions (except for chaos) on subjective well-being were statistically significant.

Parental Styles, Emotion Regulation, and Psychological Health: Evidence of Indirect Effects in the United States and Jordan

Ikhlas Ahmad, *University of Jordan* ✉ iahmadii@umail.iu.edu

Christopher Niemiec, *University of Rochester*

The current study examined the intervening role of emotion regulation in the association between parental styles and psychological health among young adults in the United States and Jordan. In both countries, parental psychological control related positively to dysregulation of emotions and parental autonomy support related positively to integrative regulation of emotions. In support of our primary hypotheses, the indirect effects of psychological control to depressive symptoms and vitality through dysregulation of emotions were significant in both countries, while the indirect effects of autonomy support to depressive symptoms and vitality through integrative regulation of emotions were significant (or marginal) in both countries. Importantly, these structural paths were fairly invariant across countries despite cultural differences between the United States and Jordan, thereby underscoring the importance of emotion regulation in the association between parental styles and psychological health.

Session 3D | Values and Aspirations

Room: Highland D

Now We Know: You Can Aspire to be Too Thin and Too Rich! The Impact of Children's Consumer Culture Ideals and Extrinsic Motives on Their Well-Being

Helga Dittmar, *University of Sussex* ✉ h.e.dittmar@sussex.ac.uk

Robin Banerjee, Matt Easterbrook, Mark Wright, Megan Hurst, *University of Sussex*

Our investigation of the links between consumer culture and children's well-being focuses on the extent to which children's body esteem, subjective well-being, and emotional and physical health can be adversely affected when they internalize advertising and media messages about 'desirable' material products and idealized appearance/body shape. Extensive interviews, experimental studies, and a major three-wave longitudinal study in the UK ($n > 1,000$) support our theoretical model, derived from Self-Determination Theory and our Consumer Culture Impact Model (CCIM, Dittmar, 2010). Longitudinal SEM analyses, examining the relationships between children's internalization of consumer culture values and their well-being, show (a) bi-directional links, (b) complex relationships between extrinsic motives for pursuing materialist and appearance ideals and consumer culture value internalization, which differ between elementary and secondary school children, and (c) moderation by identity deficits. Thus, consumer culture does not have a monolithic, negative impact on children's well-being, but produces adverse effects in particular groups of children, whose sense of identity is insecure, and who need to be targeted for intervention.

Revisiting the Organismic Valuing Process to Explain Unconscious I/E Goal Pursuit

Frederick Grouzet, *University of Victoria* ✉ fgrouzet@uvic.ca

What is good for us? What are the actions, decisions, goals that will help us to flourish? SDT proposes to distinguish between intrinsic and extrinsic goals. But how do we select what goal to pursue? Who do we listen to make this decision? Our social environment? Our own organism? We can answer these questions by revisiting the organismic valuing process (OVP) that Rogers proposed sixty years ago. More specifically, the dialectic between the OVP and the sociocognitive valuing processes will shed a light on conscious but also unconscious goal pursuit. After presenting the Dual Valuing Process Model (Grouzet, 2013a,b) I propose recent empirical evidences on the unconscious processes that are beyond the activation of the OVP and the pursuit of intrinsic goals. This should also help to solve the chicken-and-egg relationship between I/E goals and psychological needs (i.e., need support leads to intrinsic goal pursuits, which in turn fulfill needs).

Cheating: Another Cost of Neo-Liberal Value Adherence and Associated Introjected Regulation of the Motivation to Study

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Fabrizio Butera, *University of Lausanne*

In 2007 Kasser, Cohn, Kanner and Ryan argued that individual-level, neo-liberal beliefs in the values of power and achievement tend to be regulated for controlled, image-related, rather than autonomous reasons, a process which costs the individual and society. In three studies we explore the impact of this process on one significant academic cost: cheating. Results of two studies reveal that adherence to neo-liberal values of self-enhancement: power and achievement, predict a greater tendency to condone cheating, a relation explained by controlled motivation to study with introjected regulation and the consequent adoption of performance-approach goals focused on outperforming others. Results of a third behavioral study in which public ranking of results puts self-image at stake show that introjected regulation of the motivation to study directly predicts cheating behavior. These results are discussed in the light of the potential costs to self and others of self-enhancing life goals and associated controlled motivation.

Session 3E | Teachers and Learners

Room: Highland E

In the Eye of the Beholder: Is the Perception of the Teacher Affected by the Perceiver's Characteristics?

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Rinat Sabag, *Ben-Gurion University, Israel*

A need supportive environment is central for the development of autonomous motivation. In two studies we assessed whether individual differences affect the level in which students perceive their teacher as supportive (the perceiver effect), and whether these differences in perception explain differences in students' motivation. In study 1, we found gender differences in the perception of the teacher. In study 2, we found differences between students with low/high self efficacy, in the perception of the teacher as supportive. Both differences in turn, explained differences in students' motivation. The results suggest that different characteristics of students, affect the way they perceive the teacher, and this results in the type of motivation they adopt. The results highlight the importance of investigating individual differences, as they influence the perception of the environment as supportive, and contribute to the development of adaptive motivation beyond the known contribution of a need supportive environment.

Profile Analysis for Patterns of Motivation-Related Learner Characteristics among Korean Middle School Students

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Se-Kang Kim, *Fordham University*

The current study aimed to identify a set of major profiles that encapsulate patterns of academic motivation-related learner characteristics among Korean middle school students. Unlike most studies that have dealt with the motivation-related variables individually, this study utilized nine variables collectively by identifying major profiles that pinpoint which variables appear strongly or poorly among students. A total of 4060 students' responses to nine (five positive and four negative) academic motivation-related variables were analyzed: Five positive variables (autonomous motivation; academic self-efficacy; learning strategies-cognitive, -metacognitive, -behavioral) and four negative variables (controlled motivation, amotivation, academic stress, test anxiety). A principal component analysis was utilized to identify major profiles of these variables and three were identified for interpretation. The three major motivation profiles concurred with the predictions that could be derived from the SDT framework. The results of the analysis will allow us to understand motivational aspects of Korean middle school students as a whole.

Beliefs, Behaviors & Health of Undergraduate Nursing Students

Pamela Crary, *Edgwood College* ✉ pcrary@edgwood.edu

Self Determination Theory (SDT) (Deci and Ryan, 1980) posits that some learning environments can be perceived as stressful. SDT has been shown to improve educational outcomes but has not been examined in the nursing education context. SDT aligns well with nursing because key assumptions of the theory correspond well with nursing values about the individual, wellness, and caring. The overall purpose of this study was to first describe relationships among perceived stress, coping responses, and health outcomes in nursing students and secondly, to examine theoretical variables of self-determination theory within the learning context of student nurses. In a cross-sectional, descriptive, design, 154 nursing students enrolled at a Midwestern public university agreed to participate in a web based survey that used reliable and valid questionnaires from prior research. Bivariate correlations revealed significant relationships among stress and coping behaviors of students, learning-climate, perceived-competence and subsequent nursing student stress and related coping and health outcomes. Extending prior stress and coping research by including self compassion and extending SDT research in a nursing student population we demonstrated support for how nurse-educators could influence students' wellbeing. Autonomy support from nurse-educators can influence students' emotional wellbeing directly as well as indirectly through students' perceived competence. Future nurse-researchers can test these relationships with a longitudinal intervention design to improve wellbeing of nursing students.

Session 4A | Policy/Philosophy

Room: Highland A

Goldilocks and the "Just Right" Choice: Using Self-Determination Theory to Measure Developmentally Appropriate Practice

Charles Partridge, *PERSolutions: Program Evaluation and Research*

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The concept of “developmentally appropriate practice” first appeared among early childhood educators as a descriptor of educational practices sensitive to each individual child’s current and future cognitive, physical, affective and social development (as predicted by various developmental theories) with consideration of how it is affected by the child’s cultural context (Charlesworth, 2012). However useful the construct, due to its highly individualistic requirements, it has never been effectively operationalized in a way that could be measured for purposes of program evaluation. This paper offers the possibility that the SDT construct of basic psychological need satisfaction can be used to define and measure developmentally appropriate practice, not only in early childhood but across varied types of development throughout the lifespan. Literature on developmentally appropriate practice is reviewed for relationships to sense of competence, relatedness, and autonomy and a tool for measuring basic psychological need satisfaction among 5 to 15 year-olds is introduced.

Research in the Motivation in Educational Research Lab in Singapore

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When the Ministry of Education in Singapore came out with the vision of “Teach Less, Learn More”, the role of motivation was implicated; however, the idea did not translate well at the ground level because there is a lack of understanding of what human motivation is all about. The role of motivation is important if we are to strive for excellence and to promote lifelong learning. There is a huge potential for Singapore to focus on the theory-practical link of motivational research, especially since not much research is done in the Asian context. With the support of NIE, the MERL was set up with Professors Deci and Ryan as the consultants in 2009. In this talk, I will present a progress report of the MERL and open invitation for SDT researchers to join us in the journey.

A Closer Look at the Role of Teacher Autonomy Support in Students' Motivation, Learning, and Achievement

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Sherah Carr, *Mercer University, Atlanta, Georgia*

A teacher's use of an autonomy-supportive motivating style is a pedagogical device related to many optimal learning outcomes. In experimental studies, teacher autonomy support (TAS) has causally increased students' motivation, engagement, development, learning, performance, and psychological well-being (Reeve, 2009; Reeve & Assor, 2011). In this paper, we review the results of 36 studies published in refereed journals in which TAS was a variable connected with important educational outcomes. We identify specific learning outcomes related to TAS, gaps and limitations within the literature, recent research trends, and recommendations for future research. We use tables and figures to highlight the findings and synthesize the research on TAS over the last three decades. We place a sharp focus on research that investigated the relationship between TAS and students' academic achievement. The body of empirical findings will be discussed within the SDT framework and the five mini-theories espoused by SDT.

Session 4B | New Teachers

Room: Highland B

Self-Regulation Abilities of Teachers

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In the current discourse in teacher education the first year in teaching plays an important role for further professional development of novice teachers. These results lead to the question, which competencies mentors need to successfully fulfill this accompanying function. According to the PSI-theory by J. Kuhl, who integrates important SDT aspects, it can be postulated that for mentors their abilities for self-regulation are particularly important because these are the basis for high quality mentoring on different levels (e.g. concerning autonomy support). Based on these assumptions a group of mentors were tested with regard to their self-regulation abilities. In a seminar the mentors focused on their own test results to stimulate individual development processes and to strengthen their self-regulation abilities. These effects, measured in a second test session, will be examined to find out to what extent causality orientations can be positively influenced and to discuss possible consequences for mentoring programs.

Promoting Self-Determination in Teaching and Learning Mathematics for Pre-Service Teachers

Giang-Nguyen Nguyen, *University of West Florida* ✉ gnguyen@uwf.edu

This study investigated student and pre-service teacher motivation in a Mathematics Intervention program. In an informal teaching and learning environment, pre-service teachers mentored a group of elementary students who had previously been identified by the school as struggling with mathematics. The experience was meaningful for both teachers and students. The pre-service teachers self-determination to fulfill teaching goals was heightened, and the elementary school students' beliefs of their ability to learn mathematics was reinforced. Additionally, the students developed the belief intelligence is incremental (Deck, 1986). This study rendered a deeper understanding of effective interventions for students who experience difficulty in learning mathematics and supportive field experiences for pre-service teachers as they transition into the profession. Further, the results of the study emphasized the importance of meeting the individual student's psychological needs (Ryan & Deci, 2000). Providing such rich experiences for pre-service teachers is an essential strand in teacher preparation programs.

New Teacher Induction, Mentoring, and the Development of Self-Determined Professional Educators

Heidi Olivadoti, *Southern Oregon University* ✉ olivadoh@sou.edu

The study examined the following research question: Are there any significant relationships between mentoring new teachers and their development as self-determined professional educators? While the explicit goals related to mentoring new teachers are to improve practice, address equity issues, and increase student achievement, the implicit emotional and psychological benefits may be more powerful indicators of success, well-being, and career satisfaction. This premise guided the research: successful teaching is more than knowledge, skills, and technique – it could also be attributed to psychological factors such as autonomy, competence, and relatedness, the three legs of Deci and Ryan’s self-determination theory. Existing survey data of first-year teachers (N = 45) were analyzed and statistically significant correlations were found between all variables, providing some evidence that mentoring support and satisfaction with the process are associated with an increased level of understanding of professional teaching standards and increased perception of improved practice – possible indicators of self-determination.

Session 4C | Promoting Healthy Behaviors

Room: Highland C

Abstaining is More Than Just Not Doing: A Self-Determination Theory Examination of Adolescent Abstinence Motivations

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The bulk of research stemming from Self-Determination Theory (SDT) has used objective scales to examine motivations to engage in positive behaviors. First, it is unclear whether objective scales fully capture motivation from an SDT perspective, and whether open-ended measurement formats might provide richer, more valid data. Second, adolescent scholars, parents, and practitioners want to promote positive behaviors but also dissuade negative behaviors among adolescents. For example, understanding motivations to abstain from health risk behaviors such as sex and alcohol during adolescence is important. But, there is little precedent for this from an SDT framework. Thus, the purposes of the present study were to make a conceptual argument for the importance of studying abstinence motivations, develop and compare objective and open-ended measures of adolescent abstinence motivations, and demonstrate links to behaviors (with a particular focus on abstinence from sex and alcohol).

Self-Determination Theory: A Framework for Community Mental Health Services

Robert Plant, *Wellmore Behavioral Health* ✉ plantrobert90@yahoo.com

The real world application of behavioral health and substance abuse services in community based settings is typically atheoretical, taking its form and direction from funding sources and a literature on evidence based practices that transcends any particular theoretical orientation. This theoretical "diversity" and "neutrality" allows flexibility in the delivery of a wide range of services and practices but makes it difficult to communicate a coherent mission and vision. This paper will review the application of Self-Determination Theory as a framework for the delivery of community mental health and substance abuse services by a large not-for-profit agency serving children, families, and adults. SDT is applied as a set of organizing principles that tie together a diverse set of evidence based practices including trauma specific interventions, family based treatments, substance abuse services, child welfare, and early childhood programs.

Identified Motivation Moderates Effects of Legally Mandated Addiction Treatment on Time-to-Dropout

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Karen Urbanoski, *Centre for Addiction and Mental Health*

Yan Yuan, *Centre for Addiction and Mental Health*

Jody Wolfe, *University of Alberta*

Brian Rush, *Centre for Addiction and Mental Health*

Social control tactics are commonly used to pressure people to attend addiction treatment. We tested the hypothesis that identified treatment motivation would moderate effects of legal requirements to seek treatment mandate on time to dropout. Clients entering 42 and 90-day Canadian residential substance abuse programs (N = 328; 51% males; 52% Aboriginal heritage; M age = 32.5 years) rated the extent to which treatment was being sought because of a personal choice and commitment to the goals of the program (identified motivation). Administrative records were used to determine whether or not (a) clients sought treatment because of a legal requirement, and (b) they completed treatment. About one-third of clients dropped out before completing treatment. Cox regression predicted time to dropout from demographic and clinical covariates, along with baseline identified motivation and legal mandate status scores and their interaction. The hypothesized interaction was observed ($p < .05$), such that legally mandated clients reporting levels of identified treatment motivation dropped out significantly faster than other clients.

Session 4D | Autonomy in Multiple Cultures

Room: Highland D

Dusu (Internal Motivation)

Elise Klein, *University of Oxford* ✉ elise.klein@qeh.ox.ac.uk

This paper aims to understand local psychological concepts central to human agency found in a recent ethnographic study conducted in Mali, West Africa. Concepts include *dusu* (internal motivation), *ka da l yere la* (self belief) and *hami* (aspirations); all central to initiatives people undertake to improve their well-being. The paper draws upon qualitative research to provide not only local definitions of these concepts but also argues that they have not only intrinsic importance to agents, but also instrumental importance in improving well-being at an individual level and community level. This paper provides strong empirical evidence within Self-Determination Theory arguing for the relevance of autonomy to the people of Mali and a wider role in human development and social change.

Cultural Variation in the Internalization of Duty: Implications for Self Determination Theory

Joan Miller, *New School for Social Research* ✉ millerj@newschool.edu

Research on self determination theory (SDT) indicates that collectivist cultural practices may be as fully internalized as individualistic cultural practices. However, within the SDT tradition, placing an overt emphasis on role obligations tends to be considered a conformist stance that reflects introjected rather than fully internalized motives. I present evidence that among Hindu Indians, duty or *dharma* tends to be more fully internalized than is the case among Americans, with acting out of a sense of duty associated among Indians but not among Americans with a sense of satisfaction and choice. In terms of implications, our studies lend support to claims made in SDT regarding the centrality of autonomy in agency universally, while also highlighting the need to give greater attention to culturally variable meanings associated with role obligations and to avoid assuming that acting from deontic motives to meet social expectations is necessarily experienced subjectively in controlling terms.

Session 4E | Physical Activity and Health

Room: Highland E

Struggle Against Obesity: A Study of Motivational Resources Trajectories and Physical Activity of Young Children

Nadia Leroy, *Université de Genève* ✉ nadia.leroy@unige.ch

Julien Chanal, *Université de Genève*

The present paper will present a research program focused on development of motivational resources and physical activity levels in young children. Improving our understanding of motivation early development for physical activity and of social environment influence on this development represents important endeavors. We conducted a two-year longitudinal study involving three cohorts of elementary-aged school children (approximately 1200 students) and their physical education teachers. This study started in December 2011 and held the purpose to examine links between students' motivational resources and physical activity levels in physical education classes. Questionnaires were used to measure students' self-determined motivation, as well as their self-concept. Moreover, several social environmental elements that could influence children's physical practice were assessed. The level of physical activity displayed during physical education lessons was recorded by accelerometers. In this talk, we will provide information about links between self-reported measures of motivation and objectively assessed measures of physical activity.

The Mediating Role of Passion in the Relationship of Motivation Regulation for Exercise with Exercise Dependence Symptoms

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Exercise dependence is considered an addictive behavior among others, such as alcoholism and gambling. The aim of the study was to examine the mediating role of harmonious and obsessive passion in the relationship of behavioral regulations to exercise with exercise dependence. Exercise participants in fitness centers (N = 549) completed questionnaires measuring behavioral regulations to exercise, types of passion for exercise, and symptoms of exercise dependence. Regression analyses showed that introjected regulation (i.e., exercising to gain approval or avoid disapproval) was the main predictor of exercise dependence and obsessive passion for exercise.

Further, mediation analysis showed that obsessive passion mediated the relationship of introjected regulation with exercise dependence, but this was not the case for harmonious passion. It was concluded that introjected regulation represents a main determinant of exercise dependence with its effects transmitted mainly via obsessive passion for exercise.

Effects of Goal Framing Messages and Implementation of Intention on Sedentary Adolescents' Intention and Physical Activity Behavior

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Virginie Nicaise, Philippe Sarrazin, *Lab Sport and Social Environment, Grenoble 1, France*

This communication presents the results of a research program based on three quasi-experimental studies, promoting physical activity (PA) among sedentary adolescents using goal contents theory and implementation of intention. The main results of this program are: (1) a message framing health benefits of PA has no effect either on social-cognitive variables (attitude, intention, motivation), nor on the behavior (i.e., Accelerometer-based PA); (2) messages framing intrinsic (i.e., PA is good for my well-being!) and extrinsic benefits (i.e., PA is good for my physical appearance!) increase attitude, intention (and external regulation only for extrinsic framing message), but not the PA behavior; (3) the implementation of intention enhance attitude, perceived behavioral control and intention, but not the behavior; and (4) only an intervention linking a goal framing message (intrinsic or extrinsic) with an implementation of intention fosters adolescents' PA behavior.

Keynote 2A

Room: Lilac Ballroom A

Considering Challenges to Needs in Understanding the Effects of Context: Illustrations from the Study of Parental Structure

Wendy S. Grolnick, *Clark University* ✉ wgrolnick@clarku.edu

SDT suggests that contexts that satisfy psychological needs result in greater motivation, self-regulation, and well-being. However contextual effects may depend on whether particular needs are salient or challenged. Data from a study of parental structure supporting this idea will be presented. Results indicated that 1) structure is related to outcomes more strongly in domains new to children (e.g., negotiating time alone) rather than domains that are more familiar (e.g., studying), 2) structure is especially important at key academic transitions, such as the transition to middle school, and 3) whether structure is perceived as need satisfying depends on student background characteristics and achievement levels. The possibility that the same levels of structure may be perceived as controlling by some students is discussed, as is the importance of clarifying the meaning of contextual inputs (e.g., in different cultures) for individuals.

Autonomy Support and Structure : Their Unique and Combined Function

Hyungshim Jang, *Hanyang University* ✉ janghs@hanyang.ac.kr

The present talk examines two issues: (1) the function of supporting students' autonomy during classroom instruction and (2) the function of incorporating autonomy support into teachers' otherwise well-structured lesson plans. To address these two issues, conceptual definitions of autonomy support and structure will be offered. Then data from a series of studies will be used to illustrate the unique contribution of autonomy support and structure to students' motivation, engagement, and conceptual learning. The three-fold conclusion from this program of research is that (1) autonomy support, like structure, functions as a classroom necessity rather than as classroom luxury; (2) student outcomes are particularly positive when teachers find ways to add autonomy support into a well-structured lesson; and (3) it is not difficult for teachers to learn how to smoothly and effectively integrate autonomy support into their existing well-structured lesson plans. Classroom illustrations will be provided of how the various aspects of autonomy support can be easily and effectively integrated into almost any structured lesson.

Keynote 2B

Room: Lilac Ballroom B

Scaling Up: Taking SDT into Population and Public Health

Heather Patrick, *National Cancer Institute, National Institutes of Health* ✉ patrickha@mail.nih.gov

Non-communicable diseases (NCDs) including cardiovascular disease, cancer, and diabetes represent the major causes of morbidity and mortality in the developed world. Consequently, the past twenty years have witnessed an exponential increase in research targeting the health behaviors most closely associated with NCDs (e.g., poor diet, physical inactivity, and tobacco use and exposure). Self-determination theory (SDT) has produced some of the only known-efficacious interventions that yield behavior change and maintenance in the absence of ongoing intervention. However, to date, most SDT health behavior research has focused on intensive, individually-based interventions. Although efficacious, SDT-based approaches have had limited public health impact because they target individual-level change and are too cumbersome to integrate into healthcare systems, mobile technology, public health messaging, and public health policy. This presentation will focus on how to scale-up SDT-based interventions and the arenas in which the greatest population and public health impact may be achieved.

Enhancing Pro-Environmental Behaviors (PEB): Making Sense of Threatening Messages, the Facilitation of PEB, Providing Information

Luc Pelletier, *University of Ottawa* ✉ Luc.Pelletier@uottawa.ca

Public concern about environmental issues has grown substantially in the last two decades. As a consequence the development of Pro-Environmental Behaviors (PEB) is becoming an important challenge. Some believe that an efficient way to increase the frequency of PEB is to make the PEB easier and more accessible. Others believe that threatening messages that emphasize the consequences for our health or our economy should be used because simple information is not effective enough. In this presentation I examine how messages could be strategically tailored according to processes underlying behavior change (i.e., being aware of a problem, deciding what to do, and implementing a behavior) and framed in terms of whether they serve intrinsic (i.e., health, well-being) as opposed to extrinsic goals (i.e., make or save money) to increase the level of self-determined motivation. Once PEB are performed out of self-determined reasons making PEB more accessible can facilitate maintenance of these behaviors.

Session 5A | Multiple Disciplines in Education

Room: Highland A

A Model of Self-Determination Theory in Music Learning

Paul Evans, *University of New South Wales* ✉ paul.evans@unsw.edu.au

Considering SDT's breadth as a theory of motivation and its extensive evidence in a range of life's domains, it is surprising that little work has been done on SDT in music learning. This study examined adapted SDT measurement instruments with over 100 university-level music learners, and plans to also examine younger music learners. Preliminary data analysis shows good psychometric properties for the measures, and significant relationships between the fulfilment of basic psychological needs, intrinsic motivation, and both the quantity and productivity of musical practice sessions and intentions to study more challenging music in the future. Implications of this research are discussed, particularly in relation to widespread, traditional, centuries-old music teaching practices, which are often controlling, restrictive of choice, and judgmental. It expands SDT's application to the unique domain of music, as well as contributing to motivation research in music education, where a comprehensive, unified approach to motivation is much needed.

Modeling the Motivational Dynamics of Learning Another Language

Kimberly Noels, *University of Alberta* ✉ knoels@ualberta.ca

Dayuma Vargas-Lascano, *University of Alberta*

The present study included 164 undergraduate students who completed web-based questionnaires at the beginning, midpoint, and end of their semester-long French course. Participants reported on their self-perceptions of autonomy, competence, and relatedness, their intrinsic and extrinsic reasons for learning French, and their engagement in the language learning process. Parallel process modeling showed that initial levels of self-perceptions covaried with initial levels of intrinsic and extrinsic motivation. In terms of change over time, growth in autonomy was linked to growth in introjected, integrated, and intrinsic orientations. Growth in competence was linked to growth in integrated and intrinsic regulation. Baseline intrinsic motivation positively covaried with baseline engagement and increases in intrinsic motivation were linked to slower decreases in engagement. Possible mechanisms for the observed patterns and their implications are discussed in the framework of Self-Determination Theory and context effects on motivation.

Exploring Student Motivation and Achievement when Physical Activity is Integrated in the Academic Classroom

Spyridoula Vazou, *Iowa State University* ✉ svazou@iastate.edu

Miriam Skrade, *Iowa State University*

Integrating physical activities (PA) in the classroom may offer the dual benefit of (a) increasing children's PA levels and (b) augmenting learning, thereby facilitating academic achievement. However, research on the role of PA in academic motivation is scarce. Based on Self-Determination Theory, the purpose of this study was to compare the effect of PA integrated with academic lessons to the effect of traditional lessons on children's academic motivation, classroom-based PA motivation, motivational outcomes, and academic achievement. Ten PA Practice classrooms (N=203) and seven Traditional Practice classrooms (N=120) from the 4th and 5th grades participated over two months. Self-regulations (SRQ), Competence, Enjoyment, and Values (IMI), Basic Need Satisfaction (AFS), Class Climate (modified PeerMCYSQ) and academic achievement were measured before and after the intervention. Results showed that, compared to traditional classroom lessons, integrated PA has a positive impact on students' motivation and performance.

Session 5B | Motivations and Aspirations at Work

Room: Highland B

The Impact of Self-Determination on the Development of Volunteer Role Identities—A Cross-Lagged Panel Study

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Theo Wehner, *ETH Zurich*

Self-determination theory posits that the quality of motivation greatly affects well-being and performance in various contexts. This study (N = 728) addressed voluntary work and tested longitudinal lagged effects (time period: 18 months) between the quality of motivation and the development of two types of volunteer role identities: general role identity (GRI) and organization-specific role identity (OSRI). Analyses revealed substantial effects of self-determined motivation (but not controlled motivation) on subsequent GRI ($\beta = .23$) and OSRI ($\beta = .28$), with baseline GRI/OSRI controlled. GRI did not lead to subsequent self-determined or controlled motivation. The effect of OSRI on subsequent self-determined motivation was significantly weaker ($\beta = .13$) than the reverse effect; OSRI also positively related to subsequent controlled motivation ($\beta = .13$). The findings support the notion that self-determined motivation fosters the internalization of goals and values into one's sense of self. Implications for research on organizational identification are discussed.

What Are We Aiming For? Personal Aspirations Through the Lenses of Career Development

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The manner in which adults construct their careers is strongly related to the types of personal goals they value and envision for themselves. These goals give both guidance and meaning to one's professional development. Our study investigated the dynamics of extrinsic versus intrinsic aspirations in a sample of employed adults (N = 298, M age = 38, SD age = 7), depending on their career commitment and career satisfaction. An eight-scale version of the Aspiration Index was employed, tapping into both intrinsic and extrinsic aspirations (Grouzet, Kasser et al., 2005). Career dimensions were appraised through the Career Satisfaction Scale (Greenhaus et al., 1990) and the career commitment scale from the Vocational Identity Status Assessment (Porfeli et al., 2011). Results point out that depending on how committed and content adults are with their careers, they tend to ascribe differential important and level of attainment to both extrinsic and intrinsic aspirations.

Self-Determination Theory in Marketing

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Motivation has always been a field of study for marketing researchers, albeit a disparate one. This paper contributes to the discussion by critically reviewing Self-Determination Theory (SDT) as an alternative way to looking at motivation specifically in the context of marketing studies. The critical appraisal examines the core concepts of Self-Determination theory, method and empirical evidence in marketing research. The paper contends that the meta-theoretic nature of SDT can better engage, compared to classical motivation models (e.g. Freud's concept of drives, Jung's concept of archetypes, Maslow's hierarchy of needs, Murray's list of human needs), the multifaceted issues of marketing research when focusing on individual actors (i.e. person related motivation). Finally, the paper proposes possible research projects that could be undertaken under the perspective of SDT in the marketing discipline.

Session 5C | Basic Needs in Youth and Middle Age

Room: Highland C

The Role of Relatedness in a Physical Activity Program for Middle Aged Males

Lauren Banting, *Victoria University* ✉ lauren.banting@vu.edu.au
Fabio Serpiello, Erika Borkoles, Remco Polman, *Victoria University*

Despite strong interest in physical activity, limited research has focused on the psychological responses of middle aged males to physical activity programs. This study used qualitative and quantitative methods to compare the motivational response of participants in a treadmill training program and an indoor soccer program. Autonomous motivation and relatedness satisfaction increased significantly over training for the indoor soccer group ($p < 0.001$) whilst remaining constant for the treadmill training group. No changes were observed for autonomy or competence satisfaction. Qualitative data suggests that in this cohort, autonomy and competence were being satisfied in other life domains. However, the interaction between team mates in the indoor soccer training was highly valued. This social interaction served as both a positive outcome (satisfaction of the need for relatedness) and a motive for increased effort during training. In this cohort relatedness was the need most strongly associated with autonomous motivation and positive behavioural outcomes.

A Longitudinal Test of Self-Determination Theory's Motivation Mediation Model of Engagement and Disaffection in Children's Sport

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Andrew Hill, *University of Leeds*
Howard Hall, *York St John University*

Extending classroom-based research, this study longitudinally examined SDT's motivation mediation model of engagement and disaffection in children's sport. Two-hundred and fifty-two children reported perceptions of coach autonomy support and control, psychological need satisfaction and thwarting, and behavioural engagement and disaffection at three occasions over a soccer season. A cross-lagged panel mediation model was tested in which early-season autonomy support and control predicted mid-season psychological need satisfaction and thwarting that, in turn, predicted season-end engagement and disaffection. The hypothesised positive and negative indirect effects of autonomy support and control to engagement via psychological need satisfaction were supported. No effects were evident for psychological need thwarting and disaffection. Importantly, and in line with findings elsewhere, some paths in the model were unstable and reciprocal. Notably, the relationship between mid-season

psychological need satisfaction and season-end engagement was bi-directional. This study, then, supports SDT's motivation mediation model of engagement but highlights complexity in relationships.

Motivation as a Within-Person Process to Explain Ups and Downs in School and Sport Performance

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Véronique Franche, Alexandre Gareau, *University of Ottawa*

Educational and sport psychologists are often interested in identifying key characteristics that explain why certain individuals perform better than others during important tasks. The focus has traditionally been oriented toward between-person rather than within-person differences in school and sport performance. Yet, longitudinal intensive research designs (Mehl & Conner, 2012) offer a promising avenue to track the relation between motivation and performance of students and athletes across multiple days, weeks, months, contexts, and situations. The purpose of this presentation is to delineate the findings of a research program that simultaneously conceptualizes autonomous and controlled motivation as state-like processes and trait-like characteristics of the person. Results of multilevel studies conducted with students and athletes will illustrate the complex associations between motivation and indicators of school and sport performance. The usefulness of within-person designs to inform applied psychologists will be addressed and compared against the knowledge gleaned from the traditional between-person designs.

Session 5D | Achievement Goals

Room: Highland D

The Role of Goal Orientations in Self-Determined Motivation

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Achievement goal theory (AGT) and self-determination theory (SDT) are useful models to refer to when explaining student motivation. While AGT highlights student goals and their reasons for acting, SDT highlights the source of motivation and the perceived locus of causality. However, very little research is known on the relationship between these theories. The aim of the present investigation is to simultaneously examine whether dispositional goal orientations predict students' autonomous motivation, while taking into consideration the fulfillment of basic needs during a course. Data were collected from 998 students attending 55 psychology courses at a German university. Students were surveyed at seven points during a semester. The results of multi-level longitudinal modeling techniques showed that goal orientations did predict autonomous motivation during the semester. Perceived autonomy in a course positively influences intrinsic motivation, while perceived competence in a course reduces external motivation. The discussion emphasizes an integration of AGT and SDT.

Endorsing Mastery Goals is Fine but Endorsing Them for Autonomous Reasons is Better

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Athanasios Mouratidis, *Catholic University of Leuven*

Maarten Vansteenkiste, *Ghent University*

Willy Lens, *Catholic University of Leuven*

Autonomous and controlled regulation have been extensively studied within Self-Determination Theory, but it less is known whether such regulation also underlies the pursuit of mastery-approach goals. Do people pursue mastery goals for controlling reasons? Do autonomous versus controlling reasons underlying such pursuit yield different relations to motivational outcomes? We investigated these issues in two cross-sectional studies. In Study 1 with Belgian adolescents (N = 428) we found, through path analysis, controlling reasons for pursuing mastery-approach goals to positively relate to anxiety and threat and autonomous reasons to negatively relate to cheating, anxiety, and threat. In Study 2 with Greek university students (N = 400), we replicated these findings and additionally found need for achievement and fear of failure to predict endorsement of mastery-approach goals for autonomous and controlling reasons, respectively. These findings highlight the pervasive role of autonomous relative to controlling reasons even for mastery goal-directed behaviors.

Stability and Change in Motivation and Achievement Goal Orientation

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Lisette Wijnia, *Erasmus University Rotterdam*

The aim of this study was to identify longitudinal profiles of students' motivation (autonomous and controlled motivation, and amotivation) and achievement goal orientation. The results from a series of latent profile analyses (Vermunt & Magdison, 2002) showed that the five-class solution fit the data best (entropy value .79). The five groups were labeled: poor quality motivation with performance-approach and avoidance goals, moderate quality motivation with moderate mastery goals, amotivated with performance-avoidance goals, high quantity motivation with strong mastery goals, and low quantity motivation with hardly any goals. Approximately 50% of the students displayed a stable motivational and goal-oriented profile over time. Concerning the other students, they were likely to move to the group with moderate quality motivation and moderate mastery goals or to the group with poor quality motivation with performance-approach and avoidance goals during the academic year. Findings are discussed with regard to academic outcomes (i.e., grades and teacher-ratings).

Session 5E | Unique Student Populations

Room: Highland E

Behavioral Characteristics for Gifted & Talented and Its Relation with Overexcitability and Self-Determination

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Aims of study: 1) Identify the relationship between behavioral characteristics for gifted and talented with overexcitability, 2) Identify the relationship between behavioral characteristics for gifted and talented with self-determination, 3) Identify the relationship between overexcitability with self-determination for gifted and talented. Significance: This study prepares a scale for gifted and talented students in Iraq, according to the many interests of those students in literatures studies. It is very significant to depend on the theoretical foundations and scales for the three concepts mentioned above. Methodology: To Investigate the study's goals, we translate the three scales from English to Arabic language for an Arabic student population, a sample representing 130 of the gifted and talented students in five special schools in Iraq. Findings: We will present all results and conclusions in full text paper.

Differences in Competence, Autonomy, and Relatedness between Home Educated and Traditionally Educated Young Adults

Gina Riley, *Hunter College* ✉ Professorginariley@gmail.com

A quantitative design was used to assess whether or not home schooled young adults' needs for competence, autonomy, and relatedness were better satisfied as compared to young adults who were traditionally educated. Competence, autonomy, and relatedness are theorized as necessary conditions for intrinsic motivation. Previous research has indicated that the benefits of being intrinsically motivated are numerous, and include better conceptual understanding, greater creativity, and improved problem solving abilities. However, there remains an important gap in the current literature regarding whether or not home schooled young adults' needs for competence, autonomy, and relatedness are better satisfied as compared to young adults who have not been home schooled. The Basic Psychological Needs Scale (BPNS) was given to 100 young adults. Home schooled students who completed the BPNS had significantly higher levels of autonomy and competence satisfaction as compared to traditionally educated students, but there was no difference in the level of relatedness satisfaction between the two groups.

Keynote 3A

Room: Lilac Ballroom A

Distinguishing Autonomous and Directive Forms of Goal Support in Co-Equal Relationships

Richard Koestner, *McGill University* ✉ koestner@hebb.psych.mcgill.ca

Four studies examined the relations of autonomy support and directive support to goal progress over time. Autonomy support was defined in terms of empathic, perspective-taking, whereas directive support was defined in terms of the provision of positive guidance. Results from Study 1 revealed that autonomy support between romantic partners was significantly positively related to goal progress over three months, and that the beneficial effect of autonomy support was mediated by enhanced autonomous goal motivation. Study 2 involved female friend dyads and extended the goal progress results to include both self reports and reports by peers. Study 3 showed that autonomy support similarly promoted progress at vicarious goals. Across three studies, autonomy support was also significantly associated with improved relationship quality and subjective well-being. Directive support was marginally associated with better goal progress across the three studies and unrelated to relationship quality or well-being. A final study used data from a large randomized controlled study to show that autonomy support from family and friends was associated with 18 month weight loss whereas more directive forms of support was either unrelated or negatively related to weight loss. The challenge of identifying autonomy support in non-hierarchical relationships is discussed.

Towards a More Differentiated View on Non-Engagement: Examining the Antecedents and Outcomes Associated With Oppositional Defiance

Maarten Vansteenkiste, *Ghent University, Belgium* ✉ Maarten.Vansteenkiste@ugent.be

While past work in SDT has primarily focused on amotivation as the primary reason why people fail to engage in the required activity, we studied more intensively the dynamics associated with oppositional defiance, that is, the tendency to bluntly resist authority. Across a series of studies in diverse life domains, we found oppositional defiance (1) to reflect a controlled form of distance taking, which is (2) rooted in a controlling and need-thwarting socialization, and which (3) is a primary predictor of aggression and externalizing problems. Importantly, non-engagement is not by definition oppositional and controlled in nature, but can also be more volitional, as is the case in reflective defiance. The true support of autonomy then not only implies the promotion of autonomous engagement in the activity at hand, but can, under certain circumstances, also involve the support of a reflective and, hence, willing non-engagement in the required activity.

Keynote 3B

Room: Lilac Ballroom B

Hanging on or Letting Go?: Motivation and Self-Regulation of Goal Strivings

Nikos Ntoumanis, *University of Birmingham, UK* ✉ N.Ntoumanis@bham.ac.uk

The talk will present a series of field and laboratory studies which examined the role of autonomous and controlled motives for goal pursuit in predicting adaptive and maladaptive self-regulation responses when striving for an increasingly difficult but attainable goal, and when faced with an unattainable goal. Antecedents, mediators, and outcomes of the relations between goal motives and goal regulation were also tested. Autonomous goal motives positively predicted objectively assessed- persistence with increasingly difficult goals, and the cognitive ease of reengagement with an alternative goal in the face of an unattainable goal, especially when participants realized goal unattainability relatively early during goal striving. Autonomous motives, however, were negative predictors of the cognitive ease of disengagement from an unattainable goal. Controlled goal motives were not related to effective regulation of difficult or unattainable goals. Future directions for research on the role of motivation for effective regulation of goal strivings will be discussed.

The Contract Year Effect in the NBA: A Classic Undermining Pattern

Kennon M. Sheldon, *University of Missouri* ✉ sheldonk@missouri.edu

Mark H. White, *University of Missouri*

We assembled NBA player performance data from 2003–2008 tracking three year periods in players' careers: pre-contract year (baseline), contract year (salient external incentive present), and post contract year (salient external incentive removed). Two types of player statistic, supported by principal component analyses, were examined: glamor stats (shots taken, points scored, field goal percentage) and hustle stats (offensive and defensive rebounding, blocked shots). Using incentive and outcome expectancy theories, we predicted a boost in glamor stats during the CY, but not hustle stats, since glamor is what will be reinforced. Using SDT undermining theory we predicted a decline in both glamor and hustle in the post CY, relative to both the CY and the pre-CY baseline. This is what we found, showing that both extrinsic and intrinsic motivation theories are relevant within this multi-billion dollar industry. The CY effect is real, but general managers should know that it will not last.

Session 6A | Teaching Quality and Student Motivation

Room: Highland A

Increasing Writing Competencies and Motivational Resources Through a Teacher Professional Development Program (CARIS)

Frederic Guay, *Laval University* ✉ Frederic.Guay@fse.ulaval.ca

Erick Falardeau, Pierre Valois, Valerie Lessard, *Laval University*

The purpose of this research was to evaluate an intervention program called CARIS intended to foster students' motivational resources and writing competencies by improving teaching practices. CARIS involves a two-day workshop in line with SDT. During the workshop, teachers are taught to use collaboration, autonomy support, real world interactions, involvement, and structure. A quasi-experimental longitudinal study was conducted among 17 elementary school teachers and 273 of their students. Nine teachers were exposed to CARIS (students = 137) and eight were assigned to the control group (students = 136). Measures were taken at three occasions during the school year (pretest, mid-test, post-test). Results reveal a significant increase in intrinsic motivation and perceptions of competence only for students whose teachers have participated to CARIS. Students whose teachers have not participated to CARIS have experienced a decrease on these variables. Moreover, CARIS students outperformed those of the control group on a post-test dictation.

Trajectories of Psychological Need Satisfaction During the Transition to High School as a Predictor of School Adjustment

Catherine F. Ratelle, *Université Laval* ✉ Catherine.Ratelle@fse.ulaval.ca

The present longitudinal study aimed at better understanding how patterns of psychological need satisfaction (PNS) through the high school years can predict students' adaptation at the end of high school. The first step consisted in estimating whether developmental patterns of PNS were homogeneous (i.e., all students report similar developmental patterns). We used a stratified sample of 609 students, surveyed annually on a 6-year period, from the end of elementary school until the end of high school. Developmental trajectories were found to be heterogeneous for autonomy, competence, and relatedness, meaning that some students reported increasing PNS while others reported stable or decreasing PNS. The next step involved comparing trajectory groups on dimensions of school adjustment. Students in upper trajectories (i.e., reporting higher levels of PNS, either stable or increasing) reported higher levels of academic, social, and personal-emotional adjustment. Results are discussed with respect to their implications for educational research and interventions.

Associations Between Teaching Quality, Student Motivation and Academic Achievement

Ron Rogge, *University of Rochester* ✉ rogge@psych.rochester.edu

Diane Early, Ed Deci, *University of Rochester*

This study examined associations between teaching quality (observed levels of Engagement, Alignment and Rigor), student self-reported motivations, and shifts in standardized testing scores between 9th and 10th grade within data collected in four high schools in the Agua Fria Union High School District in Arizona during the 2008-2009 school year. This district serves a highly diverse study population of high school students: 43% Hispanic, 39% White, 12% African American, 5% Asian/Pacific Islander, 1% American Indian/Alaskan. Three level HLM analyses (students at level 1, classrooms at level 2, teachers at level 3) suggested links between teaching quality and student perceptions of their own engagement, competency and motivation. In addition, teaching quality was associated with residual increases in standardized math and English test scores from 9th to 10th grade. Implications will be discussed.

Session 6B | Community Applications of SDT

Room: Highland B

Self-Determination Theory–Guiding Implementation of Government Strategy

Marlien McKay, *Government of NB, Department of Healthy and Inclusive Communities* ✉ marlien.mckay@gnb.ca

First introduced in 2006, the enhanced Wellness Strategy was released by the provincial government of New Brunswick (Canada) in 2009. Unique in Canada, this Strategy uses self-determination theory as both a theoretical underpinning and guiding principle. The Strategy addresses four key areas: tobacco-free living, healthy eating, physical activity and mental fitness (conceptualized as the degree of satisfaction of the need for competence, autonomy and relatedness). The latter is positioned as a key enabler of positive behavior change as well as school, community and workplace engagement. Application of SDT principles and practices to the successful implementation of various initiatives will be discussed. Data on mental fitness, collected from students in grades 4-12 and widely shared as part of the Strategy's ongoing surveillance initiative, will be presented. Finally application of SDT as an enabler of an all-of-government collaborative approach to wellness and other department priorities and mandates will be discussed.

Basic Psychological Needs as a Foundational Piece for Comprehensive School Health

Kathleen Rice, *Province of New Brunswick* ✉ kathleen.rice@gnb.ca
Marlien McKay, *Province of New Brunswick*

In 2009, the Government of New Brunswick (Canada) published a Wellness Strategy. Included within the 4 wellness pillars of this strategy is mental fitness and its application of Self-Determination Theory as a guiding principle. During this talk, you will learn about how the Government of New Brunswick measures the basic psychological needs and wellness of students. You will also hear about the implementation of a mental fitness approach (using the Basic Psychological Needs as a foundation) established in various schools to support a comprehensive school health initiative. The talk will also include a presentation of the data analysis of the NB Elementary Student Wellness Survey done in 2010-2011 (11,784 students in Grades 4-5 from 203 schools and 19,739 parents of students in Grades K-5 from 219 schools) and the NB Student Wellness Survey done in 2009-2010 with 21,078 students in grades 6-12 from 127 schools across the province.

Self Determination and Rationality in City and Regional Planning

David Wadley, *The University of Queensland* ✉ d.wadley@uq.edu.au

City and regional planning currently lacks an elevating cause and has very few rebels in its ranks. I pointed in a 2010 publication to the tendency of top down strategic planning variously to (a) engage in empty lifestyle rhetoric ('vibrancy', 'amenity' etc.); (b) attribute, at best, extrinsic motivation to the planned-for populace in its assorted vision statements and goals; and (c) lack much understanding of the relevance of self-determination theory to its enterprise. I now relate this foregoing framework to the rational (proactive) method of planning and its alternative in (reactive) disjointed incrementalism. In any community, individual self determination is arguably facilitated in a setting of social rationality, of which the logical prerequisites are explained. The problem for city and regional planning is that 'social rationality' must now encompass the local to the global scale in order to fulfil one of its necessary philosophical conditions, namely, that of internal consistency.

Session 6C | Prosocial, Materialism, and Religion

Room: Highland C

The Metaphysical Basis of Western Civilisation and the ‘Good Life’: Effects on Aspirations, Regulation, and Well-Being

Brad Elphinstone, *Swinburne University of Technology* ✉ belphinstone@swin.edu.au

Christine Critchley, *Swinburne University of Technology*

This research aimed to show how the dominant metaphysics of Western civilisation – Mechanistic Materialism (Gare, 1996) – may affect quality of life. This fragmented, atomistic worldview emphasises abstract, extrinsic, socially-created outcomes as signifiers of worth and meaning (Gare; McGilchrist, 2009). The reification of abstract values so that they become core components of life (i.e., Fallacy of Misplaced Concreteness; Whitehead, 1964) is central to consumer materialism (Belk, 1984; DeBord, 1994; Richins & Dawson, 1992) and the pursuit of financial and material gain (Kasser & Ryan, 1993, 1996). Study 1 (N=444) suggested that complex, inquisitive thinkers place less importance on extrinsic aspirations and consumer materialism, and show higher autonomous regulation, self-esteem and psychological well-being than those who unquestioningly accept dominant norms. Study 2 (N=221) indicated that a holistic rather than mechanistic worldview predicts more complex thinking; less reification of abstract values, extrinsic aspirations and consumer materialism; and greater autonomous regulation, self-actualization, and well-being.

A Proposal for Two Subtypes of Relatedness as a Basic Human Need: Sense of Belonging and Contribution

Frank Martela, *Aalto University, Finland* ✉ frank.martela@gmail.com

In this theoretical paper, I want to look deeper into the least researched of the basic psychological needs, the need for relatedness. I explore the possibility that it might be composed of two related sub-elements, the need to belong and the need to make a contribution. The first-mentioned means our basic need to feel connected and feel cared for (Baumeister & Leary, 1995). The second is about our willingness to make a prosocial contribution, to have a positive impact on the lives of others. Recent advances in moral psychology (e.g. Haidt 2003), the prosocial behavior of infants (e.g. Warneken & Tomasello 2009), and organizational behavior (e.g. Grant 2008) lend support for the idea that there might be a natural tendency for human beings to contribute to the well-being of others. Research within SDT has looked into the why of prosocial motivation, the conditions that facilitate it (e.g. Gagné, 2003; Weinstein & Ryan, 2010). What I would like to explore is the what of prosocial motivation, the reasons we want to engage in it in the first place.

The Relation between SDT and Knud E. Lögstrups Moral Philosophy

Eivind Meland, *University of Bergen, Norway* ✉ Eivind.Meland@isf.uib.no

Are humans motivated by needs or by the spontaneous creativity that nurtures all nature? I will discuss this question with reference to the Danish moral philosopher Knud E Lögstrup (1905-81). I will discuss why modern society is faced with two positions that are equally hostile to the world that we live in: rationalism and obsessive preoccupation with conquering and controlling the world as an object for mankind at the one side; and at the other: religious escapism and longing for a better world at "the other side". Both positions are equally dysfunctional, dangerous for our wellbeing and our future. Lögstrups ethical philosophy is relevant for SDT, but departs from SDT because his motivational ethics is not needs-based. He would, however, strongly support relation and autonomous spontaneity as cornerstones in human motivation. He was a Christian, but his teachings were universal, and not belonging to any specific religion, pre-Christian and nameless. One other important contribution to modern philosophy from Lögstrup is the concept of complementarity, the unifying of opposites. Metaphysics is in conflict with science, they are opposites, but they are unifying opposites. Therefore we need methodological variation in our research, but we also need metaphysical deliberation and awe faced with the sacredness of life.

Session 6D | Sport and Physical Activity

Room: Highland D

The Use of Incentives in the Formation of Healthy Lifestyle Habits Following the School to Work Transition

Martyn Standage, *University of Bath* ✉ M.Standage@bath.ac.uk

Fiona Gillison, *University of Bath*

Much national and international resource has been directed at the question “can you pay people to be healthy?” Via a cluster randomized control trial, we tested whether rewards (4 x £10 vouchers) could incentivize school-leavers to engage with a healthy behavior initiative. Participants were allocated to three groups: control, behavioral support, and behavioral support with reward. The number of participants attending an initial appointment was higher for those gaining a reward. Yet of the 171 participants receiving incentives only 74 actually attended their first intervention appointment, reducing to only 18 at follow-up. These data illustrate the weak motivational role that engagement-contingent rewards (i.e., that have no competence affirmation to counteract negative effects of feeling controlled) play in even the short-term enactment of very specific behaviors. A follow-up trial with 54 school-leavers showed informational rewards to better support engagement via providing supports for the participants’ autonomy and competence. Implications are discussed.

Financial Motivation in an Intensive Diet and Activity Intervention Undermines Adaptive Changes in Enjoyment

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Joanna Buscemi, H. Gene McFadden, *Northwestern University*

Donald Hedeker, *University of Illinois at Chicago*

Bonnie Spring, *Northwestern University*

The Make Better Choices (MBC) trial examined different strategies for maximizing simultaneous healthful change across multiple behaviors. All participants ($n = 200$) had four risk behaviors at baseline: high saturated fat intake (Fat), low fruit and vegetable intake (FV), low physical activity (PA), and high sedentary leisure screen time (Sed). For three weeks participants used handheld technology, were coached, and offered financial incentives to change targeted behaviors, while change in untargeted behaviors was also measured. Pre and post treatment participants reported their enjoyment of each behavior. Experimental Group did not predict changes in enjoyment; however, participants’ motivation for enrolling in the study did. After controlling for General Motivation, stronger Financial Motivation predicted maladaptive changes in enjoyment; specifically, Financial Motivation was positively correlated with changes in enjoyment of Fat ($r = +.18, p < .05$), and negative correlated with changes in enjoyment of PA ($r = -.18, p < .05$) and FV ($r = -.16, p < .05$). Implications for theory and practice will be discussed.

Session 6E | Basic Needs at Work Across the World

Room: Highland E

Motivation At Work Scale: Extended Russian Version (MAWS-R) and its Implication in Research Projects

Elena Mandrikova, *National Research University Higher School of Economics (Russia, Moscow)* ✉ e.mandrikova@gmail.com

The Motivation at Work Scale (MAWS) was developed according to self-determination theory and covered four different types of motivation: intrinsic motivation, identification, introjection and external regulation. We examined the structure of the MAWS on Russian sample and refine it by adding items regarding integrated extrinsic motivation and amotivation – to use all types from motivational continuum. The final version of questionnaire—MAWS-R—was developed in Russian and used at some research projects (motivation and coping-strategies of dirty workers; motivation of software engineers on different professional stages; comparative motivational profiles of employees in Russian organizations), which allow to reveal the motivational structure and self-regulation peculiarities of Russian employees.

Autonomous and Controlled Regulation in Russian Employees: The Role of Personality Resources

Evgeny Osin, *Higher School of Economics* ✉ eosin@hse.ru

Tamara Gordeeva, *Lomonosov Moscow State University*

Tatiana Ivanova, *Higher School of Economics*

Existing studies indicate the associations between intrinsic motivation and psychological well-being. However, it was not clear whether personality resources moderate this association. A research study was done in a large sample of Russian employees (N=4708) using an original brief self-regulation questionnaire, and a set of measures of personality resources (dispositional optimism, hardiness, generalized self-efficacy, tolerance for ambiguity) and workplace well-being (workplace mood, work satisfaction, organizational loyalty, work engagement, work-life balance). Intrinsic and extrinsic motivation were associated with employee education, age, and position within the organization, and other demographic variables. In multiple regression analyses, controlling for demographics, personality resources were associated with motivational indicators, which, in turn, explained unique variance in workplace well-being. Moderation analysis suggest synergy between intrinsic motivation and personality resources: autonomous regulation increases the contribution of personality resources to workplace well-being.

Employees' Motivation in the Workplace: 12 Elements to Increase Need Satisfaction, Performance, and Well-Being

Drea Zigarmi, *University of San Diego School of Business Administration / The Ken Blanchard Companies*

Jacques Forest, *UQAM School of Management Science* ✉ forest.jacques@uqam.ca

Chloé Parenteau, Sarah Girouard, Laurence Crevier-Braud, *UQAM*

Susan Fowler, *The Ken Blanchard Companies*

David Facer, *University of San Diego*

Self-determination theory is gaining popularity in the work setting as exemplified by the increased number of published articles appearing in academic and consulting journals. In order to examine application strategies that influence motivation at work, Zigarmi and colleagues (2011, 2012) identified twelve factors, relevant for research and interventions, which could increase employee performance and well-being. Using data from 400 employees from different organizations in a variety of domains and countries, we tested the mediational roles of need satisfaction between the 12 work environment factors (e.g., procedural justice) and five different organizationally desirable intentions (i.e., endorsement, discretionary effort, intent to stay, intent to perform, and citizenship). Mediational analyses confirmed that the 12 factors have a positive impact on need satisfaction, which then have a positive impact on the five work intentions. This empirical test shows the strong theoretical foundation of SDT and more importantly the applied practices it can lead to.

Session 7A | Teaching Practices and Stress

Room: Highland A

An Experimental Test of the Influence of Guilt and Shame on Self-Determined Motivation

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Marie-Josée Énard, *University of Quebec in Outaouais*

Glen Thompson, Alain Desrochers, *University of Ottawa*

Sylvain Coutu, *University of Quebec in Outaouais*

The goal of the present project was to examine the impact of guilt and shame on self-determined motivation by means of an experimental design. Participants (N=65) were randomly assigned to one of three conditions (guilt, shame, or control). After mood induction, participants were asked to perform a demanding computerized cognitive task. Motivation was measured at regular intervals during this task, which was followed by a free-choice period. Results revealed that self-determined motivation was higher in the guilt condition than in the shame and control conditions throughout the task. The discrepancy in self-determination between shame and control conditions steadily increased during the task until it became significantly lower in the shame condition at the end of the task. The odds of pursuing the task during the free-choice period was three times as high in the guilt condition, and two times as high in the control condition, than in the shame condition.

Next Steps in the Study of Ideal/Actual Discrepancies: Are Ideals Authentic?

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Prior research has established that discrepancies between ideal and actual self-concept are associated with decrements to well-being (Lynch, La Guardia, & Ryan, 2009). It remains unclear however to what extent people's personally endorsed ideal views of self are 'authentic,' given that dynamic relationship processes may lead people to form ideals that are inauthentic or introjected (Horney, 1937/1999; Rogers & Dymond, 1954). The present study (N = 506) used multilevel modeling to test within-person associations among self-concept discrepancies, authenticity, and conditional regard (CR). Mediation analysis showed that at both within- and between-persons levels CR (CR in current relationships vs. while growing up) was negatively associated with authenticity, and that CR contributed to larger self-concept discrepancies; further, the effects of CR on authenticity were partially mediated by self-concept discrepancies. The link between present-day CR and authenticity was stronger for those who experienced CR from parents growing up. Discussion focuses on implications.

Chronic Death-Thoughts, Worldview Defense, Autonomy, and Self-Regulation

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Death-thoughts are an attribute of mortality salience long believed to engender a variety of automatic defensive reactions such as in-group favoritism and out-group derogation. This research provides a theoretical and empirical examination of the role of dispositional death-thought cognitions (DTC) in worldview defenses, sense of autonomy and self-regulation. Correlational, quasi-experimental, and laboratory studies show that the dispositional death-thought cognitions measure a unique quality of mortality salience that parallel effects found using situational inductions of mortality salience. Thus, chronic thinking of one's own death appears to be stable over situational influences and may be engendered in the person. Both dispositional and state mortality salience predicted lower self-esteem, lower sense of autonomy and relatedness. In this sense, death thoughts impair both the sense of self-regulated activity and the fulfillment of basic psychological needs, and foster the tendency toward automatic defensive reactions.

Session 7B | Manager/Executive Practices in Motivation

Room: Highland B

The Motivation Beliefs Inventory (MBI): Measuring Manager and Non-Manager Motivation Beliefs Using Four Motivation Theories

David Facer, *University of San Diego, School of Leadership and Education Sciences (SOLES)* ✉ activatepotential@gmail.com

Central tenets of SDT have been so thoroughly validated one might forget the presence of more entrenched motivational frameworks in work organizations. Such frameworks undergird individual beliefs about employee motivation and how they are operationalized. More specifically, such beliefs contribute to individuals' lay theories of motivation, which influence decisions about what new ideas ought or can be operationalized. The self-report Motivation Beliefs Inventory (MBI) was created to elucidate the motivation beliefs aspect of individual lay theories using four prevalent motivation frameworks (reinforcement, expectancy valence, achievement motivation, and SDT). Using a large sample of employees (n=712), the MBI shows acceptable psychometric properties at the subscale (.71-.82) and overall levels (.77). For the first time, researchers can assess a range of individual motivation beliefs using a parsimonious, multi-theory instrument. The MBI may also help managers and non-managers "unpack" their lay theories, and subsequently enhance their individual performance, and the leadership offered others.

Understanding the Nature and Consequences of Managers' Work Motivation: A Latent Profile Modeling Approach

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Houston Lester, *University of Nebraska-Lincoln*

Kristin Cullen, Marian Ruderman, *Center for Creative Leadership*

The goal of our work is to explore the nature and consequences of managers' work motivation. We adopt a person-centered approach that focuses on the effects of the manager's overall pattern of motivation rather than the impact of specific forms of motivation (e.g., autonomous, controlled). Using data for 405 managers (201 males, 204 females) working in the U.S., we perform latent profile modeling to identify the various types of motivational profiles possessed by managers and to link these types to managers' outcomes. In particular, we classify study participants into types based on their responses to the Motivation at Work Scale (Gagne et al., 2010), which measures extrinsic, introjected, identified, and intrinsic self-regulation. We assess the linkages between the motivational types and managers' self-reported affect, compulsive tendencies, job satisfaction, and organizational commitment. Further, we test the

relationships between the types and performance ratings obtained from managers' bosses and direct reports.

Session 7C | Nursing, Health and Human Services Systems

Room: Highland C

Health Promotion Interventions Guided by Self-Determination Theory and Delivered by Nurses

Diane Lauver, *University of Wisconsin-Madison* ✉ drlauver@wisc.edu

Chiraporn Worawong, *Maharakham College of Nursing*

Based on self-determination theory (SDT), interventions can promote behaviors to control chronic conditions. Effects of interventions guided by SDT on health promotion behaviors are less well known. Nurse-researchers conducted three feasibility studies of health promotion interventions, based on SDT, with one group, pre-post- designs. One U.S. sample was mostly white and college educated, one U.S. sample was mostly people of color without college education, and one Thai sample involved women who typically had eighth grade educations. Nurses developed relatedness with participants, asked them to choose a behavior to adopt (e.g., physical activity, healthy eating, stress reduction; respecting autonomy), and fostered their competence in new behaviors. Measures of behavior and SDT concepts were obtained at baseline and 4-6 weeks post-intervention. Fidelity of delivery was supported. Preventive behaviors improved over time. In longer and larger experiments, researchers can test the effects of interventions guided by SDT on adults' sustained, health promotion behaviors.

Autonomy Support and Competence Development for Leaders of Municipal Healthcare Institutions: Between a Rock and a Hard Place?

Etty R. Nilsen, *Buskerud University College* ✉ etty.nilsen@hibu.no

Ellen Karine Grov, *University of Oslo*

Hallgeir Halvari, *Buskerud University College*

Due to the introduction of a new health reform, motivation at work, organizational changes and need for knowledge-intensive skills are current challenges for unit-leaders in Norwegian municipalities. During the early implementation of the reform, we conducted interviews with ten unit leaders in nursing homes and home-care services. The interview guide includes aspects of how these highly autonomous unit-leaders are supported by their superiors, whom are situated geographically and organizationally very distant. Preliminary findings show that the unit-leaders are concerned with the need for competence development for the staff to fulfill the obligations given in the reform. Although the unit-leaders sympathize with the main ideas in the reform, e.g. earlier discharge from hospital, they do however feel left alone in their position as leaders. The results are discussed in terms of 'The self-determination theory' which highlights being

competent and in close relations (here: to colleagues) as main explanations for unit-leaders' motivation to continue in their positions.

Self-Determination Theory-Based Program Evaluation: Eight “Pulse-Points” for Measuring the Health of Human Service Delivery Systems

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Charles Partridge, *PERSolutions: Program Evaluation and Research*

Self-Determination Theory has provided program evaluators with the important constructs of Basic Psychological Need Satisfaction and Support for Autonomy. Together these measures can be used at eight possible “pulse points” to determine the health of a program provider-participant system. Examples of use of the framework and data generated will be provided. The presentation of this paper is for four purposes: (1) to offer a systems-based framework for translating SDT research into practice; (2) to generate critique from Self Determination theory experts; and (3) to share challenges encountered over six years of implementing the framework; and (4) to generate interest in research that validates the use of SDT questionnaires for program evaluation purposes.

Session 7D | Autonomy Support for Children

Room: Highland D

Is Autonomy Support Beneficial Even For ‘Difficult’ Youth?

Mireille Joussemet, *Université de Montréal* ✉ m.joussemet@umontreal.ca

Audrey Savard, Julie Emond Pelletier, Geneviève A. Mageau, *Université de Montréal*

While numerous studies have shown the benefits of autonomy support (AS) in education, it remains unclear whether AS is also beneficial for “difficult” children. The goal of this study was to examine whether AS would foster motivation and well-being among maladjusted teenagers receiving social rehabilitation services (N = 29 female adolescents; mean age = 14 years old). Using an experimental design, we compared the impact of AS (vs. no AS) on the internalization of a tedious, but important clinical workshop. The results suggest that compared to the comparison condition, an autonomy-supportive interpersonal style is beneficial to youths’ experience, leading to higher motivation, perceived task’s value, task liking as well as less negative affect (effect sizes between .90 and 1.17). These results suggest that the benefits of AS are not limited to well-functioning students and that extending the reach of SDT to clinical populations is a worthy endeavor.

Mother/Child Relationships when Children Disobey: Balancing Parental Autonomy Support and Structure

Geneviève A. Mageau, *Université de Montréal* ✉ g.mageau@umontreal.ca

Joannie Lessard, *Université de Montréal*

This study investigates parental structure and autonomy support when children disobey. A total of 221 children and 168 mothers rated the acceptability and efficacy of parental strategies in hypothetical scenarios. These strategies varied according to two dimensions: verbal preliminary strategies (autonomy-supportive vs. controlling) and parental action (repeating the rule, logical consequence, and punishment). Results showed that mothers rated giving a consequence paired with verbal autonomy-supportive strategies as the most acceptable and efficient strategy. Children also thought that autonomy-supportive preliminary strategies were more acceptable ($F(1, 169) = 61.79, p < .05$) and efficient ($F(1, 191) = 5.282, p < .05$) than controlling ones. Importantly, children believed that consequences and punishments were as efficient in preventing future disobedience and that these strategies were more efficient than repeating the rule ($F(2, 382) = 9.07, p < .05$). Children also rated consequences as more acceptable than punishments ($F(2, 338) = 3.81, p < .05$).

Session 8A | Modeling in Longitudinal Studies

Room: Highland A

Hierarchical and Multidimensional Aspects of Academic Self-Determined Motivation

Julien Chanal, *University of Geneva* ✉ julien.chanal@unige.ch

Frédéric Guay, *Laval University*

Many studies focusing on the academic domain have considered both autonomous and controlled forms of motivation either at a global level (i.e., school) or at a specific level (i.e., a school-subject like math or science). Previous research has shown that levels of autonomous motivations differ across schools subjects (e.g., Guay, Chanal, Ratelle, Marsh, Larose & Boivin, 2010), and across levels of generality (e.g., Vallerand & Ratelle, 2002). However, multiple school subjects and multiple levels of generality haven't been studied simultaneously yet. The present paper provides results of three studies conducted among students from different class ages. The purposes of these studies were to test a hierarchical and multidimensional model of self-determined motivation in the academic context. Results from the three studies assume that the differentiation process between motivations reflects various specificity levels of motivations. Theoretical implications for research in the academic domain and for the HMIME model will be discussed.

Predicting Adolescents' Day-to-day Optimal Functioning at School and in Sports: The Case of Situational and Trait-like Self-Determination

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Maarten Vansteenkiste, *Gent University*

Willy Lens, *Catholic University of Leuven*

In two diary studies we investigated to what extent the day-to-day associations between self-determined motivation and well-being and effort vary among adolescents who differ in trait-like autonomous and controlled motivation and time perspective. In Study 1 we found stronger positive associations between day-to-day self-determined motivation and learning efforts and well-being for students ($N = 57$; $M_{age} = 16.52$, $SD = 0.61$; 35.1% males) high in trait-like autonomous motivation and future-time perspective. We also found trait-like autonomous motivation to positively predict, and hedonic present orientation to negatively predict mean levels of learning efforts. We partly replicated these results in Study 2 with adolescent athletes ($N = 63$, $M_{age} = 14.40$, $SD = 1.58$; 87.3% males) where we additionally found day-to-day perceived autonomy to predict situational self-determined motivation. These findings underscore the key role of situational and trait-like quality of motivation and the importance of time perspective in adolescents' day-to-day functioning.

Longitudinal Relationships between Motivational Climate and Intrinsic Motivation: A Parallel Process Modeling Approach

Sami Yli-Piipari, *University of Memphis* ✉ srylppri@memphis.edu

The study aimed to test the role of task- and ego-involving climate in adolescents' intrinsic motivation during school physical education. A sample, 758 Finnish adolescents (age range 12 to 14), responded to self-report questionnaires three times across middle school years. First, a latent growth model for each variable was estimated and, second, the latent growth models were implemented in a single parallel process model. Fit indices for each latent growth model and the parallel process model indicated acceptable data fit. The study showed that ego-involving climate increased (α intercept = 3.38, α slope = .11), whereas task-involving climate (α intercept = 3.58, α slope = -.03) and intrinsic motivation (α intercept = 3.15, α slope = .02) were stable. Although both climates contributed to the level of intrinsic motivation (task $R^2 = 54\%$; ego $R^2 = 21\%$), only task-involving climate contributed to development of intrinsic motivation ($R^2 = 42\%$). The findings highlight the importance of task-involving motivational climate as a facilitator of students' intrinsic motivation in physical education.

Session 8B | Elementary School Practices

Room: Highland B

Exploring the Experiences of Upper Elementary School Children Who are Intrinsically Motivated to Seek Information

Sherry R. Crow, *University of Nebraska Kearney* ✉ crowsr@unk.edu

This presentation describes a naturalistic research study based on the question, “what are the experiences in the lives of upper elementary school children that foster an intrinsic motivation to seek information?” Self-determination Theory (Deci & Ryan, 1985) provided the foundation for the theoretical framework. Participants were selected from a pool of fifth graders from three diverse schools using the results of a specially-created survey. Analysis, based on data collected through interviews and drawings, indicates that students came from various family situations and socio-economic backgrounds, exhibited an affinity for play, a tendency toward creativity, and the disposition of non-competitiveness. A point-of-passion experience occurred in the lives of all informants, and the presence of “anchor” relationships helped foster their intrinsic motivation for information seeking. Students specified components of intrinsically motivating information seeking episodes. Implications and recommendations for practitioners include suggestions toward the goal of supporting and developing intrinsic motivation in school children.

Generation Two: Meeting the Basic Psychological Needs of Children Through Friendships with Adults

Bruce Gilberg, *Founder and Chairman of Generation Two: Creating Intergenerational Friendships, Inc* ✉ brucegilberg@gmail.com

Generation 2 is a community organized volunteer program in which adult volunteers from the community meet for a weekly child-centered play session with a first grade child. Volunteers are trained to be child-centered in the sense that they respond to the child’s initiations and interests without imposing their own agendas, judgments, or concerns. The child-centered approach is explicitly intended to support the child’s basic psychological needs for autonomy and for relatedness. G2 believes that this support for basic needs, even though only one half-hour per week, enhances child well being and their general attitudes towards the classrooms and schools within which the program is offered. Data collected on student outcomes supports this idea: students exposed to G2 show more liking for teachers and school, as well as better feelings about themselves compared to those not exposed to G2. Discussion focuses on the role of basic need supports in enhancing students’ school engagement and wellbeing.

Motivation Correlates of Adolescent Reading Achievement: Autonomy, Control, Self-Efficacy, and Grit

Stephen Tonks, *Northern Illinois University* ✉ stonks@niu.edu

Ellen Usher, Amanda Butz, *University of Kentucky*

In this study, we investigated relationships among students' (N = 2,433; Grades 4-8) autonomous and controlled motivation, self-efficacy, academic grit, and multiple indicators of achievement in reading. Through factor analyses of an SRQ (Ryan & Connell, 1989) specific to reading, we found a two-factor structure (autonomous and controlled motivation). Students not meeting state standards in reading reported lower autonomous motivation than did those who met standards. Boys reported lower autonomous motivation than girls; there were no gender differences for controlled motivation. We found no differences in either variable by ethnicity. Next, we regressed three reading outcomes on six independent motivation variables. Controlled motivation negatively predicted reading grades, computerized reading assessments, and teachers' ratings of motivation. Grit was the strongest predictor of reading grades and teachers' ratings of motivation, and self-efficacy predicted computerized assessments and teachers' ratings of motivation. We compare our findings to those of De Naeghel et al. (2012).

Session 8C | Measurement and Methods

Room: Highland C

Phenomenological Interviewing: Using Qualitative Methods in SDT Research

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Karen Mackie, Martin Lynch, *Warner School of Education, University of Rochester*

Self-determination theory adopts a phenomenological stance emphasizing the importance of perception, inner experience, and interpretation in determining the salience that external events have for people. Yet to date, research in the SDT tradition has largely relied on quantitative methods that depend upon hypothesis-testing and nomothetically derived constructs. In this symposium, we provide an overview of existing studies by SDT researchers that have used qualitative methods and explore how qualitative methods may provide additional tools for researchers to expand and explore the boundaries of SDT. Specifically, participants will have the opportunity to reflect on how familiarity with one qualitative approach, phenomenological interviewing, can help them investigate questions of critical relevance to pushing the boundaries of SDT inquiry.

Questioning the Assumption of No Cross-Loading for Inter-Related Constructs: The Case of the Sport Motivation Scale-6

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Clifford Mallett, *The University of Queensland*

Mohamed Aris, *Nanyang Technological University*

The current study was conducted to re-assess the factor structure of the 24-item Sport Motivation Scale-6 (SMS-6; Mallett, Kawabata, Newcombe, Forero, & Jackson, 2007) with an independent sample. A total of 437 participants completed the SMS-6, and their responses were examined with confirmatory factor analysis (CFA) and recent exploratory structural equation modeling (ESEM; Asparouhov & Muthén, 2009). A 6-factor CFA model did not fit to the sample data adequately. Through examination of the corresponding ESEM solution, it was found that 2 items loaded on non-target factors poorly. This result was replicated by a published data set (Mallett et al., 2007). The modified CFA model with these 2 items removed fit to the present study's data satisfactorily and all 6 factors were adequately differentiated. These results generally validate the SMS-6 responses. Furthermore, this study demonstrated the usefulness of comparing CFA and ESEM solutions for an accurate interpretation of individual parameters.

Measuring Basic Need Satisfaction: Alternatives to Confirmatory Factor Analysis When the Three Needs are Highly Correlated

Carme Viladrich, *Universitat Autònoma de Barcelona* ✉ carme.viladrich@uab.cat

Nikos Ntoumanis, Eleanor Quested, Paul Appleton, Joan Duda, *University of Birmingham*

The three basic psychological needs of autonomy, competence and relatedness are understood to be inter-related, but also each need encompasses a distinct psychological nutriment. Attempts to simultaneously measure the three needs are often plagued with difficulties such as high correlations between the three needs. In this study, we explored three statistical alternatives to CFA that have been shown to reduce high factor correlations and may address these problems. We analyzed data from 7,636 football players aged 9 to 15 from five European countries. Our results show that neither exploratory structural equation modelling with target rotation nor bi-factor models systematically lowered the correlations or statistical redundancies among the needs. The statistical approach that resulted in lower correlations was exploratory structural equation modelling with geomin rotation and $\epsilon = .5$; however, some sizeable crossloadings were observed. Further exploration of the suggested analytical alternatives to CFA with different samples and contexts is needed.

Session 8D | Special Topics in SDT

Room: Highland D

Gambling Motivation and Psychosocial Outcomes in Older Adults: A Multi-Groups Analysis

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Gambling is one of the most popular social activities among older adults. This study challenged the assumption that gambling is inevitably a negative force in older persons' lives and showed that there are some instances when gambling may not be associated with negative outcomes. Using SDT as a framework and Structural Equation Modeling as an analytical tool, this secondary analysis determined relationships among intrinsic and extrinsic motives for gambling and various psychosocial outcomes. The following research questions were addressed: Which type of motivation—extrinsic or intrinsic—predicts better psychosocial outcomes in older gamblers? What impact do age, gender, and type of gambling have on the association between motivation and outcomes? Results suggest a strong association between gambling for extrinsic reasons and relationship difficulties and emotional problems for all adults as well as a lower occurrence of relationship difficulties for older adults and women who gamble for intrinsic reasons.

The Capability Approach and Self-Determination Theory

Tadashi Hirai, *The University of Tokyo; Japan Society for the Promotion of Science, Japan* ✉

The Capability Approach (CA) is an approach in which substantive freedoms (i.e., what people are able to do and to be) are regarded as the most important informational space for assessing individual well-being. Although this approach is known in the field of development as an alternative to the traditional economic growth model (based primarily on monetary growth), it has been overly simplified by focusing on objective well-being data (e.g., years of schooling, life expectancy) and has difficulty reflecting people's voices about their own living due to a danger of adaptive preferences. The Self-Determination Theory (SDT) offers an alternative approach to measuring well-being because of the theory's fundamental basic psychological needs concept which could adjust cognitive misjudgment. SDT maintains a sophisticated and validated argument of autonomy, which is essential for reflecting people's evaluation of well-being. This research application of SDT offers a promising way for the CA to operationalize the conceptual richness for more comprehensive well-being assessment.

Assessing the Balanced Measure of Psychological Needs (BMPN) in the Context of Household Energy Saving in Western Australia

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Geoffrey Soutar, Jillian Sweeney, Timothy Mazzarol, *University of Western Australia*

Arguing weaknesses in the Basic Psychological Needs Scale (BPNS; Gagne 2003), Sheldon and Hilpert (2012) suggested an alternative, 18 item Balanced Measure of Psychological Needs (BMPN) scale (3 positively worded and 3 negatively worded items for each of the autonomy, competence and relatedness subscales). Weaknesses identified in BPNS included a lack of balance in the items, item coverage and dimensionality and the treatment of general needs satisfaction as a single construct. In a household energy saving context, using a non-student sample (n=305), we were unable to replicate the BMPN, which led to the suggestion that the BMPN's suggested three-factor structure should be measured using only positively worded items. In addition, we test a Balanced Measure of Psychological Needs Support (BMPNS) scale to compliment the BMPN. In this case, a single-factor model best explained our data. The paper includes a full presentation of results and a theoretical discussion of these issues.

Session 8E | Cognitive and Reflective Processes in Motivation

Room: Highland E

Mindfully Random: Brief Mindfulness Manipulation Improves Random Movements Production

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Iti Chaturvedi, *Nanyang Technological University*

John Chee Keng Wang, *National Institute of Education, Singapore*

Lung Hung Chen, *National Taiwan Sport University*

As production of variability could play some facilitative roles in the learning of new motor skills, we examined the effects of a brief mindfulness induction on random movement production. Sixty-three participants were randomly assigned to the experimental or control condition. Those in the mindfulness group were tasked to pay attention to their breathing while they sat quietly for six minutes. The random movement task was a task that required participants to click randomly, for five minutes, the boxes of the 3 x 3 grid shown on the computer screen. The sequence of clicking was assessed in terms of degrees of randomness. Results show that the short mindfulness induction had a positive effect on the randomness of sequence subsequently produced. The findings are discussed in terms of mindfulness, habitual tendencies, skills learning and stable attractors from the dynamical systems perspective.

The Quality of Choicework: Is it Predicted by Personality Variables?

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The quality of choicework, that is the way we construe and make choices, is an important manifestation of self-determination or its deficit. Previous studies revealed a rather stable 4-dimensional structure of choicework, including the dimensions of mindfulness, unambiguity, autonomy of choicework and satisfaction with the results. In a series of studies with life situations of varied scale of importance we found few consistent personality predictors of the parameters of the choicework; for everyday choices more than for “fateful” ones. However, two holistic types of choicework are being replicated in different studies: the involved, or agentic choice, and the noninvolved, or occasional choice. Personality differences between the groups are more pointed for everyday than for “fateful” choices. The mindfulness of choicework appears to be the most important dimension accounting for its subjective quality.

Workshops

For workshop names and locations, please see detailed program schedule at the front of this guide. The reception and dinner will follow the workshops.

Keynote 4A

Room: Lilac Ballroom A

Mindful Responses to Reward: Evidence from Brain Imaging

Kirk Warren Brown, *Virginia Commonwealth University* ✉ kwbrown@vcu.edu

Reward seeking is ubiquitous in humans but seeking such social rewards as money and social approval can have psychological and behavioral costs. Building upon research showing that mindfulness, an adaptive quality of attention, appears to promote autonomous functioning, this presentation highlights new brain imaging research investigating whether the self-regulatory advantage offered by mindfulness appears in reward responsiveness, as revealed by inspection of neural regions associated with the anticipation, gain, and loss of monetary rewards. Seventy-eight participants (34 mindfulness trainees, 44 matched controls) completed the Monetary Incentive Delay task while undergoing brain imaging. The groups performed equally well on the task, but compared to controls, trainees showed lower activations in reward and loss anticipation brain regions, as well as lower neural activations during reward receipt. Connectivity analyses suggested higher cognitive control among trainees. These results suggest that mindfulness is associated with less susceptibility to monetary rewards but without task performance costs.

The Benefits of Emotional Integration and the Costs of Emotional Avoidance

Guy Roth, *Ben-Gurion University of the Negev* ✉ roth@bgu.ac.il

Cumulative research demonstrates advantages of reappraisal (i.e., nonemotionally construing potentially emotion-eliciting situations) over suppression (Gross, 2002). However, reappraisal may result in experiential avoidance when motivated by unwillingness to risk experiencing negative emotions associated with initial appraisal and may involve distorted experiencing. Four studies compared various outcomes for college students' reappraisal, suppression, and emotional integration. Self-determination theory defines adaptive emotional regulation as differentiated awareness of one's emotional states and utilization of this awareness to regulate behavior volitionally (Ryan et al., 2006). Two experimental studies (n=120 each) revealed that emotional integration at first exposure to anxiety-eliciting stimulus led to better positive outcomes at second exposure (+72hrs): lower emotional arousal (measured via physiological assessment, facial expressions, and self-reports), better memory, and higher written-expression quality (i.e., less defensive). Two correlational studies examining students and close friends (n's=120,160) pinpointed emotional integration as best predictor of eudaimonic well-being and relationship quality. Possible implications are discussed.

Keynote 4B

Room: Lilac Ballroom B

A Self-Determination Theory Model for Health

Geoffrey C. Williams, *University of Rochester Medical Center* ✉ geoffrey_williams@urmc.rochester.edu

Organismic Integration Theory posits that social surrounds that support SDT's psychological needs facilitate internalization of autonomous self-regulation and satisfy basic needs for perceived competence and relatedness. Empirical research supports that when these needs are satisfied, people experience less depression, anxiety, somatization, suicidal thoughts and reports of suicide attempts, and greater well-being. A recent meta-analysis of 184 data sets in the health domain provide support that health behaviors including increased physical activity, not smoking, and using medications as prescribed, and better mental health are maintained when patient needs are supported in treatment. Physiologic improvements in unhealthy cholesterol, glucose control for those with diabetes, and weight loss (for those who are obese) result from this pattern of change. These results will be discussed in the context of the SDT model for health behavior change, and in the context of recent changes in biomedical ethics and medical professionalism that have elevated autonomy support and patient autonomy, respectively to the highest level of importance in all health care outcomes.

Self-Determination Theory and Motivational Interviewing: Where To From Here?

Pedro J. Teixeira, *FMH-Technical University of Lisbon* ✉ pteixeira@fmh.utl.pt

Self-determination theory (SDT) and Motivational Interviewing (MI) offer client-centered perspectives that emphasize individual commitment to behavior change and address the process by which individuals come to self-endorse goals and reasons to act. Despite considerable common ground and several calls for greater integration and collaboration between SDT and MI, the scientific cultures of the two remain largely separate. Indeed, the empirical and conceptual overlap between SDT and MI is unclear. While MI focuses on the “initial seeds” of motivation and explores ambivalence in detail, SDT explores motivational quality along a continuum and considers autonomy (i.e., self-endorsement) a valid outcome in its own right, regardless of behavior change. This talk will focus on reasons for and against greater integration of SDT and MI, using interventions in physical activity and obesity as examples. The purpose is to stimulate further thinking and research utilizing known-efficacious person-centered approaches to achieve lasting health behavior change.

Session 9A | Motivation and Physical Activity

Room: Highland A

The Effects of Motivational Climate on Self-Determination and Motor Skill Learning

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The aim of this study was to examine the effects of mastery and performance-oriented motivational climate on psychological needs (competence, autonomy, and relatedness), self-determined motivation, and learning of basic volleyball skills. 40 male students ranging 19-25 years of age from universities in the city of Urmia that were novice in volleyball skills participated voluntarily in this study. Participants were acquired basic volleyball skills in two groups with different mastery or performance oriented climate, during 13 sessions. Motivational climate interventions were established according TARGET structures proposed by Ames (1992). Results showed that the mastery-oriented group obtained higher scores than performance-oriented group in terms of competence, autonomy, and relatedness as well as self-determined motivational forms (intrinsic motivation, and identified regulation) and self-determination index. The mediatory role of psychological needs in effects of motivational climate on self-determination was not statistically significant. There was not any significant difference in basic volleyball skills between two groups. Perceived motivational climate is an important social-context variable in learning volleyball skills that influence psychological needs and self-determined motivational variables.

Assessment of the Effect of an Intervention Program with Physical Education Teachers to Improve Self-Determination Levels

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David Sanchez-Oliva, Inmaculada Gonzalez Ponce, Juan Jose Pulido, *University of Extremadura*

Jose Lopez-Chamorro, *Autonomous University of Barcelona*

Francisco Miguel Leo, *University of Extremadura*

Based on Self-determination Theory, the purpose of the present study was to test the effects of a training program in five physical education teachers on the self-determined motivation and psychological need satisfaction. The sample was formed by ten physical education teachers, five experimental group and five control group, as well as 384 pupils. Teachers developed a teaching program for 15 hours, with the aim to set up guidelines to promote the support of the three basic psychological needs and student motivation. To assess the effectiveness of the program, basic psychological needs, support and pupils' motivation were measured before the beginning of a Didactic Unit,

as well as at the end of it, separated by a 12 session interval. Results showed that there are significant differences in the analysis of repetitive measurements between control and experimental groups. Mainly, differences were found in satisfaction of competence and autonomy. However, there weren't any significant differences in the relatedness need.

Examining the Impact of Teacher's Ability Theory and Normative Versus Criterion Competition on Students' Performance, Subjective

Vali Khalkhali, *Department of Psychology, Malayer Branch, Islamic Azad University, Malayer, Iran* ✉ v.khalkhali@iau-malayer.ac.ir

The purpose of this study was to assess the impact of self-theories about ability on Iranian students' performance, subjective vitality and happiness in sport competitions. A factorial design (2×2) was conducted. 85 students participated in the study (age: M = 12.3). Ability theory text was communicated in an entity versus incremental way. Half of subjects were told participants who could attain the minimum required score could ascend to next race, and another half were told participants who could attain 10 first ranks could ascend to next race. After racing, all subjects completed subjective vitality and happiness questionnaires and their performance was recorded. Analyses of data showed incremental students, just in the second competition, reported more performance, vitality and happiness compared with entity participants. The findings highlight that ability beliefs can affect the students' performance, vitality and happiness; this emerges when fail probability is high. Moreover, winner participants, regardless of the teacher ability belief, showed more happiness compared with loser participants.

Session 9B | Goal Pursuits

Room: Highland B

Autonomy Support and Achievement Goals as Predictors of Life Satisfaction and Subjective Health Complaints

Åge Diseth, *University of Bergen* ✉ aage.diseth@psysp.uib.no

A self-determination theory (SDT) perspective on motivation presupposes that perceived autonomy support is related to several factors that are important for learning and well-being. In the present study, a representative sample of 2,594 Norwegian students in 10th grade secondary school and 1st grade high school responded to a survey measuring the students' perceptions of their teachers' autonomy support, the students' personal achievement goals, subjective health complaints, and life satisfaction. The purpose of this study was to investigate the relation between these variables and how they may differ according to grade level (10th grade secondary school vs. 1st grade high school). The results showed that all achievement goals (mastery, performance approach and performance avoidance) were positively predicted by autonomy support. Furthermore, subjective health complaints and life satisfaction were predicted by autonomy support and achievement goals. Finally, students in 1st grade high school had a higher mean level of all motivational variables.

Pathways to Success: Examining the Mechanisms Underlying Greater Progress in Autonomous Goals

Marina Milyavskaya, *McGill University* ✉ marina.milyavskaya@mail.mcgill.ca

Nora Hope, Richard Koestner, *McGill University*

In the present study, we hypothesize that autonomous goals are more likely to be attained because people experience less temptations conflicting with these goals, thereby requiring less self-control and conserving mental resources for future resistance. Ecological momentary assessment (EMA) was used as part of a semester-long study of goal pursuit. At the start of the semester, participants (N=159) reported on their relative autonomy for four goals they planned to pursue throughout the semester. Over the course of one week during the semester, participants were contacted five times daily and reported on their current desires, how these conflict with their four goals, and their levels of ego-depletion. Results from the EMA portion of the study show that greater goal autonomy is related with lower conflict between people's desires and goals. Furthermore, experiencing conflict between one's goals and desires leads to greater depletion. Impact on goal pursuit and attainment will be discussed.

Session 9C | Need Satisfaction and Energy

Room: Highland C

Need Satisfaction in Episodic Memories: An Overlooked Level of the Self?

Frederick L. Philippe, *University of Quebec at Montreal* ✉ philippe.frederick@uqam.ca

Need satisfaction is often assessed as a general perception. Our research has shown that need satisfaction in episodic memories constitutes a different and non-overlapping way to assess need satisfaction. In addition, need satisfaction in significant episodic memories has been shown to predict important life outcomes such as increases of well-being over time, emotion regulation, and dissolution of romantic relationship (negatively), over and above classical measures of need satisfaction. I will present data from five studies showing that episodic memories can be primed and immediately affect well-being or emotion regulation as a function of the level of need satisfaction characterizing the memory primed. I will also show that memories prospectively lead to important consequences in well-being and relationships. I will also discuss how perceptions of need satisfaction in past events are reconstructed over time as a function of people's self.

Implicit Energy Loss: The Effect of Embodied Cognition Cues on Vitality

Idit Shalev, *Ben Gurion University* ✉ shalev.idit@gmail.com

Recent findings indicate that being outdoors is associated with greater vitality (Ryan et al., 2010). However, little is known of the effect of different environments on vitality. Based on embodied cognition perspective, 3 studies examined the idea that activation of dryness metaphor by pictures or words will decrease perceived vitality and readiness for action. In Study 1 participants primed with physical-dryness concepts reported higher tiredness and lower subjective vitality. In Study 2, visual images of dried lands reduced subjective vitality and readiness of action. Finally, in Study 3 exposure to the names of dryness related products influenced impressions of the vitality of a target person. The findings provide evidence to the metaphoric association between experiences in physical world and psychological feelings of vitality, suggesting activation of the dryness metaphor have implications on the economy of action.

Autonomy-Support and Self-Control: The Role of Individual Differences

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Chee Keng John Wang, *National Institute of Education, Nanyang Technological University*

Self-control relies on a limited resource. Exercising self-control results in ego-depletion. Past research has shown choice to be ego-depleting when construed as controlling and/or as behavioral options, and non-ego-depleting when perceived as autonomous. Three experiments, premised on the central tenet of self-determination theory, were conducted to garner a better understanding of the relations between causality orientations, perceptions of autonomy-support, and ego-depletion. Results of Experiment 1 revealed that under neutral contexts, autonomy-orientation protected one from the debilitating effects of ego-depletion. Consistent with previous studies, results of Experiment 2 showed that participants in autonomous conditions performed better in a Stroop task, following an initial self-control task. Results suggested that contextual manipulation of autonomy-support seemed to protect even the control-oriented individuals from the weakening effects of ego-depletion. Results of Experiment 3 provided preliminary cause for future research to delineate the factors of autonomy-support when examining ego-depletion. Overall, theoretical and applied implications were deliberated.

Poster Session Abstracts

Poster Session A

Room: Empire Hall

Poster 1. Operationalization of Self-Determined Motivation: Consequences and Implications in Cross-Sectional or Longitudinal Designs

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Julien Chanal, *University of Geneva*

What consequences in studies' results are associated with choices made in the operationalization of levels of self-determined motivation (SDM)? This issue remains critical for SDT researchers since Deci and Ryan (1985) proposed a multidimensional view of motivation larger than the classical extrinsic/intrinsic formulation. To our knowledge, little is known about consequences of operationalization of SDM. Specifically, we believe that depending on methodological designs used (i.e., cross-sectional or longitudinal) and statistical analyses performed (i.e., regression or ANOVAs), choices made in operationalization would have potential consequences on studies' results. Our objective in this presentation is to demonstrate that choices made are not without consequences on results and should be carefully considered. The present research will thus provide (a) an overview of different approaches used to operationalize SDM, (b) implications associated on the studies' results and (c) recommendations that could help SDT researchers to overcome some limitations that we identified.

Poster 2. Promoting Health in Healthy Living Centres: Does It Work and How?

Eirik Abildsnes, *University of Bergen* ✉ eabil@broadpark.no

Gro Beate Samdal, *Haukeland University Hospital*

Eivind Meland, *University of Bergen*

Thomas Mildestvedt, *University of Bergen*

Tonje Holte Stea, *University of Agder*

Torgeir Gilje Lid, *University of Bergen*

In Norway most municipalities will establish Healthy Living Centers. These centers use Motivational Interviewing as a pedagogical approach, and offer programs of physical activity, healthy eating, smoking cessation, behavioral treatment for obesity, alcohol problems, and depression. We will use Intervention Mapping as a processing tool to develop theory- and evidence-based intervention programs tailored to fit local needs and resources in cooperation with 9 municipalities. Designing and evaluation the programs will be grounded on local community participation and an ecological approach to health. We intend to link behavioral change theory to designing and evaluating interventions, and use SDT as theoretical framework for several RCT studies to evaluate

behavioral intervention programs across different behavioral domains. Data will be collected at baseline, at completion of intervention and at 12 months follow-up. We intend to screen participants for competence, autonomy and relatedness using validated SDT questionnaires, in addition to other outcome measures.

Poster 3. Teachability of Need-Support in Physical Education: Multi- Informant Effects of a Teacher Training

Nathalie Aelterman, *Ghent University, Belgium* ✉ Nathalie.Aelterman@Ugent.be

Maarten Vansteenkiste, *Ghent University, Belgium*

Lynn Van den Berghe, *Ghent University, Belgium*

Leen Haerens, *Ghent University, Belgium*

This quasi-experimental study investigated whether physical education teachers (N= 39) can learn to become more need-supportive in their teaching after receiving a one-day training. Teachers' need-support was objectively assessed by coding videotapes. Teachers and students were asked to fill out a questionnaire. Multilevel regression analyses indicated that students of teachers in the intervention group experienced more autonomy-support from pretest to posttest ($B = .18$, $SE = .08$, $\chi^2(1) = 4.09$, $p < .05$) compared to those in the control group. With respect to structure, no significant intervention effect was found ($B = .06$, $SE = .08$, $\chi^2(1) = .45$, ns). Further, teachers in the intervention group tended to report more structure ($F(1,37) = 6.75$, $p = .01$, $\eta^2 = .15$), but not autonomy-support ($F(1,37) = 2.25$, $p = .14$, $\eta^2 = .06$) relative to teachers in the control group. Analyses on external ratings are currently in progress and will be available at the conference. Practical implications and recommendations for future research will be discussed.

Poster 4. Investigating the Relationship Between Differentiation of Self and Marital Satisfaction

Arezou Ahangar, *Family Counseling of Kharazmi University* ✉ ahangar_arezou@yahoo.com

Amir Rezaee, *Educational Administration of Shahid Rejaee University*

The present research aims at investigating the relationship between differentiation and marital satisfaction of women. This research comprises all married women living in Tehran in 2011, among whose 561 individuals were chosen from three regions through random cluster sampling. They measured by revised differentiation questionnaire and the student version of the marital satisfaction questionnaire. The research method is of correlation type. Stepwise regression is used to analyze data. The research indicates that there is a negative and significant relationship between differentiation and marital satisfaction. The results also showed that three factors from among aspects of differentiation have significant relationships with marital satisfaction. But between the factor of fusion with others and criterion variable is not significant. The negative relationship between the variables indicates that decrease of differentiation has the greatest effect on increasing marital satisfaction among women.

Poster 5. The Onshore Impact of Offshoring: SDT and the Preservation of Motivation During a Highly Demotivating Workplace Event.

Melanie Ahmad, *Sydney Business School, University of Wollongong, NSW, Australia* ✉ melanieahmad@hotmail.com

Gordon Spence, Lindsay Oades, *Sydney Business School, University of Wollongong, NSW, Australia*

“Offshoring” is the growing global business trend of moving organisational functions and/or processes across geographical boundaries for strategic purposes (e.g. lowering costs, creating competitive advantage, etc). Given that offshoring is generally associated with lengthy periods of employment uncertainty and often requires workers to engage with tasks that may ultimately lead to their own job loss, this form of dramatic organisational change presents a somewhat unique challenge for those wishing to preserve employee work motivation and support wellbeing. Despite its increasing use worldwide, very little theoretical or empirical work has been published on the motivational implications of offshoring in the originating country (i.e. the “onshore” impact). This poster will present a conceptual framework intended to guide research in this area, one informed by Basic Needs Theory and recognition of the theoretical importance of autonomy support. A plan for the proposed research will also be presented, along with a brief discussion of the potential implications for employees and employers.

Poster 6. Can We Predict Coaches’ Behavioral Regulation Through Basic Psychological Need Satisfaction and Thwarting?

Saül Alcaraz, *Universitat Autònoma de Barcelona* ✉ saul.alcaraz@uab.cat

Miquel Torregrosa, Carme Viladrich, *Universitat Autònoma de Barcelona*

Framed in the Self-Determination Theory, recent research has explored the basic psychological needs as an antecedent of sport coaches’ well-being. However, scarce research has addressed the issue of basic psychological needs as a predictor of coaches’ behavioral regulation. The aim of this work is to test a model in which coaches’ basic psychological need satisfaction and thwarting would predict their behavioral regulation for coaching. Specifically, the hypotheses are: (a) basic psychological need satisfaction will positively predict autonomous regulation and negatively predict controlled regulation, and (b) need thwarting will show the reverse pattern. One-hundred and fifty-two sport coaches ($M_{age} = 27.67$, $SD_{age} = 8.73$, 94.1% male) responded to a multi-section questionnaire. Data will be analyzed via structural equation modeling using Mplus 7.0, taking into account their ordinal nature.

Poster 7. Mastery and Performance Parenting Goals: Predicting Parental Autonomy-Support

Marie-Pier Allen, *Université de Montréal* ✉ mariepier.allen@gmail.com

Julien S. Bureau, Genevieve A. Mageau, *Université de Montréal*

Whereas the benefits of parental autonomy support are well established (Deci & Ryan, 2008), little is known about the determinants of this positive parenting style. In an effort to predict parental autonomy support, this study investigates the relations among parental goals and parenting behaviors using Elliot et al.'s (2001) achievement goals model. We hypothesized that parents have different achievement goals for their children (i.e., helping them develop their mastery, attain high performances or avoid low ones) and that these influence their propensity to adopt autonomy-supportive vs. controlling parenting behaviors. A total of 135 mothers and 68 fathers reported their parental goals and parenting behaviors. Results from structural equation modeling showed that parents who displayed higher mastery goals also displayed higher autonomy support, whereas performance-approach goals negatively predicted autonomy support and contributed to controlling behaviors. Performance-avoidant goals were not associated with parenting behaviors. Theoretical implications for predicting interpersonal styles are discussed.

Poster 8. Subjective Vitality Scale: Validation in a Portuguese Sample

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Maria Paula Paixão, *University of Coimbra*

Maria Fatima Simoes, *University of Beira Interior*

The aim of the present study was to translate into portuguese and validate Bostic, Rubio, and Hood's (2000) version of Ryan and Frederick's (1997) Subjective Vitality Scale. The scale assesses subjective vitality, defined as the state of feeling alive and alert or "(...) one's conscious experience of possessing energy and aliveness." (Ryan & Frederick, 1997, p. 530), and includes two forms: one that assesses the state of subjective vitality and the other its enduring aspect. The participants were 700 college students (Social Sciences, Arts and Letters and Health Sciences) attending four portuguese universities. Data analysis using structural equation modeling (SEM) allows to support the use of the translated version of the Vitality Scale and to present a final model.

Poster 9. Incidence of the Antecedents of Parents' Behaviors on Their Children Motivational Processes in the Sport Context

Diana Amado Alonso, *Research Fellowship in the Faculty of Sport Science. University of Extremadura (Spain)* ✉ diamal@unex.es

Francisco Miguel Leo Marcos, Inmaculada González Ponce, Juan José Pulido González, José María López Chamorro, Pedro Antonio Sánchez Miguel, *University of Extremadura, Spain*

Based on Hierarchical Model of Intrinsic and Extrinsic Motivation (Vallerand, 1997), this study aims to examine the incidence of the antecedents of parents' behaviors in the sport context on their children motivational processes and their emotional consequences. The sample comprised 321 fathers and mothers with their children. Questionnaires assessed perception of parents about support and pressure on their children and perception of children about their satisfaction of basic psychological needs, type of motivation and enjoyment or boredom in the sport context. Results showed that parents' perception of support did not predict satisfaction of basic psychological needs on their children, whereas pressure emerged as a negative predictor. Furthermore, these basic psychological needs positively predicted intrinsic motivation, and this last variable predicted enjoyment, and negatively predicted amotivation, which emerged as a strong predictor of boredom. Therefore, these results promote the importance of parents on motivation of youth athletes in the sport context.

Poster 10. Autonomy-Supportive and Controlling Behaviors: Two Sides of the Same Coin?

Camille Amoura, *Laboratoire de Psychologie C2S Cognition Santé Socialisation* ✉ casa.personal.trainer@hotmail.fr

We tested the effects of autonomy support and psychological control on 1) contextual autonomous motivation using a cluster analyses design (Study 1), and 2) situational autonomous motivation using an experimental design (Study 2). Study 3 aimed at testing for the effect of a commitment procedure used to recruit participants in Study 2 on situational motivation. Results showed that autonomy support and psychological control were not significantly correlated, while both were distinctly perceived by students (Study 1). Study 2 replicated the independency of both constructs by highlighting a significant interaction of autonomy and psychological control on situational autonomous motivation. An unexpected effect was found in the Low Autonomy/High Control condition where autonomous motivation was observed. To explain this, another experimental design has been conducted (Study 3), results revealed that the autonomous motivation observed was due to the commitment procedure used to recruit participants. A self-affirmation intervention has highlighted the presence of cognitive dissonance, which was induced by the commitment procedure. When participants were allowed to self-affirm themselves, the autonomous motivation disappeared.

Poster 11. Integration of Emotions Versus Suppression of Emotions: Adaptive and Maladaptive Regulation

Chen Amrani, *Ben Gurion University–Department of Education*

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Cumulative research demonstrates that expressive suppression, which involves inhibiting ongoing emotion-expressive behavior, has been associated with less than optimal functioning (e.g., Gross & John, 2003). Self-determination theory defines adaptive emotion regulation as differentiated awareness of one's emotional states and utilization of this awareness to regulate behavior volitionally (Roth et al., 2009). The present study (n = 120) tests the hypothesis that emotional integration at first exposure to anxiety-eliciting stimulus may lead to better outcomes at second exposure (+72hrs) as measured by lower emotional arousal (via physiological assessment, facial expressions, and self-reports), better memory and higher written-expression quality (i.e., less defensive). The findings support the hypothesis and reveal that integrative emotion regulation serves as a better protective factor than suppressive regulation at the second exposure to the same stimulus.

Poster 12. Self Determination as a Predictor of Undergraduate Participation in Research Activities

Craig Anderson, *University of Ottawa* ✉ craig.anderson@uottawa.ca

Luc Pelletier, *University of Ottawa*

Motivation is of crucial importance to student outcomes in higher education. If measures of motivation can successfully predict academic actions and performance, then many avenues are available for interventions that could improve student outcomes. This study directly analyzes the relationship between motivation and student behavior using the Global Motivation Scale (GMS), which measures an individual's enduring motivational orientations. The academic behaviors being investigated are the timing and frequency of undergraduate students' participation in research activities through a psychological subject pool. Examples of these behavioral measures include: the number of studies participated in, timing of that participation, and time spent taking a pretest. It is hypothesized that those students who have a more self-determined motivational orientation will participate more, earlier, and with a greater time commitment than those with other motivational orientations. Regression analyses will be presented showing the predictive power of the GMS on actual student research behaviors.

Poster 13. An Application of the Idiographic Approach to Understanding Academic Motivation

Jade Anderson, *University of Saskatchewan* ✉ jma809@mail.usask.ca
Valery Chirkov, *University of Saskatchewan*

The study was conducted from a critical realist perspective (Bhaskar, 1978) in an attempt to reveal the causal mechanism of academic motivation of undergraduate students. Constructs of interest were based on Self-Determination and Achievement Goal theories and include: motivation types (intrinsic, autonomous, and controlling); mastery-approach and performance-approach goals; autonomy and competence satisfaction; and outcome variables (dedication, well-being, and grades). Twelve undergraduates with varying motivational regulations were interviewed. Results show that the motivational mechanism is more complex than suggested by previous research which was based exclusively on statistical analysis. Specifically, most relationships were found to be reciprocal as opposed to unidirectional; short-term and long-term relationships were incongruous; and, many students did not appear to experience the motivation type for which they scored highest on a pre-survey. The results suggest that nomothetic research on motivation should be complemented by idiographic case studies in order to understand the academic motivation mechanism.

Poster 14. Student-Made Public Service Announcement Intervention to Improve Well-Being and Wellness

Kevin Anderson, *Tennessee Technological University* ✉ kevin_k_anderson@yahoo.com

Student well-being and wellness are among the most common concerns of any educational system. Unfortunately, recent statistics show that children are making more unhealthy decisions than ever. This poster explains an original intervention that utilizes the research of Self Determination Theory to increase vitality within educational communities. The project promotes intrinsic motivation and satisfies the three aims of Basic Psychological Needs Theory: autonomy, competency and relatedness. The intervention gives students the opportunity to produce and publish a local public service announcement (PSA) on the necessity of altruism, an intrinsic motivator. The process of making the PSA is designed to increase retention of altruistic concepts. By focusing attention toward intrinsic motivations and promoting hands-on involvement, students and the entire educational community serve to benefit from gains in well-being and wellness.

Poster 15. Supporting Toddlers' Autonomy and Well-being: Motivational Strategies used by Daycare Educators

Eftichia (Effie) Andreadakis, *University of Montreal* ✉ effie_73@hotmail.com

Charlie Brouillard, Mireille Joussemet, *University of Montreal*

The present study examined how educators' motivational style (autonomy-support; AS vs. controlling) relate to their beliefs concerning the effectiveness of certain motivational strategies in promoting toddlers' well-being. Educators (n=60) recruited from 12 daycare centers in the Montreal region were given a List of 23 Motivational Strategies and asked to indicate how each strategy relates to toddlers' well-being. Motivational style was assessed via the Problems in Schools Questionnaire. Pearson product moment correlations indicated that educators high on AS believed warning children of a request in advance ($r=.36$, $p<.05$) promoted child well-being. In contrast, educators high on control believed that explaining the importance of the request ($r=-.46$, $p<.01$), stopping the child physically ($r=.35$, $p<.05$), preventing unwanted behavior ($r=.35$, $p<.01$) and dropping the request ($r=.32$, $p<.05$) promoted child well-being. These findings point to concrete strategies that may prove useful for daycare educators, child development professionals and parents as well.

Poster 16. Exploring the Relationship Between Difficult Temperament and Maternal Psychological Control

Jessie-Ann Armour, *Université de Montréal* ✉ jessie.ann.armour@gmail.com

Mireille Joussemet, *Université de Montréal*

Michel Boivin, *Université Laval*

Richard E. Tremblay, *Université de Montréal*

Detrimental parenting and the child's difficult temperament have both been identified as risk factors for children's subsequent adjustment. The present study explored the relationships between two dimensions of difficult temperament (irritability and inhibition) at 17 months of age and two types of parental psychological control (coercion and overprotection) a year later. The aim of this study was to evaluate the predictive value of temperament on parenting, beyond the influence of other known risk factors (e.g., SES, maternal depression). The data has been collected within the QLSCD, a longitudinal study carried upon 2,120 families of Quebec (Canada), using self-report questionnaires and medical files. Multiple linear regressions have identified irritability as a predictor of coercion ($B=0.24$, $p<.01$), while child inhibition predicted overprotection ($B=0.06$, $p<.05$). This study underlines how child temperament may "pull for control", leading parents to act in a way that thwarts young children's need for autonomy.

Poster 17. Effects of Value Affirmations on Autonomous Motivation for Prosocial Behavior

Vanessa Aubé, *Rochester Institute of Technology* ✉ vma4953@rit.edu
Cheryl Repass, *Roberts Wesleyan College*

Recent research has shown that autonomously motivated volunteering leads to positive outcomes in both the helper and the recipient (Weinstein & Ryan, 2010). Given this information, we seek to identify methods that can foster autonomous motivation for prosocial behavior. Past research has shown that students who performed a value-affirmation manipulation reported greater levels of prosocial feelings and demonstrated more prosocial behavior than students who completed a control writing exercise over a three-month period (Thomaes & Bushman, 2011). The present study replicates the value-affirmation manipulation protocol, and examines whether the prosocial feelings and behaviors are autonomously motivated. Consistent with past findings, participants who completed the manipulation reported significantly greater levels of prosocial feelings than participants who completed a control writing exercise. In addition, after a 24-hour period, participants who completed the manipulation also reported higher levels of autonomous motivation for prosocial behavior than those in the control group.

Poster 18. How Materialism Influences Consumer Behaviours

Catherine Audrin, *University of Geneva* ✉ catherine.audrin@unige.ch
Julien Chanal, *University of Geneva*

The purpose of this study is to assess how materialism can be related to consumer behaviours. Our general hypothesis is that people presenting high extrinsic values are more attracted to luxury. Thus, we postulate that extrinsic tendencies contribute to higher knowledge for luxury brands as well as stronger preferences for luxury products compared to non-luxury products. To test our assumptions, we built a two-steps study. First, participants filled the Aspiration Index and went through a brand recognition task where their knowledge of luxury and non-luxury brands was obtained. In a second step few months later, participants completed a binary task choice where they were presented luxury and non-luxury products and had to decide between the two products which one was his favourite. We predict that aspiration index responses would induce increased recognition rate of luxury brands and also predict choices made by participants in these tasks.

Poster 19. Sources of Autonomy Support and Novice Nurses' Functioning at Work: The Mediating Role of Autonomy, Competence and Relatedness

Stéphanie Austin, *Université du Québec à Trois-Rivières* ✉ stephanie.austin@uqtr.ca
Claude Fernet, *Université du Québec à Trois-Rivières*

Healthy work environments are critical to nurses' safety, recruitment, and retention. Yet, current shortage of experienced nurses creates workplace conditions that affect novice nurses' functioning such as feelings of fatigue and lack of organizational commitment. Among 297 novice nurses, we examined whether basic needs for autonomy, competence, and relatedness act as specific mediators between two sources of autonomy support (supervisors and colleagues) and fatigue and organizational commitment. Results from SEM analyses indicate that autonomy support from colleagues and supervisors positively predict organizational commitment and negatively predict fatigue through the need for autonomy, while autonomy support from colleagues negatively predicts fatigue through the need for competence. In addition, autonomy support from colleagues positively predicts organizational commitment through the need for relatedness. Implications for research and management practices will be discussed.

Poster 20. Personal Potential of Teens as a Factor of Personal Maturity

Anastasiia Bastrakova, *Taras Shevchenko National University of Kyiv* ✉ bastra4ok@mail.ru

This study investigated the validity of patterns of personality development (Kaliteevskaiia & Leontiev, 2006) for a Ukrainian sample of adolescents. The study involved 120 pupils (15-17 years; N=53 girls) and measured subjective control; GCOS; vitality; MSTAT-I; coping behavior; life satisfaction; and life purpose orientation (Leontiev). Results showed that personality development among Ukrainians differs from that of Russians. Freedom and responsibility remain important, but the picture is blurred due to merging of the advantaged / disadvantaged and adaptation / maladaptation dimensions. The current study confirmed types similar to those described previously (autonomous, maladaptive, aloof), but a new type emerged for Ukrainians - vulnerable. Because the study was conducted at 3 different levels (secondary, high school, lyceum), we could trace the effect of socializing institution on the formation of adolescent autonomy. Deficits in the learning environment did not account for level of autonomy. Discussion focuses on implications.

Poster 21. The Implicit Impact of Controlling Social Environments From a Self-Determination Theory Perspective

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Joëlle Carpentier, *Université de Montréal*

Stéphane D. Dandeneau, *Université du Québec à Montréal*

Geneviève A. Mageau, *Université de Montréal*

Self-determination theory posits that when people's needs for autonomy, competence and relatedness are thwarted, suboptimal functioning occurs. Past research has mostly focused on conscious (or explicit) processes and shown that controlling environments pose a threat for need satisfaction (Deci & Ryan, 2000). The goal of this study was to demonstrate that such environments are also implicitly threatening. It was hypothesized that cues referring to controlling environments, because of the threat they represent, would retain people's attention and create cognitive interference. A Stroop Task (Stroop, 1935) was used in which participants were asked to identify as quickly as possible the color of words that referred to controlling and autonomy-supportive environments and neutral words. Results showed that participants took longer to respond when controlling words were presented than when other words (autonomy-supporting or neutral) were shown, thereby confirming our hypothesis that controlling environments represent an implicit threat and create cognitive interference.

Poster 22. The Teacher-Pupil Relationship in Physical Education: Pupils' Motivation, Achievement and Well-being

Lee Beaumont, *University of East Anglia* ✉ lee.beaumont@uea.ac.uk

Victoria Warburton, *University of East Anglia*

Sophia Jowett, *Loughborough University*

Objective: To examine the influence of the quality of the teacher-pupil relationship on pupils' motivation, achievement and well-being in physical education (PE). **Method:** Employing a cross-sectional research design, 360 pupils from Years 7, 8 and 9 of secondary schools in East England completed a multi-section questionnaire assessing the quality of the teacher-pupil relationship, self-determined motivation, positive and negative affect, self-esteem and efficacy for PE. Pupils' achievement was assessed via National Curriculum Attainment Levels and teacher-rated effort. **Results:** Data will be analysed to determine the relationship between the quality of the teacher-pupil relationship and pupil's self-determined motivation, achievement and indices of well-being. Correlation and regression analyses will be used. **Conclusions:** Implications for future research and physical education practice will be discussed.

Poster 23. The Moderating Role of Autonomy Support in the Relation Between Mastery Goals to Performance and Emotional Engagement

Moti Benita, *Ben Gurion University of the Negev* ✉ benitamoti@gmail.com

Guy Roth, *Ben Gurion University of the Negev*

The objective of the current study was to test the hypothesis that mastery goals which are adopted in an autonomy supportive context will be related with better performance in ability tasks, and with better task enjoyment, than mastery goals adopted in controlling or neutral contexts. To test our hypotheses, we conducted an experiment in which three groups of 30 college students each played the same computer game twice. Before engaging in the second game, participants were asked to improve their performance in relation to the first task (procedure that reflects a mastery goal setting). Instructions were given in an autonomy supportive, controlling or neutral atmosphere. We expected that subjects in the autonomy supportive condition would show better improvement and display higher levels of enjoyment and satisfaction than the other groups. The results support our hypothesis. Implication of the study and future directions will be discussed.

Poster 24. The Role of Intrinsic Motivation in the Process of Stereotype Threat

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Camille Amoura, Joanna Cohen, Loïc Bordier, *University of Reims Champagne Ardenne*

A large amount of research showed the robust effects of stereotype threat., though more research is needed to identify the process underlying this phenomenon. If many variables were tested as mediators in this relation between stereotype threat and performance (see Smith, 2004), intrinsic motivation was rarely tested as a candidate. In two studies, we operationalized stereotype threat (in Study 1 with men and women having to solve mathematical problems, in Study 2 with students from technical versus general academic background having to solve an intelligence test) and assessed performance, identity threat appraisals and situational motivation (SMS, Guay et al., 2000). Results showed that participants under stereotype threat were less intrinsically motivated than those not under stereotype threat. The decrement in performance was explained by this lower motivation. However and surprisingly, we also found a significant mediation of motivation on performance indicating that performance decrement might also impact intrinsic motivation.

Poster 25. Profiles of Parental Behaviors and Dimensions of Vocational Development

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This study examined the role of parental behaviors in predicting students' vocational development using a motivational approach. We identified and described profiles of parental behaviors using students' perceptions of autonomy support, involvement and structure, and examined how these profiles distinguished students' vocational motivations and competence. Participants were 522 Grade 9 students (289 girls; 233 boys). Three profiles of parental behaviors were identified: highly supported (HS), moderately supported (MS) and unsupported (US) students. Results revealed that HS students were more autonomously motivated (intrinsic motivation and identified regulation) than US students. They were also less controlled (introjected and external regulations) and perceived themselves as more competent than MS and US students. HS and MS students did not differ on autonomous motivations while US and MS students did not differ on control motivations. Results are discussed in light of SDT and vocational literatures.

Poster 26. How Emotional Adjustment Impacts Physical Rehabilitation

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Emotional adjustment measures how well an individual is coping with and adjusting to his or her recovery and engaging in therapy. This study looks at the relationship between emotional adjustment and other psychosocial factors, and physical recovery, during the initial rehabilitation period following injury or illness in an in-patient setting. Self-Determination Theory provides a motivational framework to consider how meeting basic psychological needs may improve physical recovery through emotional adjustment. Emotional adjustment is significantly related to physical change in rehabilitation. However, this relationship is weak, a finding that encourages the need for further research, including clinical intervention research, in the area of mental health in physical medicine and rehabilitation.

Poster 27. If You Want To Live a Happy Life, Tie It To a Goal: Subjective Well-Being and Personal Goals of Romani Migrant Girls in Berlin

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It is presumed that Roma people belong to a collectivist culture with clearly defined hierarchical structures and gender roles. In such socio-cultural environment the rights and goals of individuals tend to be subordinated to the goals of the family and community. Furthermore, migration to an individualist society such as Germany can elicit greater intergenerational differences as the adolescents' pursuit of autonomy increases, while family insists on embeddedness as a core value. It is so far unclear what kind of aspirations Romani migrant girls foster and if particular developmental trajectories they follow occur as a result of coerced parental decisions or as a result of autonomous choices. In the summer/fall 2012, a battery of self-report scales was distributed to approximately 300 girls of German and Roma Migrant background (aged 12-16) in Berlin, Germany. The presentation will focus on empirical findings regarding Personal goals, Subjective well-being and Self-concordance.

Poster 28. Academic Performance of Baccalaureate Nursing Students: The Influence of Autonomy Support and Autonomous Motivation

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Nursing education has led to sophisticated teaching strategies to help students develop nursing knowledge and skill. Nurse faculty is challenged to teach more with less time and resources. A supportive environment and strong sense of spirituality may help student performance. Limited research regarding nursing students' motivation and spirituality exists. Thus, the aim of this study was to investigate whether baccalaureate nursing students' autonomy support environments and autonomous motivation influence academic performance. Self-Determination Theory provided the framework and the concept of spirituality was used as an exploratory lens to examine autonomous motivation. The data were collected over a three-month period from four baccalaureate nursing programs in Florida. A convenience sample of 150 nursing students in the last year of their nursing program was obtained. A cross-sectional, correlational design is being used to examine the major study variables. Results and conclusions are pending as data are currently being analyzed.

Poster 29. Socialisation Strategies Used by Educators in Daycare Centers to Support the Autonomy of Toddlers

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Mireille Joussemet, *University of Montreal*

This research examines socialisation strategies used by educators in daycare centers to support the autonomy of toddlers. Sixty educators answered an online survey to identify which strategies they use more frequently. Subsequently, participants had to fill out the

Problem in School Questionnaire which measures their educational approach (autonomy support vs. control). They were also asked to answer socio-demographic questions. Results show that educators with an educational approach that favors autonomy support use specific strategies more frequently, like modeling ($r = 0,35$, $p < 0,05$) and explanation of the demand's meaning ($r = 0,31$, $p < 0,05$). In contrast, educators with an approach based on control tend to use rewards ($r = 0,32$, $p < 0,05$), role-playing ($r = 0,42$, $p < 0,01$), and to interrupt the child's actions ($r = 0,47$, $p < 0,01$). Finally, stress and educational levels are linked to the use of particular educational strategies; but the links presented above hold while controlling for these individual characteristics.

Poster 30. The Relationship Between Self-Determination and Well-Being in Adults with Spina Bifida

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Spina bifida (SB) has been called “the most complex congenital abnormality compatible with long-term survival” (Bowman, et al., 2001). A spinal defect, it affects multiple bodily systems and results in a multi-dimensional array of complex mental and physical health issues requiring careful lifelong management. As with other chronic conditions, adherence to health procedures is one of the most important—if not the most important—aspect of care. Previous research within the theoretical approach of Self-Determination Theory has found that patients in medical and psychiatric settings show improved self-management when they report feeling competent in their self-care, and report that their environment has supported their autonomous decision-making (Deci & Ryan, 1991; Deci & Ryan, 2000; Deci & Flaste, 1994). The proposed study will examine the relationship between self-reported autonomy and competence, and health maintenance and self-care behaviors in an online sample of adults with spina bifida.

Poster 31. Parental Autonomy Support and Honesty: The Mediating Role of Honesty Value Internalization and Cost/Benefit Analysis

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Geneviève A. Mageau, *Université de Montréal*

Previous research emphasizes the importance of disclosure (or honesty) in adolescent-parent communication as it is linked to parental knowledge and adolescent non-delinquency (Kerr & Stattin, 2000; Engels et al., 2005). Past research suggests that parental autonomy support promotes adolescents' honesty (Roth, Ron, & Benita, 2009). However, few studies have investigated the mediators of this relationship. In this study, we test an integrated model where perceived autonomy support should positively predict adolescent's honest communication behaviors in the parent-adolescent relationship via honesty value internalization and cost/benefit analysis of being honest. Using structural equation modeling, results from 174 parent-adolescents dyads showed that parental autonomy support was associated with honesty value internalization by the adolescent and a cost/benefit analysis that favors honesty. Honesty value internalization and cost-benefit analysis in turn predicted adolescent's honesty. The importance of

autonomy-supportive parenting in creating a family setting that fosters honesty is discussed.

Poster 32. The Eudaemonic Benefits of Autonomous Solitude

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Spending discretionary money on social experiences tends to make people happier than spending money on solitary experiences. Nevertheless, evidence suggests that certain solitary experiences may provide unique intrapersonal benefits. Based on self-determination theory, we propose that the degree to which solitary experiences satisfy basic psychological needs is an important predictor of the outcomes of time spent alone. Specifically, we predict that autonomous solitary experiences make people happier than controlled solitary experiences. Furthermore, we propose that autonomously motivated solitary experiences can produce a qualitatively different form of happiness than autonomously motivated social experiences. Whereas the latter are likely to produce hedonic happiness (i.e., high positive affect and low negative affect), the former are likely to be supplemented by eudaemonic happiness (i.e., high authenticity). Cross-sectional and longitudinal studies demonstrate support for these results, integrating research on the social outcomes of discretionary spending with research on basic need satisfaction and well-being.

Poster 33. When Change-Oriented Feedback Enhances Motivation, Well-being and Performance: A Look at Autonomy-Supportive Feedback in Sport

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Genevieve A. Mageau, *Universite de Montreal*

Change-oriented feedback (aka negative feedback) can motivate athletes and guide them toward performance improvement. However, it can also lead to anxiety or decreased motivation and self-esteem. We propose that change-oriented feedback quality is key in predicting athletes' reaction to this type of feedback, and that a high quality change-oriented feedback must be autonomy-supportive. To test this hypothesis, we first define an autonomy-supportive change-oriented feedback. We then investigate the relative impact of change-oriented feedback's quantity and quality on athletes' phenomenological experiences and performance. In total, 340 athletes and 58 coaches participated in this study. HLM analyses first show that an autonomy-supportive change-oriented feedback is empathic, accompanied by choices of solutions, based on clear and attainable objectives, avoids person-related statements, is paired with tips, and given in a considerate tone of voice. Results also show that feedback quality predicts athletes' outcomes above and beyond feedback quantity and coaches' other autonomy-supportive behaviours.

Poster 34. Leaders' Trustworthiness and the Mediating role of Autonomy in Predicting Employee Performance and Turnover Intentions

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The present study combined self-determination theory (Deci & Ryan, 1985) and trust theory (Mayer, et al. 1995) in order to investigate the mechanisms underlying the relationships between leader trustworthiness (ability, benevolence, integrity) and both performance (proficiency, adaptivity, proactivity) and turnover intentions in part-time subordinates. A total of 350 (females = 196) part-time employees participated. Participants completed an online measure of leader trustworthiness, need satisfaction, performance and turnover intentions. Regression analyses demonstrated that leader ability and benevolence only predicted the subordinates' need for autonomy. There was a significant indirect effect of leader ability and benevolence on subordinate proficiency and proactivity. Finally, there was a mediated effect of leader ability on subordinate turnover intentions and an indirect effect of leader benevolence. The results address a disparity in the research investigating the role of leaders on subordinates' performance and turnover intentions as well as contribute a rich theoretical framework for future research.

Poster 35. Teacher and Peer-Support as Predictors of Adolescents? Exercise Motivation: The Mediating Effects of Basic Needs Satisfaction

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Prior research has shown that autonomy-supportive teaching styles are associated with students' self-determined regulations and behaviors via need satisfaction. Less is known about the role of need support from colleagues/friends. This study tested whether basic needs' satisfaction mediated the influence of teacher and peer support on adolescents' exercise regulations. Participants were 1024 students (11.2 ± 1.3 yr, 47.9% girls) that completed 2-year assessments in a school-based study ("PESSOA"). Residualized change scores (0-2yr) and Preacher and Hayes mediation procedures were used. Peer support was positively correlated with autonomous regulations; teacher support was positively associated with all regulations except introjected ($ps < .010$). Only associations between peer support and need satisfaction were significant ($ps < .050$). Basic needs

satisfaction partially mediated the effects of peer support on exercise regulations, especially on intrinsic motivation ($R^2=.22$; $p<.001$). Results suggest that basic need satisfaction leading to more autonomous exercise motivation comes primarily from the support of peers, not teachers, in Portuguese adolescents.

Poster 36. Incentives and Intrinsic Motivation: Exploring the Ignored Implications for Performance

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Theory surrounding intrinsic motivation and incentives has focused largely on the degree to which the two factors are incompatible. We suggest this is not a practical position to take, as it ignores the ultimate implications for performance. Instead, we assume incentives and intrinsic motivation have some degree of compatibility because incentives are a necessary component of almost any performance criterion (e.g., Deci, 1976; Lepper & Henderlong, 2000). Our recent meta-analytic work is supportive of this position. We have shown that intrinsic motivation predicts performance, even in the face of incentivization. The current study takes this meta-analytic work a step further, showing that the relative contribution of incentives and intrinsic motivation to performance depends on the type of task at hand. When criteria are defined in terms of quality, intrinsic motivation predicts a larger portion of performance. In contrast, the opposite occurs when criteria are defined in terms of quantity.

Poster 37. Motivation of Music Teachers That Work in Basic Schools of Brazil: A SDT Perspective

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This research investigated the motivation of music teachers that work at basic education in Brazil. The research involved the development and validation of a scale (Music Teacher Motivation Scale -MTMS), designed to identify the motivational orientations of music teachers who work in the school context. Data was collected via internet and analyzed using descriptive and inferential statistics. The results revealed that music teachers present perception to autonomous motivation for teaching. Concerning the context variables, it was detected that the kind of institution (public or private) does not affect the perception of motivation of the music teachers. Comparing the professional life cycle, data show that music teachers had an increase on motivation throughout the years. As a result, this research hopes to help teachers to understand about their own motivation and to develop motivational strategies to increase the interest of students for music.

Poster 38. Consciously Stimulated, Unconsciously Driven: Self-Determined Motivation Fosters Habituation of Exercise Decision in Runners

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Consistent with the role of positive affect in unconscious goal pursuit (Custers & Aarts, 2005), the notion that self-determined motivation can be automatically and nonconsciously activated (Levesque, Copeland & Sutcliffe, 2008) is very promising in exercise research. This study investigates the relationship between different forms of motivational regulation and the dimensions of automaticity (lack of awareness, uncontrollability, efficiency, Bargh, 1994) in habitual exercising. 622 adult runners (259 men, 363 women) who attended a race event filled a questionnaire measuring exercise habit (Chamberland, Miquelon & Dumont, 2012) and self-determined motivation (Markland & Tobin, 2004), including integrated motivation (McLachlan, Spray & Hagger, 2011). Data were analyzed using structural equation modeling. Results revealed a hierarchical structure: controlled forms of motivation were negatively correlated with each dimension of habitual exercising, while autonomous forms of motivation were positively correlated with those constructs and explained 55% of habit. Implications and limits are discussed.

Poster 39. Internalization of Norms and Justification for Parental Reasoning in Adolescent–Parent Conflicts: A Cross Cultural Study

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Namrata Goyal, Joan Miller, *The New School for Social Research*

Parenting in collectivist cultures is often classified as authoritarian due to perceived parental control. We qualitatively examined reported adolescent-parent conflicts by Indian and American adolescents. Indian and American adolescents did not differ on types of conflict experienced and frequency of voicing opinions. Parents in both cultures were equally likely to justify their viewpoints. American adolescents were more likely to use compromise in resolutions and were less likely to find their parents' justifications legitimate. However, in India, parents were more likely to win arguments, with adolescents according more legitimacy to their parents' justifications. These findings suggest that Indian adolescents have internalized cultural norms where parental viewpoints carry more weight, thus feeling more comfortable according legitimacy to their parents. Parenting in countries like India is likely not authoritarian because of parental influence seen as legitimate, whereas in the US parental influence is likely to be seen in more controlling terms.

Poster 40. Toxic Teammates: The Effects of Dark Traits on Perceived Trust and Motivation

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A cross-sectional study of business students (N = 215) in newly formed project teams examined whether the dark triad traits (Jonason & Webster, 2010) influence trust perceptions (propensity, perceived trustworthiness, cooperative behaviours; Mayer, Davis, Schoorman, 1995) and ultimately their effects on motivation, specifically intrinsic, external regulation and amotivation (Guay, Vallerand, Blanchard, 2000). This study implemented a bootstrap analysis of direct and indirect effects (Hayes & Preacher, 2011), which yielded an indirect effect of psychopathy on intrinsic motivation and external regulation through perceived trustworthiness and cooperative behaviours, in addition to a direct effect of psychopathy on amotivation. Furthermore, an inconsistent mediation (suppression) effect is present, when the relation between narcissism and intrinsic motivation is analyzed through the three trust variables. Results highlight the role of psychopathic personality in the perception of team members, the perception of and ability to create trustworthy environments, and in the motivation to work in a team.

Poster 41. Does Psychological Need Satisfaction Matter when Financial or Environmental Safety are at Risk?

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Based on SDT and Maslow's hierarchy needs model, the two prevalent theories that discussed basic human needs in the literature, the present study investigated the interplay between physical safety satisfaction and psychological need satisfaction in the prediction of well-being. Our primary aim was to examine whether the functional role of psychological need satisfaction would be constrained if safety needs were deprived. The two studies focused on distinct aspects of physical safety, that is, environmental safety and financial safety in two samples relatively at risk in either of these two safety facets. Additionally, we also examined the role of materialism attainment, which is differentiated from financial safety. We found that satisfaction of autonomy, relatedness and competence, yielded a unique contribution to psychological well-being above and beyond financial and environmental safety, even for those who experience more safety deprivation. Furthermore, individuals who perceived lower financial safety actually expressed a greater desire for need satisfaction. Finally, in contrast with the positive relation between financial safety and well-being, materialistic attainment yielded a negative association, which was fully accounted for by low psychological need satisfaction. Together, these results suggest the important contribution of basic psychological needs satisfaction beyond safety satisfaction and materialistic attainment in the prediction of well-being.

Poster 42. Intensive Autonomy-Supportive Training Program on Beautiful Challenges of Disabled Athletes and Their Coaches for Paralympics

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We examined the effects of intensive autonomy-supportive training intervention to assist coaches to be more autonomy-supportive and lesser controlling toward their disabled athletes in 2012 London Paralympics. Scores on raters' observations and disabled athletes' perceptions about coaches' interpersonal style, coaches in the experimental group enacted as more autonomy-supportive and lesser controlling toward disabled athletes during their coaching practices than did coaches in the control group. Moreover, coaches had benefits (i.e., greater job satisfaction, higher coaching efficacy, and lesser physical-emotional exhaustion) from their autonomy-supportive coaching behaviors which were enhanced by the intensive autonomy-supportive training program to help coaches more autonomy supportive toward their disabled athletes. Disabled athletes of coaches in the experimental also had benefits (i.e., high concentration, greater engagement, and more medals) from having coaches who supported their autonomy in Paralympics, 2012.

Poster 43. Mediatory Effects of Need Satisfaction and Self-Determination in the Relationship Between Exercise Goal Content and Well-Being

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Luc Pelletier, *University of Ottawa*

Despite its wide application to the physical activity domain, self-determination theory researchers have provided limited empirical attention to the influence of goal content on exercise-related measures of well-being. In addition, some researchers (e.g., Srivastava, Locke, & Bartol, 2001) have challenged the explanatory power of goal content, when the quality of motivation is taken into account. The present study examined the relationship between exercise goal content, psychological need satisfaction, motivation, and well-being. The results of the path analysis indicated a good model fit (Chi-squared = 5.25, $df = 1$, $p > .05$; CFI = .98). Overall, results suggest that people who endorsed intrinsic goals for exercise reported greater subjective well-being and less exercise-related anxiety because they experienced greater psychological need satisfaction, and hence more autonomous motivation. Alternatively, people who endorsed extrinsic goals for exercise experienced less subjective well-being and greater exercise-related anxiety because they possessed more controlled forms of motivation.

Poster 44. Integrating the Goal Conflict Model and the Counteractive Self-Control Model with Self-Determination Theory.

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The Goal Conflict Model (GCM) assumes that temptations impede self-regulatory processes whereas the Counteractive Self-Control Model (CSCM) assumes that temptations facilitate self-regulation. The aim of this study was to resolve this contradiction using Self-Determination Theory. We hypothesized that the GCM would apply when a goal is sought for non autonomous reasons whereas the CSCM would apply when a goal is sought for autonomous reasons. Two studies were carried out in the exercise and food domains to test this hypothesis. Results supported our hypotheses. Individuals with strong autonomous motives exposed to a subliminal temptation prime (e.g., unhealthy snack) were slower at avoiding stimuli representing goals (e.g., a healthy snack) in a manikin task whereas they were slower at approaching temptation related stimuli (e.g., an unhealthy snack) when they were exposed to a healthy prime. The reverse pattern emerged for individuals with weak autonomous motives.

Poster 45. Internalization of Moral Values: Application of a Self-Determination Paradigm

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The internalization of moral values such as honesty can be examined through a self-determination lens. In this study, 60 college students read a scenario in which a border patrol agent indicates on a job application that he can speak Spanish even though he cannot. Participants were asked to address whether the agent's actions were wrong, and why. Results indicated that participants' responses can be clearly characterized as illustrating amotivated ("Nothing is wrong until enough people decide it's wrong"), external ("could lose his job"), introjected ("lying [...] eats people up inside"), identified ("A language barrier can definitely present problems"), and integrated regulation ("What else might Dan lie about?"). In other words, they gave varied reasons for why the agent should/should not have lied. Given that responses could be categorized in this way, results from this study indicate that self-determination theory can be applied to understanding individuals' judgments of moral behavior.

Poster 46. Work Motivation in the Prediction of Burnout in Nurses: Does Generation Matter?

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Although it is widely recognized that work motivation is associated with employee psychological health, scholars have largely ignored the potential generational differences in this relationship. The present study investigates whether generation (X and Y) moderates the relationship between employee motivation (autonomous and controlled) and burnout. Regression analyses were conducted on a sample of 1255 nurses. Results show that Generation Y employees with high autonomous motivation reported less burnout ($\beta = -.41, p < .01$) than Generation X employees with high autonomous motivation ($\beta = -.32, p < .001$). Moreover, Generation X employees with high controlled motivation reported more burnout ($\beta = .26, p < .01$) than Generation Y counterparts with high controlled motivation ($\beta = .15, p < .01$). Our results suggest that generational differences need to be considered in interventions designed to prevent burnout. The theoretical and practical implications of our results are discussed in the light of SDT and the job stress literature.

Poster 47. A Person-Centered Analysis of Adolescents' Motivations to Engage in Prosocial Actions and Abstain from Health Risk Behaviors

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This study examined adolescents' patterns of motivations to engage in prosocial behaviours and abstain from health-risk behaviours. Adolescents ($N = 419$) reported on their behaviors (volunteering, donating, sex, marijuana use), and their motivation to either engage in (volunteering, donating) or abstain from (sex, marijuana) those behaviors. Composites were created for controlled motivations (CM) and autonomous motivations (AM) based on Self-Determination Theory. Hierarchical cluster analyses identified four patterns of motivation (Low) Low CM, Low AM; (Medium) Medium CM, Medium AM; (High) High CM, High AM; and (Mixed) Low CM, High AM. MANOVAs found that the Low groups generally had the lowest prosocial behaviour and highest risk behaviour, followed by the Medium groups, while the High and Mixed groups were more adaptive than the Low and Medium groups, but not different from each other. In short, levels of autonomous motivation seem to best differentiate adaptive from maladaptive behavioural patterns.

Poster 48. Problem-Based Learning and Problem-Solving Skills: The Mediating Role of Perceived Satisfaction of Needs

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The role of teachers in this 21st century has changed drastically. It is pivotal that teachers possess 21st century skills which include problem-solving skills. In recent years, Problem-based Learning (PBL) is a pedagogical innovation used in teacher education to nurture problem-solving skills. Underpinned by the self-determination theory (SDT), this study aims to examine how student teachers' perceived satisfaction of autonomy, competence and relatedness needs mediate the relationship between PBL experience and their problem-solving skills. The participants were 303 student teachers doing an Educational Psychology at the National Institute of Education, Singapore. Findings showed the significant mediation of student teachers' perceived satisfaction of the three needs in linking their PBL experience to problem-solving skills. Results from this study will illuminate the applicability of PBL in teacher education specifically on how PBL fosters the development of problem-solving skills.

Poster 49. Perceived Collective Efficacy and Autonomous Motivation: A Motivational Synergy in Predicting Teacher Burnout

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Claude Fernet, Stéphanie Austin, Sarah-Geneviève Trépanier, *Université du Québec à Trois-Rivières*

In the realm of education, perceptions of competence and self-efficacy (a domain specific perception of competence) are regarded as key elements to maintain optimal motivation in teachers. Yet, little is still known about the role of perceived collective efficacy on teachers' psychological functioning. Perceived collective efficacy refers to teachers' belief about their capacity to take action and achieve expected results (Bandura, 1997). This study examines the interplay between perceived collective efficacy and autonomous motivation in the prediction of teacher burnout. Participants were 110 teachers from a college in Québec, Canada. Regression analyses showed that highly autonomously motivated teachers experience less burnout in presence of high collective efficacy ($\beta = -.247$). In contrast, low autonomously motivated teachers experience more burnout even in presence of high collective efficacy ($\beta = .199$). Interesting direction for future research will be discussed as well as implications for practice.

Poster 50. A Motivational Mode of Christian Service

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Self-Determination Theory (SDT) has shown great potential for internalizing Christian beliefs through inherently satisfying activities that unleash spiritual giftedness and stimulate transformative learning. In contrast to the traditional paradigm, SDT postulates that intrinsically motivating ministries may actually stimulate Christian formation (Neyrinck et al. 2006, 321). This study probed the rich perceptions and divergent meanings associated with church-sponsored service among a critical array of stakeholders in a thriving evangelical church. In furtherance of the call for a Second Reformation (Ogden 1990, 52), the researcher hopes to stimulate meaningful dialogue on the need to reform church structures that foster Christian formation through intrinsically motivated, Spirit-empowered service.

Poster 51. An Assessment of The Relationship Between Passion for Exercise and Satisfaction With the Basic Psychological Needs

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Vallerand et al. (2003) suggested that individuals may pursue activities such as exercisedue to harmonious passion (an autonomous desire to engagein the activity) or obsessive passion (a controlled desire to engage in the activity). Furthermore, Vallerand et al. proposed that harmonious passion is fostered in environments that nurture innate needs for autonomy, competence, and relatedness. Thus, our purpose was to determine whether individuals' passion for exercise would predict satisfaction of their basic psychological needs. Participants (n = 205 male, n = 275 females; Mage = 18.58; SD = 1.6) completed the Passion Scale (Vallerand et al., 2003) and the Psychological Need Satisfaction in Exercise Scale (Wilson et al., 2006). Results revealed that harmonious passion significantly predicted a positive relationship with autonomy, $\beta=.10$; competence, $\beta=.43$; and relatedness, $\beta=.43$. Moreover, obsessive passion significantly predicted a negative relationship with autonomy ($\beta= -.17$). Implications on need satisfaction and passion are discussed.

Poster 52. Dimensionality and Construct Validity of the Balanced Measure of Psychological Needs Scale in a Sample of Portuguese Adolescents

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Previous research on the 18-item BMPN scale provided support for a five-factor model encompassing three distinct need factors (autonomy, competence and relatedness) and

two method factors (need satisfaction versus need dissatisfaction). This study explores the dimensionality and construct validity of the Portuguese version of BMPN in a sample of 371 secondary school students. We compared the original 5-factor model with an alternative 6-factor structure for P-BMPN, modeled to predict the interaction between basic psychological needs and satisfaction versus frustration of those needs. Three factors were defined for both need satisfaction (F1 Autonomy Satisfaction, F2 Competence Satisfaction, and F3 Relatedness Satisfaction) and for need frustration (F4 Autonomy Frustration, F5 Competence Frustration, and F6 Relatedness Frustration). Confirmatory factor analysis found the simplified 6-factor structure to be the most parsimonious model and it asserted the construct validity for all the factors examined, supporting P-BMPN as a reliable, valid and robust instrument to measure basic psychological need satisfaction and need frustration during school transitions.

Poster 53. Socio-Demographic Predictors of Intrinsic and Extrinsic Goal Pursuit

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The present research focused on the prediction of intrinsic and extrinsic goal contents from people's socio-demographic characteristics. In keeping with Baltes' (1997) proposal that people compensate for the deficits brought on by age by becoming more selective in the goals that they pursue, we hypothesized that age would predict higher levels of intrinsic goal endorsement and lower levels of extrinsic goal endorsement. On the basis of Wilkinson and Pickett's (2009) proposal that income inequality breeds a competitive and hostile social climate in which people become preoccupied with signaling their socioeconomic success, we hypothesized that income inequality would predict lower levels of intrinsic goal endorsement and higher levels of extrinsic goal endorsement. In an online community sample of American participants (N = 1,139), we found that both age and state-level income inequality (as indexed by the Gini coefficients obtained from the U.S. Census Bureau) were negatively associated with extrinsic goal endorsement.

Poster 54. How Do Parents' Perceptions of Being Autonomy-Supportive Play Out For Their Children?

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Mireille Joussemet, Geneviève A. Mageau, *Université de Montréal*
Richard Koestner, *McGill University*

Autonomy support (AS) is one of the key components of successful parenting, alongside structure and affiliation. AS consists of supporting the child's initiatives and self-determination with empathy and respect. Such parenting has been associated with positive child outcomes, such as intrinsic need satisfaction, enhanced motivation and well-being. In the context of a parenting program intended to foster optimal parenting and child mental health, we investigated the association between parental reports of AS

(Grolnick et al., 1997) and school-aged child outcomes. Results indicate that at baseline, participating parents' reports of AS ($n=93$) were related negatively with their reports of child social problems ($r=-0.22$, $p=0.04$). Parental AS was also related positively to their child reports ($n=41$) of identified motivation ($r=0.32$, $p=0.04$) and relatedness ($r=0.38$, $p=0.02$). Surprisingly, it was negatively related with positive affect ($r=-0.32$, $p=0.04$) and self-esteem ($r=-0.31$, $p=0.05$).

Poster 55. Perceptions of Care in Interpersonal Relationships of Social Vulnerable Adolescents from Southern Brazil

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Susana Rodrigues, *Institute of Psychology at Universidade Federal do Rio Grande do Sul*

Helga Loos, Tania Stoltz, *Institute of Education of Federal University of Paraná*

The aim of this research was to investigate the perceptions of care in interpersonal relationships of social vulnerable adolescents and the behavioral implications of these perceptions. Participants were 15 male adolescents, aged from 13 to 18 years old, sheltered in an NGO in Southern Brazil. Participants answered two semi-structured interviews and the data was analyzed qualitatively based on three theoretical categories: perceptions of care, satisfaction with received care, and implications for behavioral self-regulation. Results showed that, for these adolescents, care was related with guidance on values and behavior, helping to deal with adversity and warmth. Eight of the 15 adolescents interviewed indicated that nobody taught them how to deal with adversity. Only four teenagers reported feeling satisfied with received care in their relationships with specific others (e.g., the father and social educators). Some implications for caregivers working with social vulnerable adolescents, regarding the regulation of their behavior, are discussed.

Poster 56. Community Circus: Fostering Autonomy, Relatedness, and Competence in Youth

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Jennifer Agans, *Tufts University*

Youth circus (YC) is a subset of the grass-roots "new circus" movement that emerged in the early 1970's. Unlike professional circus, new circus is community-based and accessible to all. The prominent YC pioneer, Reginald Bolton, was "enthusiastic about the possibilities of using circus for education, self-fulfillment and community development." In his 2004 dissertation, Bolton identified six elements essential to a fulfilled childhood: self-design, fun, risk, aspiration, trust, and work. He asserted that these elements are lacking in contemporary Western childhoods but are epitomized and provided by circus. We propose that promoting Bolton's six essential elements of childhood through circus arts supports the basic psychological needs of autonomy, relatedness, and competence. Through a comparison of the elements of youth circus training with prior research on contexts that promote self-determination, this poster explores the role of YC in satisfying the fundamental psychological needs required for self-determination in young people.

Poster 57. How Does Observed Controlling Teaching Behavior Relate to Students' Motivation in Physical Education?

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Isabel Tallir, Bart Soenens, Maarten Vansteenkiste, Lise Speleers, *Ghent University, Belgium*
Nathalie Aelterman, *Flemish Research Foundation*
Lynn Van den Berghe, Lee Haere, *Ghent University, Belgium*

Starting from Self-determination Theory (SDT; Deci & Ryan, 2000) as a theoretical framework, the purpose of the present study was to investigate the relationship between observed controlling teaching behavior and students' motivation in a naturalistic Physical Education (PE) setting. A sample of 702 students (out of 56 classes) and their PE teachers participated in the study. Beside students' motivation, both students' perceptions of, and external observations of controlling teaching behavior were measured. A positive relationship between observed controlling teaching behavior and controlled motivation was found through students' perceptions of the teachers as being more controlling (57.3% was mediated, $p < 0.05$). In conclusion, when PE teachers engage in controlling behavior, students notice this, which results in less optimal forms of motivation for PE. Since these forms of motivations are known to induce negative outcomes such as less engagement, it is recommended to avoid controlling behavior.

Poster 58. Autonomous Life Decisions and Regret

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Netta Weinstein, *University of Essex*

Edward Deci, *University of Rochester*

The present research is a current application of Self-Determination Theory (Deci & Ryan, 1985; Deci & Ryan, 2000) to decision-making and regret. Autonomy provides the basis for greater integration, acceptance, and understanding. This study explores the role of autonomy and outcomes in decision-making and later regret. When past important life decisions were recalled, those that turned out positively elicited lower reports of regret. In addition, decisions that were made autonomously were also associated with lower reports of regret. These results suggest that autonomous decisions may increase well-being relative to more controlled decisions, independent of their outcomes.

Poster 59. In Search of Integrative Processes, Part I

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Hasan Ayaz, *School of Biomedical Engineering, Science, & Health Systems, Drexel University*

Anthony C. Ruocco, *University of Toronto*

People's abilities to develop and act from a coherent sense of self are facilitated by satisfaction of the basic psychological needs for competence, relatedness, and autonomy. We utilized functional near infrared spectroscopy (fNIRS) to examine the effect of need satisfaction on activity in the medial prefrontal cortex (MPFC), a key region in processing information about the self. Participants completed a decision-making task (e.g., Which occupation would you prefer, dancer or chemist?) in which they made a series of forced choices according to their personal preferences. The degree of decisional conflict between the available response options was manipulated on the basis of participants' unique preference ratings for the target stimuli, which were obtained prior to scanning. Need satisfaction predicted elevated MPFC activity during high- relative to low-conflict situations, suggesting that one way need satisfaction may promote self-coherence is by enhancing the utilization of self-knowledge in the resolution of decisional conflicts.

Poster 60. Development and Validation of the Adolescent Psychological Need Support for Exercise Scale

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Martyn Standage, Fiona Gillison, *University of Bath*

Social contexts can serve to support or frustrate a person's basic psychological needs. Typically, measurement attempts have focused on the concept of autonomy support. Yet this approach somewhat neglects supports for competence and relatedness. Thus, we sought to systematically develop and validate a self-report measure of need support in the context of adolescent exercise behaviour. Items were developed and reviewed by experts and users. Subsequently, 36 items were administered to a sample of 400 adolescents. Item response theory (IRT) and traditional exploratory factor analyses were used to reduce the item pool (i.e., to 4 items each for autonomy-support, competence-support, and relatedness-support). This 12-item scale was then administered to a further 400 adolescents and confirmatory factor analyses and IRT conducted. External validity was then explored via an independent sample using existing measures of SDT constructs (viz., need thwarting, need satisfaction and frustration, motivation types) as well as objectively-assessed physical activity behaviour.

Poster 61. Competence Support for Heart Disease Patients

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Simon Beaudry, Luc Pelletier, *University of Ottawa*

According to Self-Determination Theory, when individuals' psychological needs (competence, autonomy, and relatedness) are supported, they will experience higher quality motivation, which leads to increased behavioral persistence and well-being. A group of 200 heart disease patients were followed for one year to monitor whether they were successful in integrating healthy eating behaviors, following a cardiac incident. The objective was to determine whether increased support for the patients' competence from their social environment (i.e. family members, doctors, cardiologists) would lead to an increase in motivation and whether this would lead to an augmentation in reported behavioral intentions, healthy eating behavior, and life satisfaction in patients after 1 year. The model was tested through structural equation modeling and results supported the model ($\chi^2(243) = 489.45, p < .001, CFI = .91, RMSEA = .06$). Findings suggest that creating a competence-supportive environment can help promote patients' successful behavior change, as well as increase life satisfaction.

Poster 62. Validation of Self-Determination Questionnaires for Individuals with Mild Intellectual Disabilities.

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Charlie Brouillard, Mireille Joussemet, *Université de Montréal*

According to Deci (2004), the questionnaires used by SDT researchers could be adapted for people with intellectual disabilities to assess whether they also benefit from the satisfaction of intrinsic psychological needs. The present study explored the psychometric properties of measures we plan to use to evaluate the effects of autonomy support on the experience of people with mild intellectual disabilities in a learning task. The specific objective of this study was to validate a French questionnaire measuring the satisfaction of the three intrinsic needs, engagement, well-being, interest and task's value. These questionnaires were completed by 12 individuals with mild intellectual disabilities, in a YMCA in the Montreal area (Québec). Analyses performed to verify the reliability of the scales in this population showed good internal consistency ($\alpha = .59$ to $.92$).

Poster 63. Positive Goals Build Positive Communities: Resident Assistants and Intrinsic Motivation

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Ben Hadden, *University of Houston*
Carrie Smith, *University of Mississippi*

Increasing undergraduate student satisfaction and engagement with residence hall communities has become an important goal within resident life programs. As such, researchers of higher education have been increasingly focused on exploring factors that contribute to better experiences within students' housing communities. While there are many factors that contribute to student satisfaction, research suggests that the resident assistant plays a crucial role in developing positive experiences and healthy communities (e.g., Wang, Shelley, Whalen, 2005). The current research applied concepts of Self-Determination Theory (SDT; Deci & Ryan, 1985) to examine resident assistants' desire to build strong communities and relationships, as well as their confidence in their abilities as a resident assistant. Survey data was collected from 67 resident assistants from a major Mid-Atlantic university. Results showed significant relationships between intrinsic goals and motivations and RA's confidence to complete their duties. Higher confidence was linked with positive feelings and life satisfaction.

Poster 64. Infant's Low Frustration-Tolerance Enhances the use of Conditional Regard

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Moran Cohen-Iluz, Pazit Gabay-Elgi, Orly Licht-Weinisch, Dotan Shapira, Carmen Chen, Amit Dahari, Avi Assor, *Ben-Gurion University of the Negev*

This study examined the hypothesis that infant's temperament disposition to be easily distressed and frustrated enhances parents' pre-natal tendency to use conditional regard (CR), and reduces parents' pre-natal tendency to act in autonomy supportive (AS) ways. 7No3 married Israeli couples participated in a longitudinal study involving 3 phases: (1) parents' inclination to use CR and AS with the expected first child was assessed prenatally; (2) eight month following birth, child's distress to limitations was assessed via lab and parents' reports; (3) when child was 18 months old, parents' use of CR and AS was assessed via self-reports and lab observations. Results supported the hypothesis and suggest that infant's inclination to be easily distressed and frustrated may be a risk factor that amplifies the inclination of parents endorsing CR to rely on controlling practices and reduces their reliance on AS practices.

Poster 65. Vocational Rehabilitation Predicts Increases in Motivation, Healthy Functioning, and Return-to-Work: A 15 Months Follow-Up

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Christopher Niemiec, Geoffrey C. Williams, Edward L. Deci, *University of Rochester*

The main aim of the study was to: 1) examine whether participants on sick-leave who received four weeks of vocational rehabilitation changed in various motivational variables, healthy functioning variables, and return-to-work compared to a control group, and 2) explain possible changes in the intervention group by using a Self-Determination Theory framework. This was a quasi-experimental study with 107 participants. The questionnaire package was administered four times to the intervention group [start of rehabilitation (T1), end of rehabilitation (T2), ten week follow-up (T3), and 15 month follow-up (T4)] and three times in the control group (T1, T3 and T4). A MANOVA including all repeated measures study variables yielded a significant interaction effect of condition (intervention vs. control) X time, and it was the intervention group who had the most favorable development over 15 months. A Self-Determination Theory process model of 15-months changes in return-to-work received strong support.

Poster 66. Autonomous regulation: Its Importance for Individual and Democratic Well-Being

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Bradley Elphinstone, *Swinburne University of Technology*

This study examined the importance of autonomous self-regulation in relation to general well-being, and effectiveness as a democratic citizen. Study 1 (N = 415) suggested that complex thinkers who attempt to understand and justify things in life, are more likely to be autonomously regulated. Autonomous regulation was found to yield higher levels of vitality, life satisfaction, and self-esteem, and lower levels of depression. The opposite was found in all cases for controlled regulation. Study 2 (N = 165) found that complex thinking predicted more autonomously regulated reasons for voting. The relationship between complex thinking and voting for superficial or in-depth reasons was mediated by voting regulations. Thus, individuals who are more amotivated or controlled (i.e., external/introjected) in their voting regulation are more likely to vote for superficial reasons (e.g., voting in accordance with the political preferences of one's family), and more autonomous individuals less likely to vote for superficial reasons.

Poster 67. Mobile Technology as a Research Tool for SDT Research

Jon Ferguson, *University of Rochester* ✉ jon.ferguson@warner.rochester.edu
Martin Lynch, *University of Rochester*

Recent trends in the development of mobile technology, along with the rapid adoption of these devices – especially smartphones, provides exciting new opportunities for SDT researchers interested in measuring behavior in the context of everyday life. The researchers will explore the innovative nature these emerging technologies and propose potential applications to social science research made possible through experience sampling methods (ESM) and ecological momentary assessment (EMA). We will discuss the benefits of using smartphone technology as a research tool; the advantages of large-scale, longitudinal datasets and multilevel modeling analysis in the context of SDT research; and the emerging concept of ecological momentary interventions (EMI) made possible by providing customized feedback “in the moment” in relation to measured psychological states, responses, or behaviors. We will conclude with a discussion of current research projects utilizing emerging technologies and provide suggestions for other researchers hoping to get started in using these methods.

Poster 68. Reliability and Validity of the BREQ-2 for Measuring High School Students' Motivation for Physical Education

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David A. Rowe, *University of Strathclyde*

Nanette Mutrie, *University of Edinburgh*

We investigated reliability and validity of the BREQ-2 for measuring self-determined motivation for physical education. BREQ-2 has not been validated for use in this context. 10th-grade students (N=424) completed an online version of the BREQ-2. Twenty-nine students subsequently completed a paper version. Results indicated strong internal consistency reliability (ICC=.69 to .93; median ICC=.83) and parallel forms reliability (ICC=.66 to .89; median ICC=.83), and mean scores were not significantly different between forms. Students electing to study physical education scored significantly ($p<.001$) and meaningfully (median effect size=1.00) differently on all subscales and overall scale score, in the theoretically-predicted direction, providing known groups validity evidence. Overall fit of the 5-factor correlated model was good ($\chi^2(142)=350.13$; TLI=.95; CFI=.96; RMSEA=.06), and item-factor loadings were generally high (range=.52 - .92; median=.80). The BREQ-2 measures multiple components of motivation, and can be used by physical education researchers and practitioners in paper or online form without method bias.

Poster 69. In Search of Integrative Processes, Part II: Basic Psychological Need Satisfaction Predicts Conflict-Related Negativity

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Stefano I. Di Domenico, Ada Le, *University of Toronto*

Recently, researchers have begun to use neuroimaging technologies to examine how integrative personality processes, as explicated by SDT, are instantiated in the brain (Di Domenico, Fournier, Ayaz, & Ruocco, 2012). In the present study, we utilized electroencephalography to examine the effect of need satisfaction on conflict-related negativity (CRN), a negative going event-related potential that reflects conflict detection during personal decision-making. Participants completed a decision-making task (e.g., Which occupation would you prefer, dancer or chemist?) in which they made a series of forced choices according to their personal preferences. The degree of decisional conflict between the available response options was manipulated on the basis of participants' unique preference ratings for the target stimuli, which were obtained prior to scanning. Need satisfaction predicted heightened CRN amplitude, suggesting that need satisfaction enhances one's sensitivity to behavioral conflict. These findings will be discussed within the context of personality development and clinical intervention.

Poster 70. The Expression of Psychological Needs Through Personal Narratives: Agency, Communion, and Coherence

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Todd Thrash, *College of William and Mary*

The aim of this research is to identify areas of convergence between the narrative approach to personality (McAdams, 1993) and Self-Determination Theory. We propose that basic psychological needs may be expressed through the content of personal narratives (Bauer & McAdams, 2000; Ryan & Deci, 2000). Life narratives are often characterized in terms of agency and communion; expression of these themes may signify satisfaction of the needs for competence and relatedness, respectively. In addition, stories may be structured with more or less coherence, perhaps reflecting satisfaction of the need for autonomy. To test these hypotheses, we asked participants to describe scenes from their life stories and to report their levels of need satisfaction at those times. These stories were then coded for agency, communion, and coherence. Discussion will focus on the importance of taking a qualitative approach to identifying psychological needs in the construction of personal narratives.

Poster 71. The Relationships Between Autonomous School Motivation and Educational Morale in Japanese High School Students

Noriaki Fukuzumi, *Tokyo Denki University* ✉ n.fukuzumi@gmail.com

Shoji Yamaguchi, *Tokyo Denki University*

In positive psychology, morale is the important indicator of group well-being (Peterson et al., 2008). In Japan, high schools are hierarchical or ranked. Therefore, educational adjustment varies according to the school types. However, there have been few researches about relationships between autonomous motivation and morale. We focused on school activities and educational morale. In this study, the relationships between autonomous school motivation and educational morale were examined. Participants were 1387 high school students from the 10th to the 12th grades. They completed the autonomous school motivation scale measuring intrinsic motivation, spectrum of extrinsic motivation and amotivation, educational morale scale. In order to examine the relationships between autonomous school motivation and educational morale, multiple regression analyses were conducted. In conclusion, autonomous school motivation was able to predict the degree of educational morale.

Poster 72. The Moderating Role of Gender in the Parental Autonomy Support Relationship to Sport Performance: A Multisource Perception Study

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Patrick Gaudreau, Ève-Marie Blouin, Kristina Kljajic, *University of Ottawa*

Little attention has been allocated to the relationship between parental autonomy support (PAS) and sport performance (Gillet et al., 2010). Furthermore, no study has examined the perception of PAS from athlete and the parents themselves. We conducted a multisource study in order to test if the discrepancy between perceptions of PAS could predict sport performance. We hypothesized that gender of athletes or parents could moderate the relationship between PAS, either evaluated by athletes or parents themselves, and sport performance measured objectively. 313 parents and 74 gymnasts (recruited at a provincial championship) completed measures of PAS (Gillet, Vallerand, Paty, Gobancé, & Berjot, 2010). Moderated regression analyses were used to test the different hypotheses. Gender of parents and athletes were found to be significant moderators of the relation between PAS and performance. Results will be discussed in light of the potential impact of discrepancy between multisource of PAS on performance.

Poster 73. Intrinsic Motivation and Psychological Well-being in Paid Workers and Volunteers

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Dora Herrera, *Pontificia Universidad Católica del Perú*
Willy Lens, *KULeuven*

This study aims to describe similarities and differences in the motivational profile and psychological well-being in paid workers and volunteers. The scales of Motivation at Work (Gagné, 2010) and Psychological Well-being (Ryff, 1989) were used with 188 participants. Results show that paid workers (N=94) presented higher levels of extrinsic and introjected motivation ($t(188) = -4.59, p < .001$ and $t(188) = -3.32, p < .001$ respectively). Identified and intrinsic motivation were significantly higher in volunteers ($t(188) = 2.16, p < .005$ and $t(188) = 2.86, p < .005$ respectively). If behavior regulators are categorized in autonomous and controlled motivation, it is clear that autonomy is higher in both groups $t(94) = 17.68$ and $11.40, p < .001$. No differences in well-being were found between the two groups, but positive correlations appeared between the six dimensions of well-being and identified and intrinsic motivation ($r(188)$ between .50 and .22, $p < .005$).

Poster 74. Promoting Health Behaviour Change through an Autonomy Support Intervention for Individuals with a First Episode of Psychosis

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Mario Alvarez-Jimenez, Eoin Killackey, Lisa Phillips, *University of Melbourne*

People diagnosed with a first episode of psychosis (FEP) face significant physical health deterioration related to modifiable risk factors, including exercise, diet and smoking. While amotivation is a common symptom of FEP that may contribute to poorer health outcomes, previous studies addressing health behaviours have lacked a theory of motivation and behaviour change. This may contribute to treatment effects diminishing post-intervention. Self-Determination Theory (SDT) proposes that when people feel more autonomous, competent and related, they are likely to internalise motivation for behaviour, resulting in more prolonged change. The present study will assess an intervention based on SDT principles of developing relatedness, and perceived autonomy and competence for behaviour change in the domains of exercise, diet and smoking for individuals with a FEP. Results of the 8-week intervention and 4-month follow up will be presented with a focus on mechanisms of action for maintained behaviour change within the SDT framework.

Poster 75. Evaluation of Need Satisfaction as an Intervention Strategy in a Peer-Assisted Physical Activity Trial

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Theresa Floegel, *Arizona State University*

Joe Dzierzewski, *University of Florida*

Adrienne Aiken-Morgan, *Duke University School of Medicine*

Beverly Roberts, *University of Florida*

Christina McCrae, *University of Florida*

Michael Marsiske, *University of Florida*

Mat Buman, *Arizona State University*

The purpose of this study was to assess the use of basic need satisfaction as an intervention tool in a randomized controlled trial (RCT) intended to increase physical activity behavior with older adults. This previously published RCT revealed significant increases in physical activity behavior and a time-by-group interaction of self-determined motivation to exercise at 18 months follow-up with those assigned to the experimental condition. The participants were 24 previously sedentary participants (Mage = 65.00, SD = 8.79 years) from the experimental condition only who completed post-intervention interviews. Content analysis of the interview transcripts were conducted with frequency counts of participant quotations that exemplified need satisfaction. Results revealed participants felt connected with their peer mentors and other participants, they experienced autonomy in their exercise choices, and perceptions of competence increased during the intervention. This and other supporting evidence revealed support for SDT as a guiding framework for physical activity interventions.

Poster 76. Applying SDT to HIV Disclosure for Older Adolescents

Ann Gillard, *Springfield College* ✉ anngillard@gmail.com

Mark Roark, *Utah State University*

Disclosure of HIV status is an important concern for youth living with HIV/AIDS, yet theoretical frameworks for understanding HIV disclosure motivations have been poorly applied. We applied the SDT concepts of (a) basic psychological needs of competence, autonomy and relatedness and (b) the motivation continuum to understand older adolescents' needs and their motivations to disclose their HIV status. Interviews and observations were conducted with nine youth aged 17-19 and two adult staff. Support for basic needs resulted in youths' reports of agency, strong connectedness, and skills. SDT can be used to understand types of motivation (i.e., amotivation, controlled, and autonomous motivation) to disclose HIV status. Amotivation was the predominant motivation type. People providing guidance and support to older adolescents with HIV/AIDS can use SDT to understand different motivations to disclose, and BNT to understand psychosocial factors that support or thwart HIV disclosure.

Poster 77. Universal Design for Learning from a Self-Determination Theory Perspective

Robert Gillis, *Warner School of Education, University of Rochester* ✉ rdgillis1@gmail.com

Universal Design for Learning (UDL) is a curriculum development philosophy that gives all individuals equal opportunity to learn by helping educators design flexible, adaptable teaching materials and assessments. Proponents of UDL argue that it engages three networks in the brain associated with learning (Recognition Networks, Strategic Networks, and Affective Networks) through the three principles of UDL: Multiple Means of Presentation, Multiple Means of Representation, and Multiple Means of Engagement. UDL documents address student motivation solely in discussions of Multiple Means of Engagement. However, careful review of the other two principles of UDL and the 9 guidelines of UDL reveals a process that develops an autonomy-supportive, structured classroom setting that focuses on competence and autonomy. My poster will highlight the connections between the 3 Principles and 9 Guidelines of UDL and the three basic psychological needs of Self Determination Theory: Autonomy, Competence, and Relatedness.

Poster 78. The Influence of Career Aspirations on Career Success and Subjective Well-Being of Individuals at Work

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Jacques Forest, *ESG-UQAM*

Career aspirations are likely to have an impact on subjective career success. They could also have an impact on subjective well-being (SWB) at work. But, actually, few studies have explored the possible interaction effects of the main components of career

aspirations, namely, their content and motive, on success and SWB. Moreover, few studies have verified whether psychological needs play a mediating role in the relationship between these interactions, on the one hand, and success and SWB, on the other hand. Accordingly, the purpose of the present study was to test these hypotheses, using multiples regressions. Data were obtained from 351 professionals of the province of Quebec. Results revealed that interactions of intrinsic contents and autonomous motives positively predict success and SWB while interactions of extrinsic contents and controlled motives negatively predict those consequences, most of the time. These relations were mediated either by need satisfaction or by need thwarting.

Poster 79. Employee Proenvironmental Behavior: Understanding the Roles of Organizational Values, Employee Values, and Motivation

Joseph Sarkis, *Clark University* ✉ jsarkis@clarku.edu

Laura Graves, *Clark University*

The goal of our work is to understand the roles of organizational values, employee values, and employee motivation (i.e., external, introjected, identified, and intrinsic) in predicting employee proenvironmental behaviors in organizations. Drawing on the self-determination and environmental psychology literatures, we propose that the environmental values of the organization and employee influence motivation, which, in turn, influences the frequency of proenvironmental behaviors. We test this proposition using survey data from 333 U.S. manufacturing employees. Our findings suggest that motivation partially mediates the effects of organizational and employee values on proenvironmental behaviors. The exact effects vary as a function of the type of motivation. Strong organizational and employee values appear to be associated with increases in introjected, identified, and intrinsic motivation, which, in turn, are associated with increases in proenvironmental behaviors. In contrast, the links between values and external motivation are weak, and external motivation is unrelated to proenvironmental behaviors.

Poster 80. On the Role of Need Satisfaction in the Relationship Between Workplace Bullying and Employee Functioning: A Longitudinal Study

Sarah-Geneviève Trépanier, *Université du Québec à Trois-Rivières* ✉ sarah-genevieve.trepanier@uqtr.ca

Claude Fernet, Stéphanie Austin, *Université du Québec à Trois-Rivières*

Drawing on Self-Determination Theory (SDT; Deci & Ryan, 1985, 2008), this study aims to investigate the role of fundamental need satisfaction (i.e., autonomy, competence, and relatedness) in the relationship between exposure to workplace bullying and employee psychological and professional functioning (i.e., burnout, work engagement, and turnover intention). A total of 508 nurses took part in this study. Results from cross-lagged analyses—based on two waves over a 12-month period—revealed that T1

exposure to bullying negatively predicted T2 need satisfaction and positively predicted T2 burnout. In addition, taking into account the cross-lagged effect of workplace bullying on employee functioning, T1 need satisfaction positively predicted T2 work engagement and negatively predicted T2 turnover intention. Implications for workplace bullying research and SDT literature will be discussed.

Poster 81. An SDT Approach to Workplace Safety—Preventing Injuries, Saving Lives and Reducing Costs

Thomas Wojick, *The Renewal Group Inc.* ✉ twojick@verizon.net

Self-Determination Theory (SDT) was applied to transform an underperforming organizational safety culture that relied on command and control approaches into one that ignited the intrinsic spirit and motivation of its employees and in turn fostered a generative and sustaining safety culture. The story of Zeus and Prometheus is used to metaphorically inform how organizations usurp the responsibility of safety and kill the natural desire in all employees to engage in safe behavior. The story highlights mistaken and self-defeating motivational beliefs and practices. Reflecting on the meaning and application of Prometheus's courageous act of stealing fire (intrinsic motivation) from Zeus (management) and bestowing the "spark of life" in his clay figures (employees), managers and employees learn how SDT can fuel the spark of safety in all employees. By focusing on purpose, autonomy, relationships, and competence, SDT liberated this organization from motivation-stifling approaches and significantly reduced accidents and injuries.

Poster Session B

Room: Empire Hall

Poster 1. Perceived Support for Intrinsic Motivation as a Foundation for Mindful Awareness in Educational Settings

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Jordan Quaglia, Stephen Trapp, *Virginia Commonwealth University*

Contemporary theory and research suggests autonomy and competence promote academic success. Empirical studies have identified mindfulness as a foundation for autonomous behavior, and the present study extends these findings by providing evidence for a reciprocal causal relationship between mindfulness and intrinsic motivation, such that support for intrinsic motivation in educational settings leads to increased state mindfulness among students. The hypothesized structural equation model was supported. Perceived support for intrinsic motivation fostered higher states of mindfulness among students immediately prior to taking a final exam. Increases in mindfulness blunted cognitive manifestations of test anxiety and increased test performance. Additionally, there was a direct positive effect of support for intrinsic motivation on exam scores. These results contribute to understanding self-determination in educational contexts by suggesting that support for intrinsic motivation in educational settings facilitates academic performance directly, and indirectly through its effect on state mindfulness and test anxiety.

Poster 2. Relationship Between Life Goals, Basic Psychological Needs, and Well-Being

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The current study, guided by self-determination theory, examined the relationship between life goals and basic psychological needs with well-being. The sample consisted of 347 students of Tehran university (129 males and 218 females) were chosen randomly. The students completed subjective wellbeing questionnaire (SWQ), aspiration index (AI) and basic psychological needs satisfaction scale (BPNS). Analysis of data using correlation coefficient and hierarchical regression tests showed that intrinsic goals and basic psychological needs satisfaction were significant positive predictors of well-being. Additionally, there was no significant relationship between extrinsic goals and well-being. Generally, individuals with higher intrinsic goals and basic psychological needs satisfaction reported more well being.

Poster 3. Asthma Management in Urban African American Adolescents: Application of Self-Determination Theory

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Asthma prevalence and morbidity are high amongst adolescents, especially African American adolescents – a group with poor treatment adherence. We recruited 168 urban African American adolescents with uncontrolled asthma (mean age=13.94; 61% male) and their caregivers from a larger trial testing the efficacy of adherence interventions. Adolescents and caregivers were jointly interviewed regarding adherence using the validated FAMSS. Next, adolescents reported on asthma management behaviors using asthma-specific measures of autonomous motivation, competence and relatedness (family routines and social support). We used multiple linear regression to test the hypothesis that controlling for age, SDT variables would predict adherence. Adherence was significantly correlated with all SDT variables ($r=.163-.314$ $p<.05-.001$), except social support. Family routines predicted adherence to medication ($B=.219$, $SE=.060$, $p<.001$). Sharing asthma management among family members was associated with better adherence. Incorporating medication regimens and other management behaviors into family routines may be an important way to improve medication adherence.

Poster 4. The Effects of Self-Determined Relational and Sexual Motives on Sexual Well-Being

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Elke Reissing, Luc Pelletier, *University of Ottawa*

Sexual motives have been the objective of mostly clinical research thus far, investigating their effects on sexual well-being and how they can inform clinical interventions. Researchers and clinicians agree that sexual activity must be understood within its relational context; however, little research has investigated how the effects of sexual motives on sexual well-being are shaped by relational motives. The objective of this study was to examine the role of relational and sexual motives on sexual well-being. Fifty university students (84% female; M age = 19.62) completed self-report measures of relational motives, sexual motives, and sexual well-being (sexual satisfaction and sexual distress). More self-determined relational and sexual motives predicted greater sexual satisfaction and lower sexual distress. Sexual motives mediated the effects of relational motives on sexual well-being. Self-determined sexual motives thus promote sexual well-being, but this effect may also be explained by the motives underlying the relationship with the sexual partner.

Poster 5. Choosing a High-School Major: Parents' Involvement, Type of Motivation and Success

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Choosing high school major is considered one of the first career decisions. The goal of this research is to examine the relation between parents' need supportive behavior in the process of decision of a high school major - and the type of motivation, success and well being of their children. Two hundred and forty one 11th grade students completed questionnaires assessing their perceptions of their parents' need supportive behavior, their type of motivation in choosing the major subject, their type of motivation to learn the major subject, their well being and their grades. Using path analysis, the findings indicated a model in which parents' need-supportive behaviors are positively associated with adolescents' autonomous motivation in choosing the major subject, which in turn is positively associated with autonomous motivation to learn, higher grades and better well-being. The results highlight the important role that parents have in their children' motivation and well being.

Poster 6. The Role of Need Satisfaction in Intrinsic and Extrinsic Episodic Memories on Well-Being

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Natasha Lekes, Frederick Philippe, *Université du Québec À Montréal*

The present study examined the effect of need satisfaction in episodic memories related to intrinsic or extrinsic values on well-being. Participants were randomly assigned to describe a memory characterized by either intrinsic (e.g., helping others) or extrinsic (e.g. gaining money) values. Results showed that need satisfaction in intrinsic memories was positively associated with well-being, whereas need satisfaction in extrinsic memories was unrelated to well-being. These results held after controlling for general intrinsic and extrinsic aspirations and other memory characteristics, such as valence, significance, or vividness. Furthermore, results showed that describing an intrinsic memory positively increased situational vitality. In addition, this increase in vitality was predicted by the level of need satisfaction characterizing the intrinsic memory. These results suggest that only some types of events (intrinsic values) contribute to well-being through the satisfaction of psychological needs.

Poster 7. Motivation, Creativity, Well-Being, and Quality of Work Performance

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In a social work context where significant others expect and reward chefs being creative we tested the hypotheses that identified work motivation (but not intrinsic work motivation) would positively predict creative behavior, which would positively predict well-being. Intrinsic work motivation would positively and directly predict well-being. Finally, well-being would positively predict quality of work performance. Questionnaires were completed by 119 chefs and their supervisors in restaurants in 7 cities in Norway. A SEM model supported the predicted links in the model, as well as single and double indirect links in the model, and explained 45% of the variance in well-being and 63% of the variance in quality of work performance.

Poster 8. Motivating Millennials: The Nature of Prosocial Behaviour Engagement in the Social Media Environment

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The purpose of the present study is to expand upon the notion of intrinsic motivation (to know, to accomplish, and to experience stimulation; Vallerand, 1997) within a new domain: the Social Media (SM) context. Specifically, we posit that the SM context is likely to result in Millennials (born after 1980) being autonomously motivated to engage in prosocial behaviors. Millennials have been shown to be civic-minded, socially-aware and engaged in societal causes (Saunderson, 2009). Thus, this context allows a new means of exploring the relationship between Millennials and prosocial engagement. The total sample consisted of 592 participants, who were asked to rate their online-, cause-, and event-related prosocial behavior intentions towards Facebook ?Event? pages promoting one of two charity events: one for breast cancer awareness (N = 208), and one for youth homelessness awareness (N = 384). Results found that intrinsic motivation towards knowledge and to experience stimulation significantly predicted all three behaviour intentions.

Poster 9. The Way I Make You Feel: Relatedness, Compassionate Goals, and Relationship Satisfaction

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C. Veronica Smith, *University of Mississippi*

C. Raymond Knee, *University of Houston*

Amy Canevello, *University of North Carolina, Charlotte*

Research has investigated the role of three basic psychological needs as proposed by Self-Determination Theory—autonomy, competence, relatedness—in explaining relationship satisfaction. Research has also explored how relatedness specifically increases prosocial motivations in the individual but has not focused on the role of relatedness in shaping partners' relationship functioning over time. The present research takes a dyadic perspective that proposes that relatedness fulfillment fosters compassionate goals, which in turn predict increases in partner's satisfaction. Forty-five heterosexual dating couples were asked about their relatedness need fulfillment, compassionate goals, and relationship satisfaction. Relationship satisfaction was assessed again four weeks later. Results showed that one's own relatedness fulfillment, but not one's partner's relatedness fulfillment at Time 1 uniquely predicts partner's increased satisfaction at Time 2, and that this is mediated by one's own higher compassionate goals. These findings highlight the dyadic importance of having one's needs met in promoting relationship functioning over time.

Poster 10. Activist Identification, Basic Needs Satisfaction and Well-Being Among Persons with Disabilities

David Hall, *University of South Carolina* ✉ halldl2@email.sc.edu

While sociopolitical gains resulting from disability rights activism are well-documented, the effects of self-identification as an activist on individual psychological health remains an under-examined area of study. Presented here is a conceptual model illustrating the hypothesis that an individual's level of identification with the community of social movement activists accounts for variation in personal well-being, and that the relationship between activist identity and well-being is mediated by the satisfaction of the three central psychological needs of autonomy, competence and relatedness posited by Self Determination Theory (Deci & Ryan, 2000). The model suggests that greater immersion in the disability rights social movement (increasing identification with it) provides an environmental context that supports the satisfaction of these basic needs, which are in turn expected to predict higher levels of well-being with regard to one's perception of living a satisfying (hedonic) and meaningful (eudaimonic) life.

Poster 11. Autonomy and the Student Experience in Undergraduate Physics

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David Webb, *University of California, Davis*

The role of autonomy in the student experience in a large-enrollment undergraduate introductory physics course was investigated from a self-determination theory perspective. A correlational study tested whether certain aspects of the student experience correlated with how autonomy supportive (vs. controlling) students perceived their instructors to be (i.e., the instructor acknowledged the students' perspectives and provided information and opportunities for choice). Students who perceived their instructors as more autonomy supportive tended to become more interested in learning physics, become less anxious about taking physics, come to study physics for more autonomous reasons, and perform better (for a subset of students). A controlled study tested how restructuring the course to allow more choices by students changed the student experience. More choices led to large differences between men and women in interest/enjoyment in learning physics, with women becoming less interested than men.

Poster 12. Madeline's Community of Belonging: A Qualitative Case Study Analysis Using Self-Determination Theory

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Yen C. Verhoeven, *University of Rochester*

This qualitative study explores the online reflective discourses of a pre-service teacher in order to ascertain the extent to which the three basic psychological needs of SDT (competence, relatedness, and autonomy) are manifest in a reform-based science teacher preparation program. We chose to employ qualitative discourse analysis (Wodak & Krzyzanowski, 2008) to glean latent meaning from the blog entries (n=20) of "Madeline," a participant in the student teaching module of the Warner School of Education's Get Real Science! teacher preparation program. Our findings revealed the emergence of three communities that influenced Madeline's motivational orientation: the blogging community, her classroom community, and the community of "other." Whereas a majority of the work on SDT in education has discussed the importance of autonomy support in motivating beginning teachers, our study shows how relatedness can also be a very strong need that compensates for and synergistically supports the basic psychological need for competence.

Poster 13. One Year of Exercise: Changes in Motivation and Diabetes Health Behavior

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Marit Bersaas Viestad, Hallgeir Halvari, *Norwegian School of Sport Sciences*

Adult patients (N=137) diagnosed with both diabetes mellitus type 2 and cardiovascular diseases were recruited to a randomized clinical trial of regular exercise. At baseline and after 12 months we measured perceived needs satisfaction, competence, autonomy support, effort and quality of health behavior, motivational regulations of health behavior, diabetes quality of life, vitality, and subjective well-being. Of the patients 65% answered the questionnaire at baseline, and the results from these data supported the SDT process model. As hypothesized, autonomy support was positively related to need satisfaction, which positively predicted autonomous motivation and perceived competence. Furthermore, autonomous motivation and perceived competence positively predicted physical activity, subjective well-being and vitality. In contrast, controlled motivation related negatively to subjective well-being and diabetes life quality. Physical activity was positively related to general health, subjective well-being and vitality. The final results will be available in February 2013, and they will be presented at the conference.

Poster 14. Citations as Common Courtesy: Using SDT to Reduce Student Plagiarism

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Corinne Tramuta, *SUNY Geneseo*

The traditional approach to teaching about plagiarism and citations often has legal and punitive overtones. Students are warned to not make mistakes or else they may fail the assignment, the class, or even be dismissed from the institution. An alternative approach to teaching about plagiarism is to help students understand that the citation process is about entering a conversation involving other authors, yourself, and your readers. By teaching citations as a matter of courtesy to everyone involved, faculty can promote the key tenets of self-determination theory. Research comparing two scenarios (Courteous vs. Punitive Messages) supports SDT and suggests students will be more motivated to learn proper citation protocol using supportive messages regarding issues of plagiarism.

Poster 15. Context Matters: The Impact of Salient Rewards on Motivation During the Working Day

Rebecca Hewett, *Royal Holloway, University of London* ✉ bex.hewett@yahoo.com

Through a quantitative diary study, this research examines the relationship between everyday rewards and motivation as proposed by SDT. It tests the hypothesis that more salient rewards will be detrimental to more autonomous forms of motivation. It also explores the impact of job and task context on this relationship. Very few instances of

financial reward were reported, most took the form of verbal or written feedback. Multi-level modelling confirmed that more salient reward is positively related to external motivation. It was found to be detrimental to intrinsic motivation where manager support for autonomy is low and identified motivation where task complexity is high. This study bridges previous experimental research and contradictory findings in the field, to identify the conditions under which rewards can be detrimental to positive motivational experience at work. It adds to limited applied research on the role of reward salience in understanding the motivational impact of reward.

Poster 16. Future Orientation, Vitality and Health-Related Quality of Life in Primary Care Patients

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Fuschia Sirois, *Bishop's University*

Sheri Nsamenang, *East Tennessee State University*

An adaptive view of the future, or future orientation, is associated with beneficial health outcomes; however, potential mechanisms of action for this relationship are unexplored. Our sample of 101 primary care patients (71% female; 94% Caucasian; MeanAge=42.18, SD=12.83) completed surveys assessing future orientation, subjective vitality and health-related quality of life. In support of our hypotheses, future orientation and vitality were associated with one another, and both were related to fewer role limitations due to physical and emotional functioning, less pain, and better social functioning, mental health and general health. Further, vitality fully mediated the effect of future orientation on these patient-centered health outcomes, and exerted an indirect only effect on its association with physical functioning. A goal-oriented and motivated view of the future may contribute to, or enhance access to, the physical and mental energization of vitality, resulting in reduced impairment and better health functioning, and should be targeted therapeutically.

Poster 17. Are You Satisfied With Your Life? The Role of the Three Psychological Needs and Sibling Support

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Nicole Hollis, Katherine Conger, *University of California, Davis*

Self-Determination Theory emphasizes the nature of individuals to act as agents to maintain their own psychological well-being through the innate needs of autonomy, competence, and relatedness (Ryan & Deci, 2000). Because siblings serve as a critical emotional resource throughout the lifespan, sibling support may influence how these innate needs predict later well-being (Kramer & Conger, 2009). With this framework as a guide, 531 young adults from the Family Transition Project reported their sense of autonomy, competence, relatedness, and sibling support at 18 and 20 years, and life satisfaction at 21 years. This project investigates how the change in the three psychological needs during the transition to young adulthood predicts later life satisfaction and the role of sibling support as it moderates this association. The

satisfactory alphas and significant positive correlations between variables suggest that change in the three innate needs will interact with sibling support in predicting later life satisfaction.

Poster 18. The Talent Development Environment and its Impact on Athletes Motivation

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There is an increasing interest in different sports to optimize talent development, and the purpose of this study was to clarify the impact of the environment on psychological aspects of talent development, following the work of Martindale and colleagues (Martindale et al., 2010; Wang, Sproule, McNeill, Martindale, & Lee, 2011). This was done by examining athletes perceptions of key features in their talent development environment with the Talent Development Environment Questionnaire and its impact on important factors, such as perceived competence, fear of failure, and motivation. The participants (age 16-19 years) in this study were playing team sports on junior elite level, and were enrolled at Swedish sport academies. The results showed positive relationships between a positive talent development environment, competence, and autonomous motivation, as well as positive relationships between an adverse environment, fear of failure, and controlled motivation. These findings highlight differential effects of environmental factors on athletes' development.

Poster 19. Self-growth in the College Years: Orientation Towards Intrinsic Values Predicts Resolution of Identity and Intimacy Stages

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Richard Koestner, Marina Milyavskaya, *McGill University*

It has long since been established that university is an important time for identity formation (e.g. Marcia, 1970), but what drives this maturation? In the present study, we found support for our hypothesis that increased orientation to intrinsic values over two academic semesters predicts University students' resolution of the Eriksonian stages of identity and intimacy, and that stage resolution predicts enhanced well-being. Specifically, we tracked 196 university students' value prioritization using the Aspiration Index (Kasser & Ryan, 1996), resolution of stages using the Erikson Psychosocial Inventory Scale (Rosenthal, Gurney, & Moore, 1981), positive affect, negative affect, and satisfaction with life. We found that increased orientation towards intrinsic values significantly related to greater resolution of both identity ($r = .255, p < 0.001$) and intimacy stages ($r = .268, p < 0.001$), when controlling for t1 resolution, and that increased resolution positively predicted enhanced well-being across the year.

Poster 20. The Impact of Psychological Need Satisfaction in Networked Memories on Mobilization Behaviors

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Frederick L. Philippe, *University of Quebec at Montreal*

The present research examined how psychological need satisfaction in episodic memories and their networked memories influenced the mobilization in the 2012 Quebec student strike. A total of 294 students completed a questionnaire about their non-violent behaviors supporting the strike and described a personal memory about this strike. They were then asked to describe a second memory (a networked memory) evoked by the first memory, even if this memory was not about strike. Participants rated the level of need satisfaction characterizing each memory. Judges coded these networked memories for whether they were specific or general and if they were related to the strike or not. Results showed that need satisfaction in both memories independently predicted strike behaviors ($r_s = .33$ and $.15$, $p_s < .05$). Specifically, strike-related networked memories, specific or general, were associated with strike behaviors. However, only specific networked memories unrelated to the strike were associated with behaviors.

Poster 21. Investigating Process: How Home Environment Influences Children's Early Literacy Skills

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Cynthia Buettner, Lieny Jeon, *Ohio State University*

Household chaos is negatively associated with children's academic achievement (Evans, 2006), but the mechanism underlying this association has not yet been explored. The goal of this study is to test two sets of mediating factors. First, children from chaotic home environments may lack regulatory skills due to inconsistency in rules and guidance (Ryan & Deci, 2000). The relationship may also be mediated by children's attention skills. We hypothesize that chaotic home environments may decrease children's regulatory skills through heightened hyperactivity/inattention, which in turn may decrease literacy skills. Second, children may not be able to develop an interest in reading, and/or a habit of reading in more disorganized home environments and, therefore, may have lower literacy skills. The hypothesized associations were tested using data from 2,939 preschool children by means of structural equation modeling. The results indicate the importance of understanding environmental influences on early literacy.

Poster 22. Why They Stay: How Fulfilling the Three Basic Psychological Needs Affect Non-Family Managers' Intention to Stay Employed

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Jennifer Jennings, *University of Alberta*

Family businesses managers can be divided into two groups, managers who are members of the owning family and non-family managers. In family businesses it is the owning family's values and identity that heavily influence the regulations of the business. This leaves the non-family managers in a family business subject to the extrinsic regulations of the owning family. Self-determination theory is motivated by the desire to understand the internalization of extrinsic regulations. In this research project we look at how the fostering of the three basic psychological needs by owning families affects a non-family manager's intention to stay employed in the family business. We discover a positive relationship between fostering basic needs fulfillment and intention to stay and identify moderators and mediators of the relationship.

Poster 23. Secondary School Teachers' Motivation for Professional Development: A Person Centered Analysis

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Perry den Brok, *Eindhoven School of Education*

These days, teachers are required to invest in their own professional development (PD) because of ongoing contextual changes affecting schools. Research has shown that an important determinant for PD behavior is motivation. However, to what extent teachers are motivated for PD has not been empirically examined. Therefore, in this study, secondary school teachers' motivation for PD is investigated from an SDT perspective. A person-centred analysis is applied to expose occurring configurations of different types of external regulation and intrinsic motivation in teachers. The resulting motivational profiles will be validated by relating them to basic psychological need satisfaction. Moreover, the relation between motivational profiles and self reported PD-behavior will be investigated. Finally, qualitative data will inform us on what causes teachers to adopt specific motivational profiles. Data is currently being collected from a sample of Dutch secondary school teachers (N = 1800). Results are available at the time of the conference.

Poster 24. The Relationship Among Degree of Self-Regulation and Perceived Stress, Burn-Out Symptoms, Work Engagement and Perceived Competence

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Petter Gustavsson, *Karolinska Institutet*

Geoffrey C. Williams, *University of Rochester*

Ann Rudman, *Karolinska Institutet*

The degree of autonomous motivation affects professional development and health. While lack of autonomy may increase stress, the presence of autonomy can lead to high perceived competence and low anxiety. Using the new instrument, Self-Regulation Questionnaire for Nursing Students, the purpose of this study was to explore the relation between degree of self-regulation and perceived stress, burn-out symptoms, work engagement and perceived competence. Data were collected in 2011 and a total of 113 university college nursing students participated. Nursing students with autonomous motivation, had high perceived competence, were more engaged, perceived lower levels of stress, burnout and performance-based self-esteem compared to students with controlled motivation. Students with controlled motivation were more stressed than students who were more autonomously motivated. The type of motivation students had impacted on health and well-being and how students engaged in their studies.

Poster 25. Motivation and Treatment Engagement in Patients with Severe Mental Illness

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Arno van Dam, *GGZ Westelijk Noord Brabant*

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Willem van der Spek, *GGZ Breburg*

Christina van der Feltz-Cornelis, *Netherlands Institute of Mental Health and Addiction*

Treatment disengagement poses a major problem for the successful treatment of patients with severe mental illness. Providing motivation feedback to clinicians seems to be a promising approach to improve treatment engagement and outcomes. The Motivation and Treatment Engagement Intervention Trial (MotivaTe-IT) aims to examine the effect of a motivation feedback intervention based on Self-Determination Theory. Patients (N= 294) with a primary diagnosis of a psychotic disorder or personality disorder were randomly assigned to either a feedback or a no feedback control condition. Outcomes of interest were treatment engagement, psychosocial functioning and quality of life. MotivaTe-IT serves to gather insight into motivational processes and to determine how plausible applications of SDT, the TransTheoretical Model and the Integral Model of Treatment Motivation are in this patient population. The poster shows

the design and preliminary results of MotivaTe-IT, including QR-codes that link out to movie clips of the motivation feedback intervention.

Poster 26. When Autonomous Motivational Orientations Reduce Burnout and When They Do Not

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Nikos Chatzisarantis, *Edge Hill University*

Martin Hagger, *Curtin University*

Masato Kawabata, *National Institute of Education*

The purpose of the present study was to examine the combined effects of trait affectivity and autonomous motivational orientations on burn out. In accordance with previous research stemming from self-determination theory, we hypothesized and showed that participants with an autonomous motivational orientations reported lower levels of burn out relative to participants who endorsed a controlling motivational orientation. However, our study also revealed that participants with autonomous or controlling motivational orientations reported equivalent levels of burn out when autonomously motivated individuals were characterized by negative affectivity and controlling motivated individuals were characterized by positive affectivity. The current study reveals a boundary condition for effects of autonomous motivational orientations on burn out, and yields new insights into how to maximize beneficial effects of autonomous motivational orientations on burn out.

Poster 27. Perceived Legitimacy of Parenting and its Mediating Role: Parental Control and Autonomy in Adolescents

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Cigdem Kagitcibasi, *Koc University*

This study examined the effect of parenting dimensions (control, warmth, and induction) on development of autonomy in adolescents. This causality was investigated by testing the mediating role of acceptance of parental control. Testing this model can yield further understanding for parenting-development link, since the role of parenting practices can depend on how the child perceives parenting. The proposed model was tested across middle and late adolescence. Participants of the study were 630 9th and 12th grade high school students in Istanbul. The data were collected by administration of self-report questionnaires. The results indicated that i) middle adolescents showed higher levels of acceptance of control compared to the late adolescents; ii) adolescents perceived highly controlling parenting as legitimate, if high control was accompanied by moderate-to-high levels of parental warmth; iii) parental warmth and induction decreased levels of adolescent autonomy via leading to acceptance of control.

Poster 28. What is an Autonomy Supportive Intervention?

John Kayser, *Montreal Heart Institute Research Centre* ✉ john.kayser@mail.mcgill.ca

An autonomy supportive intervention (ASI) aims to increase perceived autonomy support (PAS). PAS is positively associated with health behaviour changes. Three core themes in an ASI are known: choice, rationale, and empathy. However, little has been reported on the attributes of this intervention. Rodgers' evolutionary method of concept analysis was used to analyze the attributes of an ASI. 64 papers describing an ASI in health behaviour change were identified searching the databases: CINAHL, PsycINFO, and MEDLINE. Although most attributes were classified under the three core themes, nearly half remained unclassified. These remaining attributes were classified under two new themes: collaboration and strengths. A working model illustrates a new conceptualization of an ASI that includes 5 themes: choice, rationale, empathy, collaboration, and strengths.

Poster 29. The Use of Interviewing, Behavior Change and Concept Mapping as Motivational Educational Tools within Kinesiology/Health Departm

Linda Keeler, *Western Washington University* ✉ linda.keeler@wwu.edu

Justine Vosloo, *Ithaca College*

Emma Grindley, *University of Idaho*

Self-determination theory (SDT; Deci & Ryan, 1985) is a common motivational theory taught within kinesiology and health departments as framework of explaining sport, exercise and health behavior. It is not uncommon that motivational theories, such as SDT, offer the first exposure of psychological theoretical frameworks to students within kinesiology and health. Interactive, experiential and applied teaching methods are effective strategies to enhance student learning (Richardson, 2001) and have been used as foundations for assignments to enhance motivational theory learning modules. The following poster will outline three assignment options that have been successfully utilized to enhance student learning of motivational theories, including SDT, within kinesiology and health across multiple universities. The assignments include: 1) interview and analysis, 2) individual behavior change challenge and analysis, and 3) case studies and individual and team concept mapping. Copies of assignment instructions, samples of student work and variation suggestions will be offered.

Poster 30. A Mediated Moderation of Self-Determination Theory and Academic Interactions

Jobina Khoo, *The University of Southern Mississippi* ✉ jobina.khoo@eagles.usm.edu

The basic psychological needs of autonomy, competence, and relatedness are components of the Self-Determination Theory. Academic integration includes these elements through instructor interactions in the classroom, during office hours, course

expectations, participation in seminars and workshops, as well as formal and informal presentations. A mentoring relationship includes assistance, support, and respect in research, scheduling, and decision making, with understanding of graduate goals and career choices. A healthy mentoring relationship between student and faculty member can be explained by the Self-Determination Theory. The use of mentoring could clarify the effect Self-Determination Theory has on college graduate students' academic interaction. Demographic information such as gender, age, classification, degree pursued, major, or presence of mentoring faculty could also influence this relationship between Self-Determination Theory and academic interaction. A mediated moderation could determine if the relationship that exists between Self-Determination Theory and academic interactions can be mediated by mentoring or moderated by demographic information.

Poster 31. Children's Psychological Well-being as Influenced by Parents' Economic Condition with the Mediating Effects of Parents' Subjective Well-being

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This study is to investigate the relationship between parent's economic condition and its influence on children's psychological well-being and the mediating effect of parent's subjective well-being and autonomy support for their children from the perspectives of self-determination theory. 737 middle-high school students and their parents were investigated by questionnaires. The results show that (1) parents of poor economic condition (under poverty level) have poorer subjective well-being (more stressful), and less autonomy supportive (more controlling) parenting (2) parent's psychological well-being has mediating effect between their economic condition and autonomy support for their children, (3) children of poor family have lower intrinsic motivation and less psychological well-being, (3) parental autonomy support has mediating effect between parental economic condition and children's psychological well-being. Based on the results, the educational implications were discussed.

Poster 32. The Relationship Between Partners' Helping Motivation and Partner/Patient Outcomes in the Context of Pain

Sara Kindt, *Ghent University* ✉ sara.kindt@ugent.be

Maarten Vansteenkiste, *Ghent University*

Emelien Lauwerier, *Ghent University*

Annmarie Cano, *Wayne State University*

Liesbet Goubert, *Ghent University*

The present study investigated how partners' motives for helping relate to the well-being and relationship satisfaction of partners and patients with fibromyalgia, and the mediating role of psychological need satisfaction. A total of 48 dyads (n=36 female patients) completed questionnaires assessing positive and negative affect, anxious and

depressive feelings, and relationship satisfaction. Additionally, partners completed an adapted version of the Motivation to Help Scale assessing controlled or autonomous motivation to help the patient partner. Autonomous motivation to help was negatively related to anxious and depressive feelings and positively related to positive affect and relationship satisfaction, but only in partners. Furthermore, psychological need satisfaction mediated these relationships. Autonomous helping motivation was not related to patient outcomes. The findings indicate that partners who help for autonomous reasons have better well-being and feel more satisfied about their relationship than partners who help out of external or internal pressures.

Poster 33. The Satisfaction of Singers in the Choral Environment: A Study Involving Choristers of Choral Activities in Music Extension

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Liane Hentschke, Giann Mendes Ribeiro, *Universidade Federal do Rio Grande do Sul - UFRGS/Brazil*

This research aims to investigate the satisfaction of basic psychological needs of choral singers in activities, from the perspective of Self-Determination Theory. Based on this theoretical framework, the research was carried out with a qualitative approach, using a semi-structured interview. The sample was composed by 15 singers belonging to 5 choirs of extension sector of the Arts Institute from Federal University of Rio Grande do Sul - UFRGS. The results presented concern the perception of singers satisfaction of their needs for competence, belonging and autonomy regarding: the repertoire runs from your pick up from the same difficulty, be it musical or due by the language to be sung; development of activity assays of the choirs, more or less controlling, and the relationship between the singers, conductors and vocal trainers, where the interaction is not clearly perceived, but is highlighted as important to the musical result.

Poster 34. Needs and Activity—On the Concept of Needs in Self-Determination Theory and Activity Theory

Martin Kramer, *University of Helsinki* ✉ mkramer65@gmail.com

The purpose of this research is to investigate the situation of teachers in the process of school change, as they find themselves in the conflict between societal demands and personal basic psychological needs. The research project is carried out in Austria, where the author works as a teacher in a rural secondary school that is facing a major reform process. In order to analyze the situation, the concept of basic psychological needs – developed by Deci and Ryan into Self-Determination Theory – is put in dialogue with the concept of needs in Cultural-Historical Activity Theory. Teachers' activity systems are analyzed with regard to those needs on three levels: classroom, school and school system. Data are collected through questionnaires, narrative interviews, autoethnographic recordings and in school conferences that are specially adapted

Change Laboratories. Interventionist methodology is employed in an attempt to raise agency amongst teachers.

Poster 35. Fundamental Psychological Need Thwarting: How Organizational Culture and Burnout Intertwine.

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The goal of the current research was twofold. First we wished to examine how organizational culture (OC) influences psychological need thwarting (NT) at work and at home. The second goal was to examine the influence of NT in the relationship between organizational culture (OC) and burnout. Participants (N= 86) were Quebec high school teachers and completed an online questionnaire which assessed NT (work and home), Cameron and Quinns' (2006) typology of OC and burnout. Results suggest that OC affects both work and home NT. Mediation analyses reveal that work and home NT partially mediate the relationship between market culture and employees' burnout, whereas a complete mediation was found between clan culture and burnout. Findings are discussed in terms of how one's work environment can have sprawling effects at work and at home, and how this can impact employees' WB.

Poster 36. Ideological Passion, Affects and Moral Disengagement: A Pathway to Moderate and Radical Activism

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In response to a government decision, thousands of residents of Quebec (Canada) launched a long-lasting strike which generated debates concerning activist's radicalism. Inspired by Rip et al. (2012) on the moderating role of ideological passion in activism, we exploited this opportunity to conduct a survey study (n=212) to investigate the mediating roles of moral disengagement (Bandura, 1996), positive and negative affects in the relation between types of passion and moderate versus radical activism. Results of path analysis show full mediations between harmonious passion (HP) and moderate activism through positive affects and moral disengagement, and between HP and radical activism through moral disengagement. Partial mediations between obsessive passion (OP) and moderate activism through positive affects and moral disengagement, and between OP and radical activism through negative affects and moral disengagement were found. The importance of moral disengagement in understanding how harmonious passion can lead to radical activism will be discussed.

Poster 37. Maternal Psychological Control and Toddler's Affect: An Observational Study

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Mireille Joussemet, *Université de Montréal*

David Forman, *SUNY Geneseo*

This study explores how maternal motivational strategies relate to their toddler's affect (N= 106, M= 26.4 months, SD=1.7; 61 boys). Psychological control was coded during a Clean-Up task (14 min.), while toddlers' affect was coded during two experimental tasks (Bloc Building [BB, 5 min.] & Adherence to a Rule [AR, 11 min.]). Results suggest that overt, coercive control pertained to poorer affect. Indeed, Giving Orders related with less joy (BB: $r = -.23$, $p = .01$) and more irritability (BB: $r = .24$, $p = .01$; AR: $r = .30$, $p = .00$), while Threatening linked with more sadness (BB: $r = .68$ $p = .00$) and irritability (BB: $r = .36$, $p = .00$; AR: $r = .24$, $p = .01$), and less neutral positive affects (AR: $r = -.24$, $p = .00$). In addition, more covert types of control (Bribing; Perform the child's task) allied with more sadness (BB: $r = .18$, $p = .05$; AR: $r = .19$, $p = .05$, respectively).

Poster 38. Exercise Motivation, Adherence and Well-being: A Comparative Study Between Freestyle and Les Mills Classes

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Few studies analyze the impact of fitness classes on motivation, adherence or well-being. We compare this impact, in two popular fitness class programs within the perspective of the self-determination theory (SDT). The sample comprised 120 regular exercisers (40 ± 12 y) at two health clubs, who fulfilled a packet of questionnaires with SDT variables, and exercise-related emotional response. Adherence was measured retrospectively by the frequency to classes within the last six-months. No differences were found between frequency to Les Mills and freestyle classes. Hierarchical regression analysis showed that class frequency was marginally predicted by the satisfaction of psychological needs ($p = .059$) and that exercise-related psychological well-being was predicted ($R^2 = 41.7\%$) by autonomy support ($p = .038$), self-determined regulations ($p < .001$) and by the satisfaction of psychological needs (marginally significant, $p = .054$). The satisfaction of psychological needs emerged as an important variable for the study of adherence and emotional responses to exercise in the fitness class context.

Poster 39. What Makes for Autonomous Sex? The Role of Basic Need Satisfaction in Sexual Motivation and Implications for the Relationship

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Netta Weinstein, *University of Essex*

The current project examined the facilitating role of basic need satisfaction (autonomy, competence, and relatedness) on autonomous sexual motivation and the association with higher relationship and sexual well-being. In addition, it was hypothesized the individuals with low self-esteem were more likely to benefit from the provision of basic need satisfaction. The study utilized an interval-contingent diary design and participants were recruited from the United States and Germany. Results suggested that partner need provision was related to autonomous sexual experiences, which in turn improved sexual and relationship satisfaction. Positive effects were particularly robust for individuals low in self-esteem. This work adds to the existing literature on human motivation, relationship and sexuality.

Poster 40. Basic Needs and School Adjustment: Moderation by Relative Autonomy among Korean Adolescents

Myunghye Lee, *University of Rochester* ✉ mhlee77@gmail.com

Martin Lynch, *University of Rochester*

The study was to test the structural equivalence and latent mean differences of basic psychological needs between low and high groups on the Relative Autonomy Index (RAI) and to investigate the structural relationship among the three basic psychological needs identified in self-determination theory, depressive tendency, self-efficacy, and school adjustment as it pertains to 1055 Korean adolescents testing for moderation by RAI. Latent means analysis revealed that the high RAI group tended to have relatively high satisfaction of all basic psychological needs. A structural equation modeling analysis revealed that autonomy, competence, and relatedness had effects on depressive tendency and self esteem but the depressive tendency had a mediating effect on school adjustment in low RAI group. However, in the high RAI group, autonomy had an effect on school adjustment mediated through depressive tendency. While, relatedness had direct effects on school adjustment self esteem did not work as a mediator in either group.

Poster 41. Thwarting You Thwarts Me: Ostracizing Others Thwarts Basic Psychological Needs for Autonomy and Relatedness

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Cody R. DeHaan, Anjalene Whittier, Richard Ryan, *University of Rochester*

Abundant research shows the harmful psychological effects of being ostracized (e.g., Williams, Cheung, & Choi, 2000), but little research has investigated the costs of complying with ostracism. This study guided by self-determination theory (SDT; Ryan & Deci, 2000) explored the question of whether compliance with ostracizing others is

psychologically costly for the ostracizer. Supporting our guiding hypothesis that complying with ostracizing a confederate during a conversation would carry psychological costs, we found that ostracizing lowered mood as compared to a neutral condition, an effect explained by psychological need thwarting. Further, ostracizers continued to ostracize even when there was no longer pressure to do so. Findings point to the robust psychological costs associated with hurting others, with implications for those who act on prejudice and the social contexts (e.g., parents, peers, communities) who encourage it.

Poster 42. Longitudinal Study on Self-Definition and Job Satisfaction through Mediated Self Regulation

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Myunghye Lee, Martin Lynch, *Warner School of Education, University of Rochester*

This study examined self-defining men and job satisfaction through mediated self regulation, as conceptualized in the Self-Determination Theory. Participants were 66 men of the Guidance and Oakland Growth Studies at the Institute of Human Development, University of California, Berkeley. Participants' TAT stories collected in 1958 were scored using the self-definition Q-sort scale; high scores indicate greater self-definition. In 1970 and 1980, the same participants rated source of job satisfaction and aspects of self regulation towards their job based on the Oakland Growth and Guidance IHD Adult 2 questionnaire. Findings indicate that self-definition positively correlated with integrated and identified regulations, but not introjected regulation. Nevertheless, integrated, identified, and introjected regulations impacted job satisfaction. Results indicate significant mediation of the effect of self-definition on job satisfaction through integrated regulation. In addition, job satisfaction in the 1970 predicted job satisfaction in the 1980.

Poster 43. Children's Emotional Reactions to Parental Autonomy Support and Structure in Situations of Disobedience

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Genevieve A. Mageau, Mireille Joussemet, *University of Montreal*

This study investigates children's emotional reactions to parental use of structure and autonomy support when children disobey. A total of 221 children rated the extent to which they would feel angry, sad, shameful, and guilty when presented with different parental strategies in hypothetical scenarios. These strategies varied according to two dimensions: verbal preliminary strategies (autonomy-supportive vs. controlling) and parental action (repeating the rule, logical consequence, and punishment). Results showed that controlling preliminary strategies elicited more anger, sadness, and shame than autonomy-supportive ones. Interestingly, there was no difference in guilt across the two conditions. Results also showed that punishment would make children feel angrier than both consequences and repeating the rule. Children believed that punishment

would make them feel sadder and guiltier than consequences, which in turn would be worst than repeating the rule. Finally, results showed that punishment would elicit more shame than repeating the rule (all $ps < .05$).

Poster 44. Relations Over Time Among Self-Concept, Autonomous Regulation, Controlled Regulation, and Academic Achievement Toward Writing

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Frederic Guay, David Litalien, *Laval University*

We examined, in a longitudinal study, the relations over time among self-concept, autonomous regulation, controlled regulation, and academic achievement toward writing. A total of 332 grade 2 French-Canadian students (156 boys and 176 girls) were asked to complete a questionnaire assessing regulation and self-concept constructs on three occasions during a school-year (October, February, June). Results from Structural Equation Modeling (SEM) showed that the four concepts assessed are relatively stable over time. Models also showed that there is a reciprocal relation between autonomous regulation and self-concept. Finally, results provided no support for the hypothesis positing that academic achievement would be longitudinally predicted by autonomous regulation, controlled regulation, or self-concept. Results are discussed in light of self-determination theory and self-concept theory.

Poster 45. When Does Occupational Commitment Prevent Burnout? The Moderating Role of Autonomous Motivation

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Although it is largely accepted that employees who are strongly committed to their job are at risk of burnout (emotional exhaustion, cynicism, reduced professional efficacy), the research has been relatively silent about the underlying reasons that could explain such relationship. The purpose of this study is to examine the moderating role of autonomous motivation between occupational commitment and burnout. In contrast to the assumption above, we propose that commitment can negatively predict burnout, but especially for highly autonomously motivated employees. The study was conducted among 1152 teachers from Québec, Canada. Regression analyses showed that highly autonomously motivated employees experience less cynicism ($\beta = -.32, p < .001$) and more professional efficacy ($\beta = .49, p < .001$) in the presence of commitment than their less autonomously motivated counterparts ($\beta = -.21, p < .001$; $\beta = .32, p < .001$). However, the interaction was not significant for emotional exhaustion. Theoretical and practical implications will be discussed in light of self-determination theory.

Poster 46. A Participant Survey for the Technology for Untapped Talent Project: An Analysis of Students' Perceptions and Self-Determination

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This pilot study examines individuals with disabilities' perceptions of their involvement in the enrollment process and participation in the Technology for Untapped Talent (TUT) program. TUT program provides vocational training to enable eligible individuals with disabilities to achieve gainful employment and economic self-sufficiency. This program strives to open up the science, technology, engineering, and mathematics (STEM) fields of employment to students with disabilities in a supportive environment. The TUT program assists participants in attaining the skills necessary to access competitive employment in integrated community settings allowing for successful transition into the community and the ability to enjoy the full inclusion and integration into mainstream society to the best of their abilities. Through the examination of prior employment, educational, social, familial and rehabilitation experiences, this study investigates the motivating factors that led to participants' enrollment and participation in the TUT program in relation to transition services, self-determination and vocational rehabilitation.

Poster 47. A Meta-Analysis on the Relationships Between the Basic Psychological Needs and Burnout

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This study aimed to investigate the relationships between the three basic psychological needs and burnout among athletes using a meta-analytic approach. A systematic literature search was conducted using three groups of keywords (i.e., burnout, sport, and motivation) in five electronic databases (i.e., Eric, PsycARTICLES, PsycINFO, SPORTDiscus, and MEDLINE). Three inclusion criteria were used to include the searched studies. Seven studies met the inclusion criteria. The meta-analytic results showed that there were negative correlations between the three basic psychological needs and burnout ($r = -.64$ to $-.22$; small to large effects). In addition, compared with the other two burnout constructs (accomplishment and devaluation), exhaustion showed smaller correlations with the three basic psychological needs, which could be due to the limitations of the burnout measurement. It was concluded that the basic psychological needs can be used to explain athlete burnout. Future studies need to examine whether there are limitations of the current burnout measurements. Practitioners should use intervention programmes to increase athletes' three basic psychological needs and thus to prevent or avoid burnout.

Poster 48. Pragmatic Case-Finding–A SDT-based Approach to Improve GP's Talks About Alcohol

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Alcohol consumption is a major cause of physical and mental health problems as well as social problems. GPs see themselves as responsible for the identification of and treatment of alcohol problems, but they seldom use SBI. We have through focus group interviews with Norwegian GPs described how GPs adapt different strategies for case-finding to the clinical setting and their personal style (Lid, Malterud 2012). Their strategies were partly based on health incidents or other clinical signs, and partly based on routine screening measures in specific situations. The combination of these two strategies we have called pragmatic case-finding. We apply pragmatic case-finding in a SDT-based approach to improve GP's talk about alcohol. We have designed a pilot seminar to teach GPs clinical strategies based on MI and SDT, and we also apply principles from SDT in planning the seminar for the GPs. Preliminary results will be presented at the SDT-congress.

Poster 49. Current Trends and Intellectual Base in Sport and Exercise Psychology Research: A Bibliometric Study

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This study reviewed the research field of sport and exercise psychology (SEP) with bibliometric methods. We examined: (I) current trends in SEP research published between 2008 and 2011; and (II) the intellectual base of the field of SEP, which refers to the body of influential literature that has been cited by the articles published between 2008 and 2011. The dataset consisted of 795 articles from five core SEP journals and 345 articles obtained through citation-based extension (N = 1140 articles). A cluster analysis yielded 73 clusters showing current trends in SEP research. Among the fifteen largest clusters, three were related to applications of Self-determination theory (SDT) in sport, exercise, and physical education. Among the research specialties identified in the intellectual base, the SDT specialty was the largest with the highest number of citations (3000). Applications of SDT are prominent in SEP research and seem to be dominated by quantitative methods.

Poster 50. PhD Completion: Identifying Motivational Resources and Engagement Indicators That Matter Most

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Frédéric Guay, *Université Laval*

In Canada and in the United States, doctoral persistence rates are estimated between 40 and 60 %. Motivation has been pointed out as a key determinant of doctoral degree completion. The purpose of this research was to compare a group of completers (N = 297) and non-completers (N = 134) on variables derived from Self-Determination Theory (SDT) and on various indicators of engagement. Using Mplus (Muthén & Muthén, 1998-2006), we tested the equivalence of latent factor and observed means over both groups (completers vs. non-completers). As expected, results shows that completers perceived themselves as more competent, felt they received more support from their advisor, their professors, and other students, and were more likely to receive a scholarship and to actively participate in conferences. Surprisingly, both groups did not differ on autonomous and controlled regulation, amount of publication, incomes, and indebtedness level. Findings are discussed in light of SDT.

Poster 51. Motives and Motivational Regulations of Men and Women for the Practice of Weight Training in Gyms

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Alexandro Andrade, Maick Viana, Ricardo Brandt, Tania Crocetta, Claudia Arab, Rodrigo Batalha, Jul Silva, *Santa Catarina State University, Brazil*

The relation between motives and motivational regulations for the practice of weight training was investigated in 252 individuals in gyms of Florianópolis-SC, Brazil (52.8% men/47.2% women). A questionnaire about the motives for the practice (0=no influence/4=great influence) and the Behavioral Regulation in Exercise Questionnaire - 2 (BREQ-2) were utilized. 'Weight loss' had a positive correlation with introjected regulation ($r=0.202$, $p<0.05$) in women and a negative with external regulation in men ($r=-0.204$, $p<0.01$). 'Increase in muscle mass' was correlated to intrinsic motivation ($r=0.183$, $p<0.05$) in women and to introjected regulation ($r=0.331$, $p<0.01$) in men. For men, 'health and well being' and 'leisure and socialization' correlated to identified regulation ($r=0.359$, $p<0.05$; $r=0.205$, $p<0.05$) and intrinsic motivation ($r=0.205$, $p<0.01$; $r=0.468$, $p<0.01$). For women, these motives correlated to identified regulation ($r=0.200$, $p<0.05$; $r=0.182$, $p<0.05$) and intrinsic motivation ($r=0.281$, $p<0.05$; $r=0.460$, $p<0.01$), respectively. Apart from 'increase in muscle mass', the relations between motives and regulations for the practice of weight training were similar in men and women.

Poster 52. Intrinsic and Extrinsic Sport Motivation as a Function of Age

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In the school context, Gillet, Vallerand and Lafrenière (2012) found that the intrinsic and extrinsic motivation vary with age and the amotivation was relatively low and stable from age 9 to 17 years. The objective of the present research was to investigate intrinsic and extrinsic motivation, and amotivation in sport context as a function of age. Participants were 1,111 Mexican national athletes, aged 10–26 years (56% male and 42% female). Athletes completed Motivation Scale for Sport (Pelletier et al., 1995). The results indicated a significant decrease from intrinsic motivation to increasing age ($F(16, 1094) = 3.38, p < .001$), finding greater variability in the period of 18–22 years. Extrinsic motivation varied significantly by age ($F(16, 1092) = 3.64, p < .001$), but was more stable. Finally, amotivation increased significantly with age ($F(16, 1094) = 21.66, p < .001$), having greater variability from 12 to 17 years.

Poster 53. Promoting Students' Motivation Towards Science Learning: The Role of Personal Needs and Motivation Orientations

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This study aimed at designing a teaching module for science education that enables lower secondary school students to promote their motivation towards science learning, and examining the way this intervention was experienced by students with different SDT-based motivation orientations. Industry site visits that were enriched with activities that were considered able to promote students' motivation by supporting the fulfillment of the basic psychological needs were prepared and implemented in Finland and in Greece. Twenty-seven students participated in each country. Students' motivation orientations were examined by the Academic Motivation Questionnaire, and representatives of different motivation orientations were interviewed. Interviews showed that representatives of different motivational orientations experienced different aspects within the module that met their psychological needs as they are declared in the Self-determination Theory. The results offer a perspective to adolescents' psychological needs and how they mediate the way they value an activity within context of science education.

Poster 54. Cancer Caregivers' Motives for Providing Care Predict Psychological Adjustment to Bereavement

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Family members' motives for providing care to cancer patients have been shown to impact their psychological well-being pre-loss, but the impact on post-loss adjustment has yet to be documented. This study examined the effect of motives for caregiving on psychological adjustment to the loss. Family caregivers participated in a nationwide study at 2 years post-diagnosis (T1) and 46 of them were identified as bereaved 5 years post-diagnosis (T2: bereaved an average for 3 years). Reasons for providing care (RPC) and sociodemographics at T1 were measured along with psychological adjustment outcomes-depressive symptoms (CES-D), prolonged grief (IRC), and life satisfaction (SWLS) at T2. General linear model revealed that external motives for caregiving at T1 predicted lower levels of depressive and prolonged grief symptoms at T2 ($p < .03$). Findings suggest that extrinsic motives may shield against plausible adverse mental health consequences in responding to an undesirable event, like the death of the care recipient.

Poster 55. The Role of Personality in Associations Between Autonomy-Supportive Versus Controlling Parenting and Adolescents' Adjustment

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Research increasingly shows that autonomy-supportive parenting is associated with positive developmental outcomes, whereas controlling parenting is related to more detrimental developmental outcomes. Drawing from literature on parenting by personality interactions, the question addressed here is whether the effects of autonomy-supportive and controlling parenting would hold across interindividual differences in children's personality. Study 1 ($N=402$; 55% female; Mean age = 12.4 years) investigated whether controlling parenting was significantly associated with internalizing and externalizing problems and whether personality type (i.e., resilient, overcontrolled, or undercontrolled) moderated these associations. Study 2 ($N=289$; 58% female; Mean age = 15.7 years) investigated whether a model with basic need satisfaction vs. frustration as mediator between autonomy-supportive vs. controlling parenting and outcomes, held across differences in personality types. It was found that the mediation models were the same for individuals with different personality types. Further investigations are needed to gain a more detailed view on possible moderation effects.

Poster 56. Resilience Attitude of Mexican Men and Woman Weightlifters

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Mexican men and women athletes go through several difficult personal situations at the beginning of their sports career, and have to overcome them with extraordinary efforts to keep their aspirations, but there are some or many cases that result in abandonment, because the low levels of resilience attitude. Resilience Scale was administered to all participants ($n = 23$, $H = 11$, $M = 12$) at Mexican Weight Lifting Pre-Olympic Championship, which gave places to participate in the 2012 Olympic games. The scale has the following characteristics: self-confidence, meaningful life, equanimity, perseverance and sense of individuality. Results: The highest average is for the "sense of self" with 135.7 ($SD = 5.07$), followed by self-confidence with mean 131.8 ($SD = 5.25$); meaningful life with 129.1 ($SD = 8.35$); perseverance with 128.9 ($SD = 14.04$), and the lowest average is of equanimity with 125.8 (5.79).

Poster 57. A Double-Helix Motivational Metaphor: Motives' Quality, Dimensions and Strength Represented Vectorially

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Based on the constructs of motivational quality and continuum introduced by SDT (Deci & Ryan) and on expectancy theories (Bandura, Eccles, Heckhausen, Pekrun, Vroom) the study is centered on the question: What is the relationship between the quality of motivation (extrinsic versus intrinsic) and the multidimensional infrastructure (valence, expectancy, instrumentality/locus of control) and strength of motives. A double helix metaphor focused on the quality, dimensions and strength of motivational vectors is proposed. Its vectorial representation has a structural level that includes motives' quality (intrinsic/extrinsic, M_i , M_e) and an infrastructural level that includes valence (V), expectancy (E), and internal versus external locus of control (I). The various patterns of the balance among these components generate 39 motivational types. Findings on five random samples ($N = 1555$) suggest that the vectorial model identifies changes of the quality, dimensions and strength of motives and their relationships with work performance, job satisfaction and interrogative attitudes.

Poster 58. Further developing the TSRQ (smoking)

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The purpose of this study was to refine the Treatment Self-Regulation Questionnaire-Smoking (TSRQ-S) to differentiate between identified and integrated regulation. New items were generated based on existing questionnaires, expert review and pilot testing. 264 smokers completed the questionnaire, the Brief Wisconsin Inventory of Smoking Dependence (Smith et al., 2010) and a measure of intentions to quit. Preliminary results show that, following elimination of poorly performing items, a five factor model provided optimal fit to the data and the subscales exhibited good reliability. However, the factor intercorrelations did not conform to the expected simplex pattern. For example, there were large correlations between introjected, identified and integrated regulations. Nevertheless, there were differential correlations between these regulations and smoking dependence and intentions to quit. Introjection was significantly more strongly associated with primary dependence than integrated regulation whilst integration was significantly more strongly associated with intentions to quit than either introjection or identified regulation.

Poster 59. Does God Matter? Prayer, Religiosity, and Religious Coping in Daily Life

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Through the ages, religion has been a party of nearly every human civilization in one form or another. Indeed, nearly 90% of people worldwide state they belong to a specific religion or religious organization. Accordingly, religious coping has been one of the foci of psychology of religion research, though little attention has been paid to prayer or types of prayer and their effects. Previous work has indicated that religiosity and religious coping can have benefits with respect to psychological well-being and depression among other areas. Further, intrinsic and extrinsic religiosity has recently been of interest, with prior work showing beneficial effects to intrinsic religiosity and deleterious effects on extrinsic religiosity. The current study tracks participants' religious coping over a 14 day period, along with their engagement in different types of prayer (petitionary, ritualized, and meditative). We expect to show beneficial effects for participants engaging in each of these for autonomous reasons.

Poster 60. Basic Need Satisfaction, Flourishing and Gratitude: A Study in Peruvian Bank Workers

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Self-Determination theory proposes that the three basic psychological needs are very important nutrients for optimal functioning (Vansteenkiste, Niemiec & Soenens, 2010). Positive Psychology (Seligman & Csikszentmihalyi, 2000) proposed that it is important to put emphasis in studying human strengths and positive outcomes (Deci & Vansteenkiste, 2004). Two of these outcomes refer to flourishing and gratitude. Need satisfaction can help to understand how people can have an optimal development and functioning. Therefore it seems clear its relationship to outcomes such as flourishing and gratitude. The aim of our research was to examine the relationship between flourishing, gratitude and need satisfaction and 450 Peruvian bank workers participated. Results showed that the three basic psychological needs positively predicted flourishing and gratitude. Also, a longitudinal latent change model yielded a satisfactory fit to the data and the changes in need satisfaction were related to changes in both flourishing and gratitude over time.

Poster 61. Testing the Interaction Between Scholarship Status and Controlling Coaching Behavior in Predicting Intrinsic Motivation

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Anne Cox, Anthony Amorose, *Illinois State University*

Grounded in cognitive evaluation theory (CET; Ryan & Deci, 2002), the purpose of this study was to test the potential moderating role of perceived controlling coaching behavior in the relationships of scholarship status to perceived competence and autonomy and, indirectly, intrinsic motivation. NCAA Division I swimmers ($N = 162$, Mean age = 20.06 years) were administered a questionnaire containing measures of all study variables. Path analysis results supported an interaction between scholarship status and perceived controlling coaching behavior predicting perceived competence ($\Gamma = -.26$). In addition, there was a significant negative relationship between perceived controlling coaching behavior and perceived autonomy ($\Gamma = -.25$), and a significant indirect relationship between perceived controlling coaching behavior and intrinsic motivation ($R\text{-squared} = .22$). The present findings support the basic tenets of CET and provide new information on how coaches may impact the motivation of athletes who differ in scholarship status.

Poster 62. The Impact of Major Organizational Change on People: A Self-Determination Theory perspective

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Major structural change in organisation is common in organizations today, including events such as mergers and acquisitions, downsizing and off-shoring. These events can have significant impact on the motivation, performance and wellbeing of employees. This poster presents a Self-Determination Theory perspective to managing major organizational change, with a focus on corporate acquisitions and the experience of the acquired firm owner/entrepreneur. During the integration of an acquisition an acquired firm owner/entrepreneurs will potentially experience lost autonomy to make decisions and face new demands and technical challenges that may stretch their abilities. In addition, the acquired organization's established social network will likely transform dramatically during the acquisition integration. Maintaining motivation, performance and wellbeing among acquired employees, particularly founders/senior staff of knowledge based firms, is central to a successful acquisition transaction and should be of strong interest to acquiring firms.

Poster 63. Enhancing School Classroom-Management Efficacy through University Coursework based on SDT

Brad McLennan, *University of Southern Queensland, Australia* ✉
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Effective classroom-management in schools is an international issue of students' academic outcomes, schools' performance, and retention of teachers in schools. Teachers' classroom-management includes establishing order and building positive relationships with students. Moreover, effective classroom-management entails teaching methods that link positive behaviour management with an engaging curriculum. Pre-service teachers in training and beginning teachers who demonstrate enhanced classroom-management efficacy are more likely to engender effective instructional and behavioral outcomes. Additionally, classroom-management efficacy is a buffer against stress, burnout and attrition. Thus, it is incumbent on pre-service teacher educators to provide for knowledge, skills, and efficacy in positive classroom-management. The current project explores the potential of specialist coursework in classroom-management that is structured upon autonomy, competence, and relatedness. This paper reports upon Australian research into the coursework's conceptualization and issues related to the implementation of SDT principles in a "crowded" university curriculum.

Poster 64. Motivational Processes in Pulmonary Rehabilitation: A Qualitative Exploration of Patients' Experiences and Guidance by Rehabilitation Professionals

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Nanne de Vries, *Department of Health Promotion, Maastricht University*

Annemie Schols, *Department of Respiratory Medicine, Maastricht University*

Stef Kremers, *Department of Health Promotion, Maastricht University*

The present study aimed to explore COPD patients' experiences during pulmonary rehabilitation and the guidance provided by rehabilitation professionals, with a special emphasis on the motivational process patients go through during rehabilitation. Focus groups, followed by semi-structured interviews, were used to collect data from seven COPD patients at the beginning and six other COPD patients at the end of an in-patient pulmonary rehabilitation program, supplemented by a focus group and semi-structured interviews among fourteen rehabilitation professionals. Our study revealed that patients' motivation often converted towards a more autonomous motivation near the end of rehabilitation. For most patients being active turned out to be a strategy for staying physically fit; some patients indicated that they even began to like exercising. The pulmonary rehabilitation program in itself is rather controlling—patients follow a prescribed program—however, rehabilitation professionals also appeared to be successful in providing autonomy support towards patients.

Poster 65. Novice Teachers' Motivation to Work

Merilyn Meristo, *Tallinn University, Estonia* ✉ merilyn.meristo@tlu.ee

Erika Löffström, *University of Helsinki, Finland*

The first 5 years are crucial for novice teachers. Research has shown that during this time teachers who leave the profession, typically drop out. Teachers' motivation is of fundamental importance, it not only predicts their own well-being and job satisfaction but also students' outcomes and engagement. This paper describes novice teachers' level of motivation in the following sub-categories: enjoyment, perceived competence, perceived choice, pressure, effort and relatedness with colleagues. The sample was formed of 114 novice teachers. The Intrinsic Motivation Inventory was used at the beginning and at the end of school year. The results indicated a high level of intrinsic motivation and a low level of pressure and tension. Significant differences exist between class teachers, teachers of social sciences, and teachers of sciences. These findings tell us that novice teachers come to school with positive attitudes which remain the same or even improve by the end of the first year.

Poster 66. The Efficacy of Self-Determination Interventions on Physical Activity: A Meta-Analytic Analysis

Lauren Miller, *Syracuse University* ✉ lsmill04@syr.edu

Interventions based on Self-Determination Theory are effective in increasing individuals' sense of autonomy, competence, and relatedness which has a positive impact upon their physical and mental health outcomes. The current meta-analysis reviews twenty-one studies that used self-determination interventions to increase participants' levels of physical activity. This meta-analysis extends the previous literature by evaluating the effectiveness of self-determination interventions versus control groups in producing change in a) participants' levels of physical activity, b) participants' physical characteristics (i.e., BMI and weight), and c) participants' emotions. Additionally, the results examine whether characteristics of the intervention (e.g., number of sessions), the sample (e.g., SES and gender), the physical activity (e.g., its intensity), and the study (e.g., design) moderate the effect of self-determination interventions on participants' physical activity, physical characteristics, and emotional outcomes. Due to the nested structure of the data, a hierarchical linear model is used to examine the results.

Poster 67. Integrating the Theory of Planned Behaviour and Self-Determination Theory to Predict Physical Activity Intentions

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Jean-Michel Pelletier, Pier-Éric Chamberland, Samuel Morin-Carignan, Alexandre Castonguay, *Université du Québec à Trois-Rivières*

To better understand the processes that underlie motivated behavior, Hagger and Chatzisarantis (2009) have recently integrated self-determination and planned behavior theories. They suggest that the effects of autonomous motivation (AM) on intentions to engage in health behaviors should be mediated by attitudes and perceived behavioral control (PBC). In line with this proposition, the objectives of this study were to: 1) verify a model that examined the sequence between AM, attitudes, PBC, and intentions to practice physical activity (PA) and 2) examine the role of an additional variable on intentions to practice PA, namely barriers self-efficacy (BSE). The model posited that AM would be associated with more positive attitudes, higher PBC and BSE toward PA, which in turn, would be related to stronger intentions to practice PA during the next month. Participants were 178 individuals (N= 142 women, mean age = 31 years). Results of a path analysis support the proposed assumptions and findings are discussed with reference to the complementary aspects of both theories.

Poster 68. Teacher-Student Interpersonal Profile and Student Motivation in Competence Based Education

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Judith Gulikers, *Education and Competence Studies, Wageningen University and Research Center*

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Martin Mulder, *Education and Competence Studies, Wageningen University and Research Center*

Competence based education aims to decrease the number of students who quit their education programme due to students' loss motivation. Students' motivation are strongly related to how they perceive their teacher interpersonal behavior. This study was designed to investigate students' perception of teacher interpersonal behavior, its associations with students' learning motivation and its connection with competence-based education system. Data were gathered using Indonesian version of the Questionnaire on Teacher Student Interaction (QTI) and the Intrinsic Motivation Inventory (IMI) at the beginning of October 2012. About 1400 students from 15 agricultural vocational schools in Java island, Indonesia, participated in this study. This ongoing study aims to contribute to the current debate of the importance of competence based education, and to give an empirical evidence on the associations of teacher interpersonal and students' learning motivation in vocational education setting.

Poster 69. The Influence of Global Motivation and Perception of the Degree of Satisfaction of the Basic Psychological Needs in the Work Context

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In order to test whether work motivation is affected by global motivation or the perception of the degree of satisfaction of basic psychological needs in a work context, 428 Serbian workers, graduated of either technical high schools or university, were examined. GMS and BPNS at Work were translated into Serbian and adapted. The scale for measuring work motivation was designed. Regression analysis was applied. The results showed that work motivation is mostly under the influence of the eponymous tendency at global motivational level. Perception of the degree of satisfaction of the need for competence exerts the biggest influence on motivation, while the need for relatedness also seems important in collectively-oriented social environments. The need for autonomy can be repressed in the work context, since the need for competence is primary in the work domain. With age, however, the need for personal autonomy at work becomes increasingly significant.

Poster 70. Expecting Mothers' Experiences of their Own Mothers as Predictors of Preferred Resolution Style in Future Parent-Child Conflicts

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Inbal Kivenson Bar-On, *University of Haifa*

Yaniv Kanat-Maymon, *The Interdisciplinary Center Herzliya*

Pazit Gabay-Elgi, Moran Cohen-Illuz, Avi Assor, *Ben Gurion University of the Negev*

As part of a longitudinal study, 89 first-time expecting mothers reported their perceptions of their own mothers and responded to vignettes depicting parent-child conflicts. We hypothesized that expecting mothers' perception of their own mothers as basing their self-esteem on child achievements (child-contingent self-esteem) will predict expecting mothers' perception of their own mothers as using achievement-oriented conditional regard, which in turn will predict expecting mothers' preference for a controlling conflict-resolution style with their expected child. Analyses of the expecting mothers' responses support the hypothesized associations. These findings suggest that in addressing expecting mothers' emerging styles of resolving conflicts with their child, the teaching of an alternative autonomy-supportive style may not suffice. Thus, it may also be important to address the potential roots of the controlling style; namely, expecting mothers' experience of their own mothers as having child-contingent self-esteem and a consequent controlling orientation.

Poster 71. Does Parental Autonomy Support Influence Motivation for Diet and Exercise in Older Adolescents?

Shannon Morrison, *University of Alabama at Birmingham* ✉ samorris@uab.edu

Carol Dashiff, David Vance, *University of Alabama at Birmingham*

This study investigated the role of parental autonomy support on older adolescent self-determination influencing adolescent motivation for diet and exercise behaviors. Utilizing hierarchical multiple regression analyses, this cross-sectional study of 132 freshman and sophomore college students did not support that parental autonomy support is predictive of older adolescent's motivation for diet and exercise; however, study results did indicate that parental autonomy support remains highly influential on adolescent self-determination ($F(2, 130) = 22.21, p = .001$) during early college years and that adolescent self-determination is predictive of motivation for diet ($t = 2.21, p < .05$), but not exercise, in this population. Findings suggest that parental autonomy support may influence adolescent internalization of attitudes and behaviors during latter adolescence but may play a lessor role in motivation for specific health-related behaviors as the adolescent nears adulthood.

Poster 72. Women Drug Treatment Court Defendants: Self-Determination Theory-Based Constructs for HIV and Hepatitis C Treatment

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Geoffrey Williams, *University of Rochester School of Medicine*

Court-involved women are at higher risk for infectious diseases and inadequate treatment than the general population. Less than 40% of HIV or Hepatitis C-infected individuals are adequately treated. We aimed to assess planned constructs prior to conducting a motivation-based intervention targeting HIV and Hepatitis C-related health behavior among women in Drug Treatment Court (DTC). We recruited 79 women to study measures based in Self-Determination Theory (SDT). Measures of motivation for health behavior: autonomous self-regulation, autonomy support and perceived competence for healthcare were reliable and correlated (0.30-0.84) in the direction predicted by the SDT health behavior model. Autonomous self-regulation mediated the relation between autonomy support and perceived competence. Simultaneously we established that 80% wished to participate in a future study under described conditions. This study lays the foundation to examine whether a needs supportive treatment climate in DTC could motivate healthier behavior, potentially improving health.

Poster 73. The RISE of Structure: Indiana's Teacher Evaluation Measure Through the Lens of Self-Determination Theory

Jennifer Moss, *Purdue University* ✉ moss16@purdue.edu

Individual US states have begun to observe and evaluate classroom teachers' effectiveness to assist in determining pay, retention, and promotion, by using existing measures, or creating their own (US Department of Education, 2012). In the present study, I compare Indiana's measure, RISE (Indiana Department of Education, 2012), with teacher and student behaviors described in the self-determination theory literature. An observational Likert-type scale from Reeve, Jang, Carrell, Jeon, and Barch (2004) provided a research-based framework for a deductive content analysis. I coded over sixty-five effective and highly-effective behaviors from the RISE with the Reeve, et al., descriptors. More than twice as many RISE items fell in the "teacher-provided structure" and "student engagement" categories compared with the "teacher-provided autonomy support" and "teacher involvement" categories. Drawing from self-determination theory literature, I will discuss long and short term implications of the under-representation of autonomy support and involvement in teacher evaluation measures.

Poster 74. The Role of Self-Determination Theory in Coaching

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The current study aims to show the influence of career-coaching on the satisfaction of the three basic psychological needs for autonomy, competence and relatedness and the assessment of goals. Although coaching is based on a broad practical basis, there is a lack of research examining psychological theories that could explain the effects and effectiveness of coaching. Self-Determination Theory might present one useful theoretical framework for understanding the coaching process. In the current study participants take part in a career-coaching-program where goals set for the coaching are related to the coachee's future career. We examine whether a career-coaching serves not only to achieve one's own goals but also to satisfy the three basic psychological needs. Furthermore we aim to explore how an autonomy supportive coach and the intrinsic motivation of the coachee influence the attainment of goals.

Poster 75. Foreign Language Teachers' Beliefs About Motivation and Motivating Practices

Ana Munoz, *Universidad EAFIT* ✉ apmunoz@eafit.edu.co

In this poster presentation, I will describe a study aimed at identifying teachers' beliefs about motivation and motivating practices and how these relate to student autonomy, competence, and relatedness. The variables researched within each of these constructs included: 1) Autonomy: sharing objectives with students, explaining the utility of tasks, giving choices, and checking for understanding; 2) competence: Clarity of instructions, scaffolding, and descriptive feedback; 3) relatedness: Emotional scaffolding, confidence, respect, and active listening. To gather data, 65 teachers at a language center in Medellin, Colombia were surveyed, interviewed, and observed in class during 2010-2011. The results showed a lack of clarity in meaning and importance of the constructs and thus insufficient promotion of these in the classroom. There were also discrepancies between teachers' beliefs and practices, as well as institutional limitations to implement SDT as a motivational model. The pedagogical conclusions and implications of the study will also be discussed.

Poster 76. The PoEMA Study: A Randomized Controlled Trial of Antecedents, Mediators and Outcomes of Autonomy-Support in Fitness Clubs

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Eliana V Carraça, Pedro J. Teixeira, *Faculty of Human Kinetics, Technical University of Lisbon, Lisbon, Portugal*

Increasing adherence is a top priority in many health care settings, including fitness clubs. Within an SDT framework, the PoEMA trial (Promotion of Exercise Motivation and Autonomy) will explore antecedents of exercise professionals' motivation and strategies, and test the effectiveness of two training interventions for health professionals on outcomes such as motivation, well-being and exercise-related behavioral and physiological indicators. The study will be a cluster-randomized controlled trial evaluating the effects of two training programs, differing in length and format, on the qualitative experience of exercise-related behaviors and motivations by fitness professionals and their clients. Assessments will include standard SDT questionnaires and external observer ratings. Ecological Momentary Assessment will measure intra-individual fluctuation in motivational and other psychological variables. Moderation and mediation analyses will identify mechanisms and conditions underpinning the training programs' effectiveness, as well as their antecedents and main effects. This presentation will describe the study's goals, design, and methodology.

Poster 77. Maternal Disregulation of Negative Emotions as Predictor of Mothers' Difficulties in Provision of Structure

Orna Neuman, *Ben-Gurion University of the Negev* ✉ ornaneuman@gmail.com

Guy Roth, *Ben-Gurion University of the Negev*

Self-Determination Theory emphasizes the important role of parental provision of structure for children's sense of competence and well-being. However, little is known about antecedents of structure provision by parents. The current research tested the hypothesis that mothers' disregulation of negative emotions may undermine parental provision of structure, which in turn may predict adolescents' well-being. Thus, structure, which among other parental behaviors involves communication of expectations and constraints on behavior, was hypothesized to be affected by the parent's difficulties in regulating negative emotions. 221 dyads of mothers and adolescents participated in the study. The results support the hypothesis. SEM analysis indicated that maternal disregulation is negatively related to mothers' provision of structure which in turn predicts adolescents' well-being. Implications of these results will be discussed.

Poster 78. Perfectionism and Motivation

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Edward Deci, *University of Rochester*

Previous research suggested the tendency to strive for only the highest personal standards (termed adaptive perfectionism) was associated with positive outcomes, such as academic achievement, academic motivation, and adaptive learning (cf., Stoeber et al., 2006; Vansteenkiste et al., 2010). As shown in the current study (N=204), however, excessively high standards could be pursued with either a controlled motivation, where the individual was ego-involved with personal standards, or an autonomous motivation, where the individual pursued personal standards for self-endorsed reasons. The results showed that the pursuit of high personal standards predicted optimal outcomes (high positive affect, low negative affect) only when individuals experienced high autonomy with respect to their pursuits of those standards. The second study, which is an experiment, will be conducted to examine further how the interaction between individuals' motivation and their perfectionistic tendencies predicts positive and negative affect, basic psychological needs satisfaction, intrinsic motivation, and activity persistence.

Poster 79. Perfectionism and Coping skills: The Mediating Role of Self-Determination in Brazilian Soccer Athletes

Joao Ricardo Nickenig Vissoci, *Duke University/US and PUC Sao Paulo/BR* ✉ joaovissoci@gmail.com

Leonardo Oliveira, *PUC Sao Paulo/BR*

Jose Roberto Nascimento Junior, Lenamar Vieira, Jose Luiz Vieira, *State University of Maringa*

The aim of this study was to investigate the effect of perfectionism on the coping strategies of athletes mediated by self-determination. The subjects were 182 soccer players aged 12 to 18, who answered the instruments: Sport Motivation Scale, Athletic Coping Skills Inventory-28 and the Multidimensional Scale Perfectionism. The results found that the model was able to predict coping at 51%. Adjusted perfectionism predicted significantly and positively intrinsic motivation (0.518), extrinsic motivation (0.288) and sport confrontation index (0.325). However, maladaptive perfectionism only predicted extrinsic motivation (0.358) and negatively sport confrontation index (-0.182). Still, the effect mediated by self-determination becomes stronger and positive between intrinsic motivation and sport confrontation index (0.612) and negative between extrinsic motivation and sport confrontation index (-0.386). Thus self-determination strengthens the predictive effect of adaptive perfectionism on sports coping skills.

Poster 80. Mastery-Avoidance Goal Reconsideration: A Taiwanese perspective

Chiao-Lin Nien, *National Taiwan University of Physical Education and Sport* ✉ Chiaolinnien@gmail.com

The aims of the present study were to focus on the role of mastery-avoidance goal along with other achievement goals on mastery athletes including marathon, triathlon and other sport participants in Taiwan. According to the argument of multiple achievement goals (Elliot, 1999; Elliot and Conroy, 2003), those who were involved in sport would experience MAV goal more occasionally once they are no longer perform better than themselves. This is an ongoing cross-sectional design study which will collect a sample of mastery athletes to fulfilled this theoretical argument. Achievement goals as well as SDT motivation variables will be collected on several event venues and mean and standard deviation of achievement goals as well as SDT motivation variables will be compared across a certain period of time.

Poster 81. Structural Changes in Academic Motivation Among Japanese Junior High School Students

Takuma Nishimura, *University of Tsukuba* ✉ nishimu.takuma@gmail.com

Many previous research in a Western culture revealed that academic motivation, especially intrinsic motivation, decrease gradually in school. This study examined changes in academic autonomous and controlled motivation which were distinctive motivation on self-determination theory among Japanese junior high school students by using a latent curve model. 365 Japanese students (185 boys and 180 girls) completed the self-regulation questionnaire (Ryan & Connell, 1989) on academic activity in Japanese version (Nishimura, Kawamura & Sakurai, 2011) for each year at three times (7th, 8th and 9th). The results revealed that autonomous motivation decreased in the junior high school, while controlled motivation increased during the same period. In this result, we found that structure of academic motivation in student changes to controlled motivation from autonomous one. This is a unique finding because a prior study conducted in a Western culture suggested that both motivations decrease in school.

Poster 82. Taking an Implicit Approach to the Need for Competence

Jolene Van der Kaap-Deeder, *Ghent University* ✉ Jolene.Deeder@UGent.be
Maarten Vansteenkiste, Jan De Houwer, Bart Soenens, *Ghent University*

Within Self-Determination Theory (SDT; Deci & Ryan, 2000) there has been the general tendency to measure the satisfaction of and the desire for the three basic psychological needs explicitly; whereas in other need-theories (e.g., McClelland, 1961) research has focused on implicit account of needs. An implicit account to the needs can bring forth several important benefits, like less social desirability, and could contribute to a better understanding of these needs. The Implicit Association Test (IAT; Greenwald, McGhee, &

Schwartz, 1998) was adapted to measure implicit competence satisfaction and desire. The validation and the contribution of this implicit measure of competence was examined in two studies. In study 1, competence satisfaction was manipulated and this was followed by this implicit measure. In study 2 an known-groups approach, with groups differing in their perfectionism-profiles, was adopted to provide further validation of this measurement. Results will be discussed.

Poster 83. The Teacher-Pupil Relationship: Effects on Physical Education Teacher's Motivation and Well-being

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Lee Beaumont, *University of East Anglia*

Sophia Jowett, *Loughborough University*

The purpose of the study was to examine the influence of the quality of the teacher-pupil relationship on teachers' self-determined motivation and well-being in physical education (PE). Employing a cross-sectional research design, sixty PE teachers (male and female) from secondary schools in East England completed a multi-section questionnaire assessing the quality of the teacher-pupil relationship, self-determined motivation for teaching, positive and negative affect, efficacy and satisfaction with teaching. The questionnaire was completed with regards to one randomly selected pupil in their class. The data will be analysed using correlation and regression analyses to determine the relationship between the quality of the teacher-pupil relationship and teacher's self-determined motivation for teaching and indices of well-being. Implications for future research and for physical education teacher training and practice will be discussed.

Poster Session C

Room: Empire Hall

Poster 1. How Tired Are You? Examining the Link Between Daily Psychological Need Satisfaction and Daily Sleep Quality

Rachel Campbell, *Ghent University, Belgium* ✉

Maarten Vansteenkiste, *Ghent University, Belgium*

Anathasios Mouratidis, *University of Leuven, Belgium*

Joke Verstuyf, Bart Soenens, An Mariman, Dirk Vogelaers, *Ghent University, Belgium*

Grounded in BPNT, this study relied on a diary methodology to examine the association between day-to-day fluctuation in psychological need satisfaction and frustration and daily sleep patterns. Adult participants (N = 73, 28.8% males; Mean age = 43.08) as well as adolescent participants (N = 275, 49.8% males; Mean age = 16.51) kept a sleep diary reporting on their daily fatigue and need satisfaction at night and sleep quality (e.g., alertness) in the morning during 14 consecutive days. Multilevel analyses indicated that daily need satisfaction related more strongly to indicators of sleep quality than to indicators of sleep quantity. Specifically, need satisfaction and need frustration contributed, respectively, to daily fatigue, reasons for getting awake at night and morning alertness. These results suggest that the satisfaction of one's psychological needs is implicated in the degree to which one is able to get one's physical needs met.

Poster 2. Neural Basis Underlying Psychological Effects of Photo Taking

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Although positive psychological effect of photography has been demonstrated, its neural mechanism is unknown. Based on Self-Determination Theory (Deci 1975), we assumed two critical factors for the psychological effect: self-agency in exploration for the object to be photographed, and internal evaluation criteria for selecting the object. Four conditions in 2x2 factorial design composed of the two factors were included in behavioral and fMRI experiments. First, we revealed that depressive tendencies were reduced under the condition with self-agency in exploration and internal evaluation criteria (SI condition). In the fMRI experiment we investigated the brain activity of 26 healthy participants in four conditions. Improvement of depression tendency was positively correlated with activation in the right insula and negatively in the right middle frontal gyrus under the SI condition. Given the roles of two regions in self-agency/

awareness and inhibition, respectively, the results support our assumption of the psychological effect of photography.

Poster 3. Future Orientation and Depressive Symptoms in a Primary Care Sample: Vitality as a Mediator

Sheri Nsamenang, *East Tennessee State University*

Catherine Rowe, *East Tennessee State University*

Jameson Hirsch, *East Tennessee State University* ✉ hirsch@etsu.edu

Depression is a global public health burden, and often occurs and is treated within primary care settings; indeed, approximately 25% of primary care appointments focus on mental health. A growing body of research suggests that having an adaptive, future orientation contributes to well-being; however, the mechanism of action of this association is unknown. Thus, we examined vitality as a potential mediator of the relationship between future orientation and depressive symptoms. Our sample of 101 participants (71% female; 94% Caucasian; MeanAge=42.18, SD=12.83) were recruited from a rural, primary care clinic serving working and uninsured patients, and completed surveys assessing future orientation, subjective vitality and depressive symptoms. Supporting our hypothesis, we found that having a future orientation is associated with greater levels of subjective vitality which, in turn, is related to fewer depressive symptoms. Therapeutic encouragement of future orientation and vitality, perhaps through cognitive and motivational techniques, may reduce depression risk.

Poster 4. Present and Resilient: The Beneficial Effects of Mindfulness on Perceptions of General Health

Ryan E. O'Loughlin, *Nazareth College* ✉ rolough8@naz.edu

James W. Fryer, *State University of New York at Potsdam*

Previous literature (O'Loughlin & Zuckerman, 2008) has found mindfulness to be an important factor in people's perceptions of their physical health. The present short-term longitudinal study tested the hypothesis that mindfulness buffers perceptions of general health from the influence of temporary physical symptoms. At Time 1, participants completed the Mindful Attention Awareness Scale (Brown & Ryan, 2003). At Time 1 and Time 2 (approximately 6 weeks later), participants indicated the severity of current physical symptoms, and rated their general health on a scale from excellent to poor. Concurrent and longitudinal analyses looking at changes in perceptions of general health found significant interactive effects; simple slope analyses revealed that those high in mindfulness had a weaker relationship between symptoms and perceptions of general health than those low in mindfulness. Highly mindful individuals do not appear to base their sense of general health on the symptoms they are currently experiencing.

Poster 5. Pay and Justice: Their Role in the SDT-model Predicting Needs Satisfaction and Intrinsic Work Motivation

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Hallgeir Halvari, *Buskerud University College*

Jacques Forest, *Université du Québec à Montréal*

Tone Helletun Skarsten, Sissel Sævareid Ellefsen, *Buskerud University College*

The study investigates the relationships between pay, justice, and employee motivation in a self-determination perspective. Survey evidence from 252 banking employees in eastern Norway is analyzed. Preliminary correlation and regression analysis are conducted in PASW. Bootstrapping procedures and interaction analysis are used to investigate the relationships in the model. Regression analyses show strong relationships between the variables. Mediation effects are found for justice, pay satisfaction and need satisfaction. Interaction analyses uncover autonomy support as a moderator between pay deviation and justice, and between pay deviation and pay satisfaction. Pay deviation will harm the feeling of justice and pay satisfaction. However, introducing autonomy support will reduce these consequences and in turn increase need satisfaction and intrinsic motivation. The results support the impact of the SDT model related to pay in organizations. Structural equation modeling in LISREL is to be performed to analyze both the measurement models and the structural model.

Poster 6. The Functional Significance of Intrapersonal Events Mediates the Effects of Leadership on Need Satisfaction

Emily Oliver, *Aberystwyth University, U.K.* ✉ ejo@aber.ac.uk

Matt Smith, *University of Chichester, U.K.*

Cognitive evaluation theory (Deci & Ryan, 1985) posits that intrapersonal events vary in their functional significance, with informational versus controlling self-regulation resulting in positive and negative consequences respectively. Modelling inner speech as an intrapersonal event through which individuals process and internalize social messages, the present study examined whether self-talk mediated associations between coaches' leadership behaviours and athletes' need satisfaction. Following ethical approval, 406 university level athletes (M age = 20.17, s = 1.94) completed measures of transformational leadership, needs satisfaction, and a modified version of Oliver, Markland, and Hardy's (2010) functional significance in self-talk questionnaire (FSSQ), which included an amotivational subscale. Key findings were that the revised three-factor FSSQ demonstrated improved model fit, and that need satisfaction was positively predicted by informational self-talk, and negatively predicted by controlling and amotivational self-talk. Bootstrapped mediations indicated significant indirect effects of some transformational leadership behaviours on need satisfaction through self-talk, partially supporting the hypotheses.

Poster 7. My Eyes On Me: Need Fulfillment and Self-Presentation in Close Relationships

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Benjamin W. Hadden, C. Raymond Knee, *University of Houston*

Self-determination theory (Deci & Ryan, 2000) suggests that fulfillment of three basic psychological needs—autonomy, competence, and relatedness—creates a sense of self-worth that is not contingent upon a particular self-image. Lower ego-involvement is theorized, in turn, to lead to more authentic interactions with others (Hodgins & Knee, 2002). The present research tests this assertion across two types of close relationships. In Study 1, 177 participants reported how much a close friendship fulfills their basic psychological needs, as well as their levels of self-image goals in the friendship, and the extent to which they engage in self-presentation with their friend. In Study 2, another 177 participants answered the same questions about a romantic partner. Results across both studies suggest that need fulfillment is associated with less desire to build or maintain a specific self-image, and that this, in turn, predicts lower levels of self-presentation.

Poster 8. Associations Between Changes on the Level of Physical Activity and Changes on Psychological Need Satisfactions, Exercise Behavior

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Cláudia Minderico, *Universidade Lusófona / FMH-UTL*
Luís Sardinha, *FMH-UTL*

Several cross-sectional studies showed that regular physical activity (PA) is associated with higher values of autonomous motivation, basic psychological needs satisfaction (BPNS) and increased well-being. Less is known about how changes on the level of PA are associated with changes on the aforementioned variables, especially on children and adolescents. This study analysed a two-year cohort of the PESSOA study, gathering data from 696 students (12.1 ± 1.3 y, 47.9% girls) in Oeiras, Lisbon, Portugal. Self-reported measures of PA, BPNS and well-being were collected at baseline and two years after. An ANCOVA analysed differences between students that have improved, maintained or decreased PA, controlling for age, BMI and sex. Results showed that life satisfaction, quality of life, self-esteem and positive affect have increased on the students that improved or maintained their PA (all $p < .002$). All BPNS, introjected, identified and intrinsic motivation also have increased in these groups (all $p < .024$). As expected, amotivation ($p < .001$) and external regulation (n.s., $p = .081$) have increased on the students that have reduced their PA. This analysis showed that improving or

maintaining PA is associated with increased scores in important markers of motivation and well-being.

Poster 9. From Perfectionism to Self-Handicapping in Physical Education: The Mediating Roles of Achievement Goals and Self-Regulation

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Somayeh sadat Siadat, *Department of educational psychology, Faculty of psychology and education, University of Tehran, Iran*

This study examined to provide empirical support for the notion that adaptive and maladaptive perfectionists fundamentally differ in their reported achievement goals and academically-related outcomes. Participants were sport's university students in Tehran (N=512) who responded to a questionnaire measuring sub-dimensions of perfectionism in sport (Stoeber, Otto & Stoll, 2006), achievement goals (Conroy et al., 2003), exercise self-regulation (Ryan and Connell, 1989), and self-handicapping (Urda et al., 1998). Path analysis showed that all perfectionism dimensions had a unique contribution in the explanation of students' goal orientations and self-regulation. There was also evidence that achievement goals and self-regulation have mediating roles between perfectionism and self-handicapping. By showing how adaptive and maladaptive perfectionism patterns affect students' self-handicapping through their achievement goals and self-regulation, the present findings have important implications for a better understanding of determinants of students' motor behavior.

Poster 10. Short Term SDT Outcomes Resulting From an Adaptive Sport and Adventurous Training Programme in the Recovery of Wounded, Injured

Suzanne Peacock, *Leeds Metropolitan University, UK* ✉ S.Peacock@leedsmet.ac.uk

Although the SDT is well-established, its application to the recovery of wounded, injured and sick (WIS) UK Armed Forces personnel has yet to be investigated. Using inclusive sport and adventurous training activities as vehicles for personal development, the present study explored the impact of exposure to the newly-provided Battle Back Centre on need for autonomy, competence and relatedness. Participants (n=104) were UK WIS personnel attending a 5-day residential Multi-Activities Course, with delivery centred on experiential learning and reflection. Each completed the Basic Psychological Needs Scale in General on arrival and at course completion. Results from 12 courses indicate personnel experienced significant increases ($p < .0005$) in the three basic psychological needs; each scale score improved by 78%. These preliminary and on-going findings highlight not only the positive short-term role of inclusive sport and adventure activities in the recovery of WIS personnel but also the relevance of the SDT to this population.

Poster 11. Development and Validation of the Motivation to Discontinue Benzodiazepines Scale (MDBS)

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Isabelle Green-Demers, *University of Quebec in Outaouais*

Michel Prévaille, *University of Sherbrooke*

Our poster presentation concerns the development and validation of a measure designed to assess motivation to cease benzodiazepines use by the elderly: the Motivation to Discontinue Benzodiazepines Scale (MDBS). This instrument was conceptualized according to self-determination theory, and comprises five subscales that correspond to the motivational subtypes of this theoretical framework (extrinsic motivation by integrated, identified, introjected, external regulation, and amotivation). The MDBS was distributed to 399 consumers of benzodiazepines (157 men, 242 women; mean age = 74.62, S.D. = 5.59). Results revealed that the EMDB possessed sound psychometric properties. The MDBS' subscales displayed no positive correlations with social desirability. The factorial structure of the MDBS was documented by a confirmatory factor analysis. Convergent validity was examined by means of correlations with a variety of relevant psychological and behavioural constructs. The reliability of the subscales of the MDBS was satisfactory. Results are discussed in terms of measurement and clinical implications.

Poster 12. Who is the Right Therapist For You?: The Role of Mindfulness, Attachment, and Personality in Optimally Matching Psychotherapists

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James N. Masciale, *Connected Psychology, LLC*

Hidefusa Okabe, *Harvard University*

Laura K. Palmer, *Seton Hall University*

Current research shows that client preferences are an important moderating component of evidence-based practice in the field of clinical psychology. Moreover, client preferences have been shown to influence therapeutic alliance and therapy outcomes. While no one therapeutic modality has been shown to systematically be more effective than another, therapeutic alliance formed between client and therapist has repeatedly been shown to predict therapeutic efficacy. Prior work, though, has equated preferences with extrinsic qualities of the therapist or with comparing therapy to medication. As such, the influence of personality factors – in particular mindfulness and attachment style – on client preferences in psychotherapy has been hitherto unexplored. In this study, we identify personality traits that are associated with preference for one modality rather than another. Specifically, we show mindfulness and attachment style are important predictors of both preference for modality as well as perceived therapeutic alliance. As such, this work has practical applications for practicing psychologists, particularly with respect to referral and treatment planning.

Poster 13. Measuring Relative Autonomy, Interest, and Self-Efficacy Beliefs as Science Learning Outcomes from Citizen Science Participation

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Chris Niemiec, *University of Rochester*

Tina Phillips, *Cornell University*

As part of a project to develop instruments to measure learning outcomes from public participation in scientific research (PPSR) projects, also known as Citizen Science, new measures of relative autonomy, interest and self-efficacy for learning and doing science were administered together to groups of youth participants in a PPSR project. This poster will speak to the relationships between these constructs and the importance of respondent beliefs regarding whether or not they had participated in "real science" on pretest-posttest differences on these measures.

Poster 14. Face-to-Face with Others' Emotions: Dispositional Mindfulness Predicts Emotion Regulation in Social-Affective Contexts

Jordan Quaglia, *Virginia Commonwealth University* ✉ quagliaj@vcu.edu

Robert Goodman, *Virginia Commonwealth University*

Disruptions in social behavior have been theorized to play a role in the etiology and maintenance of mental disorders. Social situations present unique challenges for emotion regulation, since processing others' emotions could undermine intrapersonal emotion regulation. Here we explore whether mindfulness predicts greater emotion regulation when face-to-face with others' emotions. Participants completed questionnaires to assess dispositional mindfulness, and then an Emotional Go/No-Go Task involving fearful, neutral, and happy faces. After controlling for a mindfulness subscale previously shown to reflect maladaptive self-focus, higher mindfulness predicted less response time variability (RT variability) during conditions of high affective salience (AS). The relation between mindfulness and RT variability remained significant even after accounting for RT variability during the condition with the lowest AS, suggesting that differences reflect emotional, rather than attentional, regulation. Mindfulness may support "emotional autonomy" in social situations. We discuss the importance of an emotion regulation framework that accounts for social mechanisms.

Poster 15. Physical Activity and Quality of Life in Youngsters: A Mediation Analysis of the Role of PA Motivation and Peer Support

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Cláudia Minderico, Luís B Sardinha, *Faculdade de Motricidade Humana*

The purpose of this study was to analyze the potential role of physical activity (PA) motivation and perceptions of peer support in the association between PA and quality of life (QoL), after a 2-year program. Participants in the PESSOA program (N=926, 10-15 yr, 429 boys) self-reported their PA level, QoL, PA behaviour regulations and peer support, at baseline and at 2 years. In the total sample, introjected regulation thwarted the effect of PA on QoL (95%BCa CI=-.034 to -.006), while peer support (.029 to .089) and intrinsic regulation (.057 to .144) supported the positive effect of PA on QoL. Similar patterns were observed in boys, while in girls intrinsic regulation (.002 to .126) was the only mechanism that exerted significant effect. In boys, peer support and the fulfillment of more self-determined behaviour regulations explained the QoL effect of PA, while in girls intrinsic regulation was the only significant contributor.

Poster 16. Basic Psychological Needs: Concurrent and Longitudinal Associations in Outpatients with Depression

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Interpersonal and achievement motives are implicated in etiological models of depression; yet, basic psychological needs as conceptualized within Self-Determination Theory have yet to be thoroughly investigated in major depressive disorder (MDD). Ninety-two patients with MDD were randomized to receive cognitive behavioral therapy versus pharmacotherapy for depression. Patients completed the Hamilton Depression Rating Scale, Beck Depression Inventory-II, Dysfunctional Attitudes Scale, Automatic Thoughts Questionnaire, and Cognitive Errors Questionnaire. A subset completed the Balanced Measure of Psychological Needs before (n=41) and after treatment (n=45). Need satisfaction was concurrently associated with self-reported depression severity. Relatedness and autonomy satisfaction were concurrently associated with negative automatic thoughts, and competence satisfaction with positive automatic thoughts. Further, relatedness satisfaction was associated with a range of cognitive errors. Autonomy satisfaction was longitudinally associated with depression severity, and relatedness and competence satisfaction with positive automatic thoughts. These results demonstrate the clinical relevance and utility of basic psychological needs in depression.

Poster 17. Assessment of Self-Determination Needs in Women of Color Engaging in HIV Care

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Lynne Messer, *Portland State University*

Andrea Blickman, Katya Roytburd, *University of North Carolina at Chapel Hill*

Heather Parnell, Kristen Sullivan, Miriam Berger, *Duke University*

As part of an initiative to promote entry and engagement in HIV care, we explored the measurement of self-determination needs of women of color living with HIV. Mean scores and Chronbach alpha correlation coefficients for are reported. Autonomy was assessed by the Basic Needs Satisfaction (24, 0.65) and Treatment self-regulation questionnaire (101, 0.88); Relatedness assessed by Basic Needs Satisfaction (26, 0.74) and Patient Reactions Assessment (84, 0.91); and Competency assessed by Basic Needs Satisfaction (19, 0.62) and Perceived health Competency (31, 0.74). Correlation between the two measure was poor for autonomy (corr: -0.118) and relatedness (corr: 0.184) and moderate for competency (0.57). Assessment of the core needs of self-determination may need the development of specific tools to use with women of color or when patients are engaging in HIV care or both.

Poster 18. An Autonomy Support Motivation Intervention with PreService Teachers: Do the Strategies that They Intend to Use Change?

Amanda Radil, *University of Alberta* ✉ radil@ualberta.ca

Lia Daniels, Amanda Wagner, *University of Alberta*

Self-Determination Theory posits that autonomy is one of three psychological needs whose fulfillment leads to an optimally motivating learning environment. A quasi-experimental design was used to see if the motivational strategies that preservice teachers intended to use in their classrooms changed after they were presented with an evidence-based autonomy-support motivation intervention. A mixed randomized-repeated measures ANOVA revealed that the strategies change significantly in comparison to a control group, with both a main effect of time ($F(1,60) = 13.84, p > .001$) and a significant interaction effect ($F(1,60) = 8.07, p = .01$). Analysis revealed that preservice teachers in both groups endorsed autonomy-supportive motivational strategies at similar levels before the intervention; those who took part in the intervention endorsed significantly more autonomy-supportive strategies after the intervention than the control group. The effects of novelty and usefulness of content were explored. Implications, suggestions for further research and future applications are discussed.

Poster 19. Academic Coping and Engagement in Urban Youth: Testing a Motivational Model

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Wendy Grolnick, *Clark University*

There is little consensus on how to conceptualize coping within the academic domain and even less is known about the contexts that support academic coping. Using Self-Determination Theory (Deci & Ryan, 1986) this study address how and why autonomy supportive, structured and involved parents and teachers affect children's response to academic setbacks by exploring motivational resources (self-regulation, perceived competence and control, security) that may mediate the relationship between parent and teacher resources and coping. Further, we examine student's appraisal of failure, as either a threat or challenge to their well-being, and examine whether students need supportive contexts predict their appraisal of failure in addition to their specific coping responses. The study includes urban youth, often at risk for academic disengagement (Hamack, 1986) and targets sixth graders. We test the following models:

Autonomy Support-->Self-Regulation-->Threat vs. Challenge to Needs-->Coping-->Engagement

Structure-->Perceived Competence and Control-->Threat vs. Challenge to Needs-->Coping-->Engagement

Involvement-->Security-->Threat vs. Challenge to Need-->Coping-->Engagement

Poster 20. The Impact of Need Satisfying Memories on Romantic Relationships

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Frederick L. Philippe, *University of Quebec at Montreal*

The satisfaction of the three basic psychological needs is a key component of people's life experiences. When experiences are encoded as episodic memories, they retain the associated level of need satisfaction initially experienced. Therefore, when an episodic memory is activated, the level of need satisfaction linked to that memory influences the person's attitudes and behavior in the present moment (Philippe et al., 2012). Within romantic relationships, such a change in a partner's attitude should not only affect a person's perceptions of relationship quality but also the perceptions of his or her partner. Results of 73 dyads show that need satisfaction in a couple-related episodic memory of one partner predicted the relationship quality of both members of the couple (β s .27 and .21, $ps < .05$), over and above need satisfaction in the relationship in general. The interactive nature of memories will be discussed in line with theories on need satisfaction.

Poster 21. Relationship Between Client Self-Determination, Therapeutic Alliance and Mental Health Recovery

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This study incorporated a Self-Determination Theory framework to examine the relationship among client self-determination (autonomy, competence, relatedness) and therapeutic alliance, in relation to mental health recovery. The subjects (N=146) were predominantly African/Caribbean American adults with mild to serious mental illness. Through a series of correlations, t-tests, and hierarchical multiple regression analyses, the results supported a strong relationship between client self-determination and mental health recovery ($r=.511$; $p= <.001$); client self-determination accounted for 30.2 percent of the variance in mental health recovery. Another important finding was that therapeutic alliance was only very weakly related to mental health recovery ($r=.180$; $p= <.031$). And regardless of whether one examined high or low perception of therapeutic alliance, the level of self-determination was positively and significantly related to the level of mental health recovery. In the final analysis client self-determination, Christianity and gender (women more than men) accounted for 40.2 percent of the variance in mental health recovery in this study.

Poster 22. Immersion Domains Related to a Better Attention Control in a Video Game Rehabilitation Protocol

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João Vissoci, *Duke University*

Leandro Malloy-Diniz, *Universidade Federal de Minas Gerais*

Ricardo Pietrobon, *Duke University*

Orlando Bueno, *Universidade Federal de São Paulo*

Our main objective was to investigate which immersion domain is related to a better performance in a video game created to train attention control to adolescents with ADHD. Game behavioral and immersion data was collected through Mechanical Turk. Players were exposed to our game and subsequently we evaluated the five immersion constructs proposed by Jennett et al. (2008). The initial study evaluated 9 subjects aged from 20 to 46 years. A Spearman's Rank Order correlation was run to determine the relationship between Immersion and the three behavior measures (correct hits, omission and commission). There was a positive correlation between correct hits gain throughout the game and real world dissociation and control, ($r_s(9) = .823$, $p = .023$ and $r_s(9) = .923$, $p = .003$). Our data are still preliminary, however this strong result suggests that the more disconnected from environment stimuli you got and the more inside the virtual world you are, your behavioral performance enhance, producing more correct responses.

Poster 23. Determinants of Need Supportive Coaching Behavior

Meredith Rocchi, *University of Ottawa* ✉ mrocc029@uottawa.ca

Research in Self-Determination Theory has shown that when coaches engage in need-supportive interpersonal behaviours (support autonomy, competence, and relatedness), their athletes experience a subsequent increase in motivation for sport. The objectives of the present studies are to determine which environmental factors are related to coaches' need-supportive interpersonal behaviours (study 1) and to determine whether these behaviours are related to athletes' reported perceptions of the behaviour and their motivation for sport (study 2). Structural equation model results support a model where administrative pressure and perceived athlete motivation is related to coaches' self-reported use of need-supportive behaviours in study 1. Hierarchical linear modeling results found that the self-reported interpersonal coaching behaviours were perceived by their athletes and related to an increase in athlete motivation for sport study 2. Future implications for coach training are discussed.

Poster 24. Are Classrooms Meeting the Psychological Needs of Children with ADHD Symptoms? A Self-Determination Theory Perspective

Maria Rogers, *University of Ottawa* ✉ maria.rogers@uottawa.ca

Rosemary Tannock, *University of Toronto*

This exploratory study used a Self-Determination framework to examine the perceptions of the classroom environment and the academic motivation of children with and without Attention-Deficit/Hyperactivity Disorder (ADHD). Thirty-six children with clinically significant levels of ADHD symptoms and thirty-eight children with no ADHD symptoms between the ages of 6 and 10 years participated in this study. All children completed semi-structured interviews about their feelings of competence, relatedness to their teacher, and perceptions of autonomy-support in the classroom. They were also asked about their motivation regulatory style towards school and learning. Results indicated that children with symptoms of ADHD reported significantly lower feelings of competence, autonomy, and relatedness to their teachers compared to the children without ADHD symptoms. Children with ADHD symptoms reported significantly more amotivation and external forms of motivation compared to children without ADHD symptoms, who reported more internal motivation. These results demonstrate the negative psychological implications of ADHD in the school setting.

Poster 25. Coming Out as LGB: Impacts of Relational Support Following Identity Disclosure

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Netta Weinstein, *University of Essex*

Research, theory, and individual experiences regarding disclosure of a lesbian, gay, or bisexual (LGB) identity indicate that coming out is typically a stressful, ongoing, and relationally important process. This study examines the impact of first coming-out experiences on current outness and wellbeing. LGB individuals (N=108 Mage=27.94, SD=10.23) reported on their first disclosure experience and their experience coming-out to mother, father, and best friend. Receiving a negative response from first person, mother, father, or best friend led to decreased perceived autonomy in that relationship after controlling for autonomy support prior to coming out. Receiving a positive response from first person, mother, and best friend (but not father) predicted greater perceived autonomy support in the relevant relationship. As well, receiving a negative response from disclosure targets produced significant well-being deficits. Receiving a negative response from one's father was particularly harmful increasing depression ($\beta = .417, p = .01$) and decreasing self-esteem ($\beta = -.505, p = .003$).

Poster 26. Development of a Questionnaire to Assess the Basic Psychological Needs Support in Physical Education Classes

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Tomas Garcia-Calvo, Pedro Antonio Sanchez-Miguel, Diana Amado Alonso, *University Of Extremadura (Spain)*

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Self-Determination Theory (SDT) has been widely used to explain the motivation in physical education (PE) context. Grounded on this theoretical framework, this work aims to provide an instrument to assess perception of pupils about their teachers' basic psychological needs (BPN) support in physical education classes. Specifically, this study shows the results obtained in the Confirmatory Factorial Analysis (CFA) with Spanish (2,227 pupils; Mage = 13.97; DT = .79) and Portuguese (445 pupils; Mage = 13.52; DT = .62) sample, and also presents the English version of the scale (QBPNS: Questionnaire of Basic Psychological Needs Support). Results emphasized a new instrument to measure student's perception of autonomy, competence, and relatedness support of PE teachers, showing a scale to examine the multifaceted environment that influences on motivational processes developed by pupils during PE classes.

Poster 27. The Motivation of Undergraduate Students of Music Education in Brazil

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Liane Hentschke, *Universidade Federal do Rio Grande do Sul*

Motivation has been widely discussed into the academic context of music education undergraduate courses by generate direct implications on the quality of the students' educational development and their future relations with the career. Music as a subject became compulsory in basic schools in 2012 in Brazil and this requirement changes the perspectives of undergraduate courses of music education in our country. This research aims to investigate the motivation of undergraduate students of music education in Brazil and the factors related to it. Among them, it could be verified variants of personal characterization, the intention to conclude studies and continue in the major area. The data has been obtained through a self-report questionnaire with Likert scaling questions and analyzed according to the Self-Determination Theory.

Poster 28. Individual Differences in Dissonance Arousal and Intentions to Change Counter-Attitudinal Behavior in the Environmental Domain

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Karine J. Lavergne, Luc G. Pelletier, *University of Ottawa*

People are frequently exposed to information that makes them aware of the discrepancies between their attitudes and the behaviors they display. According to cognitive dissonance theory the discrepancy creates a state of discomfort and a negative affect that motivate attitude or behavior change. However, we know very little about how people react to these discrepancies in a domain like the environment and how motivation resulting from a discrepancy leads to stronger pro-environmental attitudes, behavior change, and more frequent behavior. In a study conducted with 213 participants we examined whether autonomous and controlled motivations acted as distal motives affecting the magnitude of discrepancy and the amount of psychological discomfort (i.e. individual differences in dissonance arousal). We hypothesized that autonomous (versus controlled) motivation would arouse more cognitive dissonance, because it implies greater attitudinal importance, and lead to stronger intentions to change behavior. The analysis generally supported our hypothesis.

Poster 29. Zen and the Art of Wellness at Work: Mindfulness, Work Climate, and Psychological Need Satisfaction in Employee Well-being

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Richard Ryan, Christopher Niemiec, Geoffrey Williams, *University of Rochester*

The present study investigates how both mindfulness and managerial autonomy support affect well-being at the workplace. Two hundred and fifty nine working adults were

recruited from Mturk market place, and were assessed for individual differences in mindfulness, as well as the autonomy supportive versus controlling style of their management at work. Also assessed were multiple indicators of employee wellness and work-related adjustment, including burnout and turnover intention. Results showed that both mindfulness and autonomy support had direct and positive relations with employee well-being and work outcomes. Furthermore, less autonomy supportive work climates were associated with employee's basic psychological need thwarting, that is, their experience of suppressed autonomy, competence and relatedness at work. In turn, need thwarting was associated with lower wellness and work adjustment. Yet these negative indirect effects were moderated by mindfulness. Specifically people higher in mindfulness were less likely to feel need thwarted, even in unsupportive managerial environments. Thus mindfulness appears to act as a protective factor for employees' wellness in controlling work environments. These results highlight not only mindfulness as a potential pathway to wellness at the workplace, but also the relevance of autonomy support in work environments in promoting employee's well-being.

Poster 30. SWOT Analysis of PlantingScience Program Using Self-Determination Theory

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Carol L. Stuessy, *Texas A&M University*

PlantingScience is a K-12 curriculum developed by the Botanical Society of America. Students in the classroom and scientists in the field cooperate in a genuine scientific investigation utilizing live plants through an online mentorship. Reports from students, scientists, and teachers indicate an increase in student enthusiasm for science as a result of PlantingScience. In this study, a SWOT analysis was conducted on PlantingScience using Self-Determination Theory as a theoretical lens. SWOT (strengths, weaknesses, opportunities, threats) analysis is a strategic planning method used to identify favorable and unfavorable internal and external factors related to a program. Data from online discourse between scientists and students, teacher interviews, teacher-scientist focus group conversations, and classroom observations were analyzed and categorized based upon their relationship to autonomy, competence, and relatedness. The strengths, weaknesses, opportunities, and threats as related to these three psychological needs were categorized and reported in an effort to enhance the PlantingScience program.

Poster 31. Autonomy-Supportive Teacher Supervision

Chris Scudella, *Cardinal Stritch University* ✉ cscud921@gmail.com

This dissertation will examine the effects of veteran teachers' intrinsic motivation when supervised by administrators employing autonomy-supportive teacher supervision. The purpose of this study is to research the effects of veteran teachers' intrinsic motivation for continued professional growth when administrators provide structure and autonomy-support to their teacher supervision. Administrators classified as structured will be

characterized by three categories in their supervision: (a) present clear, understandable, explicit, and detailed directions; (b) offer a program of action to guide teachers' ongoing instruction; and (c) offer constructive feedback on how teachers can gain control over valued outcomes. Autonomy-supportive principals will be characterized by three categories in their supervision: (a) nurture inner motivational resources, (b) rely on noncontrolling informational language, and (c) acknowledge the teachers' perspective and feelings. It will be determined if veteran teachers are more likely to report self-motivation when principals demonstrate these characteristics during large group meetings or during individual conferences.

Poster 32. The Application of Self Determination Theory to Employee Motivation in Irish Workplaces

John Sexton, *Dublin Business School* ✉ john.sexton@systemdynamics.ie

The vast majority of work organisations still equate motivation with money and other extrinsic rewards, however, using such traditional techniques can be counter-productive and unnecessarily costly. This study tests a variant of the 'SDT research agenda' suggested by Gagne & Deci (2005) within two Irish organisations, one public and one private, in order to understand Irish attitudes to motivation and engagement, and help direct future action to improve employee performance, engagement and satisfaction. The study assesses the relationship between Autonomous Motivation, as defined by SDT, and Employee Job Satisfaction, Performance, Organisation Commitment and Well-Being, and seeks to understand how satisfaction of employee Psychological Needs helps explain the relationships and considers the effect of an employee's Organisation Type, Age, Gender, Causality Orientation and Perceived Autonomy on the strength of the relationships.

Poster 33. The Relations of Emotional Integration and Emotional Avoidance with Well-Being and Relationship Quality

Noa Shane, *Ben-Gurion University of the Negev* ✉ noa328@gmail.com

Past research demonstrated the advantage of reappraisal (i.e., nonemotionally construing potentially emotion-eliciting situations) over suppression of emotions (Gross & John, 2003). However, reappraisal may result in experiential avoidance when motivated by unwillingness to risk experiencing negative emotions associated with initial appraisal. Hence, the present study compares the socio-emotional outcomes of reappraisal and integrative emotion regulation. The latter, contrary to emotional avoidance, involves a differentiated awareness of one's emotional states and utilization of this awareness to regulate behavior volitionally (Ryan et al., 2006). Based on self-determination theory, a correlational study, based on a sample of 110 college students, was conducted to test the hypotheses that integrative emotion regulation would be a better predictor of well-being and quality of relationships in comparison to reappraisal and suppression. Results support the hypotheses. Implications of these findings will be discussed.

Poster 34. Conditional Positive regard is Harmful also When Defined and Assessed in Ways that are Consistent with Reinforcement Theories

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Yaniv Kanat-Maymon, Gaby Jhonson, Eynat Jakira, Avi Assor, *Ben Gurion University of The Negev, Israel*

In past studies we assessed parental conditional positive regard (PCPR) by examining the extent to which parents give more affection than usual when the child complies with their expectations. However, traditional reinforcement notions do not really claim that following child's compliance parents should give more affection relative to some general baseline. Rather, they recommend to show more affection when children comply than when they do not comply. To address this issue, we devised a new measure in which participants are asked to indicate (on a nine point scale) the extent to which a parent responded to them warmly versus coldly following: (1) Compliance with parents' expectations, and (2) Breach of parents' expectations. Results of regression analyses, difference score analyses, and construct validation procedures showed that PCPR predicts negative correlates also when assessed in methods that are more consistent with reinforcement theories.

Poster 35. Parental Intrinsic Value Demonstration Predicts Subjective Well-Being of Chinese College Students through the Mediation of Autonomou

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Parental Intrinsic Value Demonstration (IVD) refers to the parenting practice in which parents not only enact valued behavior but also enjoy it and identify with it. In this study, structural equation modeling results using a Chinese college student sample (n=89) confirmed the hypothesis that IVD predicts higher subjective well-being through the full mediation of the Index of Autonomous Functioning (Weinstein et al., 2012). Importantly, these relations emerged also after controlling for basic autonomy supportive parenting practices assessed by the POPS (Grolnick et al., 1991). These findings support the view that parents' IVD helps children form authentic, direction-giving values, which then enhance their autonomous functioning and well-being. The results also suggest that parents who wish to enhance autonomous functioning and well-being in their children would do well if they engage in IVD in addition to basic autonomy supportive practices such as taking the child perspective, minimizing control and allowing choice.

Poster 36. To Be Self-Determined, or Not To Be, Culture is the Question: Towards Better Understanding of Generalizability of Self-Determination Theory

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The researchers provide an analytical framework for studying whether autonomy, competence, and relatedness are cross-cultural universal psychological needs according to SDT. Also we examined some outcomes related with being self-determined. Two cross-cultural studies of students from University of Tehran (N=1528) were conducted in which students responded to a survey measuring sub-dimensions of Hofstede's cultural dimensions (1980), perceptions of parents (Rabbins, 1994), basic psychological needs scale (Deci & Ryan, 2000), self-determination scale (Sheldon et al., 1996), aspirations (Kasser & Ryan, 1996), and subjective vitality (Ryan and Frederick, 1997). In the first study, structural equation modeling analysis revealed how Iranians' culture and parenting styles affect students' psychological needs and self-determination. With the same analysis method, the results of second study showed how much self-determined students experience vitality in their lives through aspirations. The present findings have significant implications for self-determination theory which are discussed by highlighting the role of culture.

Poster 37. Personal Strivings and Manifestation of Self-Determination in Every Day Life of Young Polish adults

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The poster will present outcomes of research conducted in SDT paradigm in a group of 60 Poles aged 20-30. The main aim of the research is to get to know the motives which young Poles attribute to their personal goals and compare them with the motives which lie behind their everyday activity. This is important for advancing the understanding of self-regulation mechanisms and determining the relationship between a declared level of self-determination and real motivation. The research also aims to enrich our knowledge of the regulative function of young adults' long-term aims by investigating the relationship between their goals and everyday activity. The research is a part of a bigger project on the determinants and manifestations of autonomy and intrinsic motivation and their significance for young people's perception of the future. The research methods include, among others, the Polish adaptation of Emmons' Personal Striving Assessment (1986) and the Internet diary method inspired by Sheldon, Ryan and Reis's research (1996).

Poster 38. Predicting Smoking Relapse: A Diary Study Into the Role of Autonomous Self-Regulation, Perceived Competence & Medication Taking

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Christopher P. Niemiec, *University of Rochester, Department of Clinical and Social Sciences in Psychology*

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According to the Self-Determination Theory Model of Health Behavior Change, decreases in autonomous self-regulation and perceived competence for smoking cessation foreshadow relapses to smoking. The present study examined this hypothesis using ecological momentary assessment data. Participants (N=238) used a hand-held computer for one month to report their autonomous self-regulation, perceived competence, and smoking behavior. Using survival analyses, we will identify 1) whether reductions in day-to-day autonomous self-regulation and perceived competence for smoking cessation lead to relapse to smoking after an initial quit attempt and 2) whether reductions in autonomous self-regulation for medication taking lead to less medication taking and subsequent relapse to smoking. Results from these analyses will be available by the end of February. The results will provide a better understanding of the process of smoking relapse, which can be used to improve tobacco dependence treatment and increase smoking cessation rates.

Poster 39. Autonomy Support and Key Clinical Outcomes in Long Term Care

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This study examined the impact of Autonomy-Supportive leadership among Administrators (Admin's) and Directors of Nursing (DoN's) on key clinical outcomes in Signature Healthcare's 74 nursing homes. Admin's and DoN's were given a modified Problems at Work questionnaire to assess overall levels of autonomy-supportiveness as well as subscores on each of the instrument's four subscales (High Autonomy, Moderate Autonomy, Moderate Control, High Control). These scores were then correlated to several corporate datapoints, including Gallup G-12 Engagement, Turnover, Retention, Incidence of Falls, and Incidence of High Risk Pressure Ulcers. Final results included only those Admin's and DoN's with a tenure of more than 12 months in their facility. Preliminary results suggest a high correlation ($r > .82$) between High Control orientations and increased incidence of Falls and moderate correlation between High Control orientations and increased incidence of Pressure Ulcers. Correlations were also found between levels of Autonomy Support and both Turnover and Retention. Autonomy

Supportiveness appears to be a better predictor of key corporate metrics than Gallup G-12 Engagement scores.

Poster 40. Comparing the Objective Motivational Climate Created by Grassroots Football Coaches in England, Greece and France

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Joan Duda, *School of Sport and Exercise Sciences, The University of Birmingham, UK*

Nik Digel, *Department of Physical Education*

The purpose of this study, grounded in a self-determination theory and achievement goal theory framework, was to investigate to what extent differences in the objectively observed coach-created motivational climate was a function of the coaches' country (i.e., England, Greece and France). Fifty-seven coaches from England (n=18), Greece (n=22) and France (n=17) were selected to take part in the study. Each coach was videotaped during one complete training session using a digital camcorder and microphone. The Multidimensional Motivational Climate Observation System (MMCOS) was used to code the coach created motivational climate in terms of need-supportive and need-thwarting dimensions. Results showed that (1) coaches were observed to emphasise a more need-supportive environment than need thwarting one (i.e., 69.9% and 30.1%, respectively), and (2) although coaches' interpersonal styles varied significantly across countries, the general pattern of the coach-created environment observed in the three countries had a similar profile.

Poster 41. The Role of Intrinsic and Extrinsic Motivation to Retention and Persistence Rates of Summer Bridge Community College Students

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Retention rates for community college students are a matter of concern. Currently, California community colleges are working towards implementing intervention strategies that can positively impact student persistence. Summer Bridge programs are an emerging intervention strategy that applies important elements found in Deci and Ryan's (1985) Self-Determination Theory which focuses on intrinsic and extrinsic motivation. Baker stated "Extrinsic and intrinsic motivational processes are not necessarily antagonistic; rather it is the extent to which behaviors are self-determined." This was also supported by Reiss (2012) who stated "All human motivation arises from an intrinsic

source. Moreover, extrinsic motivation (a means to an end) arises from the pursuit of the intrinsically valued goal it produces. This project surveys students who participated in three Summer Bridge programs in order to examine the intrinsic and extrinsic motivational factors that students self-report as being influential in their completing the Summer Bridge programs and persisting with their education.

Poster 42. “I Am Autonomous”–Experiencing Autonomy in a Freedom Threatening Situation Leads to a Better Performance

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According to self-determination theory, people with a strong autonomy orientation experience a threatening situation as a challenge and therefore remain open, flexible and decide intentionally how to react to the threat. Proceeding from this assumption, the present study (N = 202) combined self-determination and reactance theory in order to investigate whether an autonomy prime in combination with a threat to one’s freedom can lead to a better performance in a subsequent crossword puzzle. The results indicated that individuals who were primed with autonomy orientation before they experienced a freedom threatening situation, not only performed better in a crossword puzzle but also showed more intrinsic motivation, more perceived competence and less experienced pressure. Accordingly, when exposed to a reactance situation, the activation and therefore awareness of being still autonomous could lead one to experience a feeling of being challenged and thereby improving performance.

Poster 43. Motivational Processes Among Youth Elite Athletes: A Longitudinal Perspective

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According to Self-Determination Theory (SDT), athletes’ need satisfaction and self-determined motivation is largely affected by their coach’s interpersonal style. More self-determined types of motivation have in turn been related to several positive outcomes, such as better performance and well-being. However, few studies have examined how these variables change over time among athletes in competitive sport settings. Therefore, the purpose of this research project is to examine how perceived interpersonal style from the coach, need satisfaction, self-determined motivation, and well-being change over the course of a season among youth elite athletes engaged in individual sports (cross-country skiing, biathlon, alpine skiing). These variables were measured at pre-, mid-, and late-season in a sample of Swedish youth elite athletes (age 16-20) enrolled at Swedish youth sport academies. The results are currently being

analyzed and results from this project will be presented and discussed in light of previous SDT research in competitive sport settings.

Poster 44. Personal Goals and Basic Need Satisfaction During Simulated Flight to Mars

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The study presents changes in crewmembers' personal goals and in their subjectively perceived satisfaction of basic psychological needs of autonomy, competence, and relatedness during 520-days isolation project MARS-500. The 6 crewmembers reviewed their personal goals (Cox, Klinger, 2004) and satisfaction of basic needs (Gagné, 2003) on 3 months periods. The ratings of personal goals show cognitive and emotional engagement in personal issues inside and outside the flight. The limited environment induced changes in crewmembers' basic psychological needs (e.g. increase of autonomy and competence in some crewmembers during the first part of mission, and decrease in relatedness, autonomy and competence during the return part of the flight). The patterns of personal goals and basic psychological needs satisfaction provided important additional information for understanding crewmembers' overall motivational adjustment during the mission.

Poster 45. The Relation Between Goal Contents and Career Decision Activities in Japanese College Students

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Shigeo Sakurai, *Kochi University of Technology*

This study measures aspirations of college students based on Goal Contents Theory, which is an aspect of Self-determination Theory, and investigates the relation between future goals and career decision activities. The results indicate that intrinsic goals are positively related to adaptive career decisions. That is, intrinsic goals appear to foster and strengthen concrete career images, and lead to more mature career decisions that stem from identity and confidence towards one's life. In contrast, the results concerning extrinsic goals were ambivalent. Thus, on the one hand, the results suggest that extrinsic goals are not related to career interests and mature career decisions, while, on the other hand, extrinsic goals are also related to confidence towards one's life. The significances of these results are discussed.

Poster 46. Daily Motivation, Different Types of Job Demands and Well-Being Among Secondary School Teachers

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Arnold A.B. Bakker, Wido G.M. Oerlemans, *Erasmus University Rotterdam*

The main aim of this study was to investigate the role of self-concordant job motivation in the relationship between different types of job demands, namely, job hindrances and job challenges, and daily well-being indicators among secondary school teachers. On the basis of self-determination theory, we hypothesized that teachers' daily job self-concordant motivation buffers the negative impact of hindrance job demands, whilst enhancing well-being when combined with challenging job demands on a within-person level. In order to test our hypotheses, we employed a diary methodology to investigate self-concordance, job demands, and well-being during specific work-related tasks among teachers. Our findings add to the literature on motivation and well-being by showing that the levels of self-concordance, job demands and well-being experienced by teachers vary greatly on a within-person level. Theoretical and practical implications of the findings to enhance teachers' well-being are discussed.

Poster 47. Causality Orientations and Psychological Needs Satisfaction: Model Invariance Across Mindfulness Levels

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Self-determination theory identifies three psychological needs of competence, autonomy, and relatedness. We proposed a model where causality orientations, which guide individuals' interpretations of the source of their actions, are related to each need satisfaction individually. Additionally, we studied the role of mindfulness as the awareness of on-going events may help to guide behaviors which are congruent with needs. Data were collected from 174 participants. Structural equation modeling analyses showed that the model fitted the data well (CFI=.94; IFI=.95; RMSEA=.05). As theoretically expected, autonomy orientation positively predicted competence, autonomy, and relatedness need satisfaction ($p < .05$). Contrary to expectations, control orientation did not significantly predict competence and autonomy need satisfaction, and predicted only relatedness need satisfaction negatively ($p < .05$). Multi-sample analysis showed that the model was invariant across the high ($n=59$) and low ($n=63$) mindfulness groups. The roles of causality orientations and mindfulness in individual need satisfaction are discussed.

Poster 48. The Relationship Between Work Motivation and Work Values for Women's Junior College Students in Japan

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This study investigated the relationships between work motivation and work values for women's junior college students in Japan. Students belonging in two different departments were compared: the department of nursing and the department of elementary school education. Motivation aiming to make a social contribution was considered within the framework of self-determination theory. As a result, although intrinsic motivation and social contribution motivation showed high correlation, they were extracted as different factors. These motivation was related with a sense of values which thinks self-growth and the influence to work as important in working. Moreover, the students in the department of nursing showed higher motivation to social contribution than the students in the department of elementary school education. Even though students in both departments have some clear future vision, the difference in their work motivation was found.

Poster 49. Maternal and Paternal Involvement, Autonomy Support and Warmth: Predictors of Adolescence Self-Esteem

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The aim of this study was to investigate the relationship between maternal and father's perceived parenting styles (involvement, autonomy-support, and warmth) and dimensions of self-esteem in High school students. In this study 352(205 males and 147 females) Junior high school students were selected with Cluster sampling and completed 2 scales: Cooper Smith's self-esteem Scale, and Perception of Parents Scale. Multiple Regression analyses indicated that maternal and father's parenting styles predicted individual, academic, family and general self-esteem. There are no significant differences between male and female in dimensions of self-esteem and general self-esteem. The effects of maternal and father's parenting styles were different on males' and females' self-esteem. In sum, results of this study indicated that when parents support children's autonomy, are involved and warm, children are most likely to display higher level in dimensions of self esteem.

Poster 50. The Moderating Role of Autonomous Motivation for Therapy in the Relation of Self-Criticism to Depression: A Longitudinal Study

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The present longitudinal study examined autonomous motivation as a moderator of the relation between self-criticism and depression in a sample of 42 clinically depressed adults receiving psychotherapy. Recently, autonomous motivation has surfaced as a predictor of psychotherapy treatment outcome. Studies show that it predicts lower posttreatment depressive severity and a higher probability of remission (McBride et al., 2010; Zuroff et al., 2007). Another predictor of treatment outcome is self-criticism, a personality trait that involves constant and harsh self-evaluation closely linked with fear of others' criticism and disapproval. Research shows that high self-criticism predicts smaller changes in depressive symptoms throughout therapy (Hawley et al., 2006). Results of the present study demonstrated that, for participants high in self-criticism, lower autonomous motivation for therapy was associated with higher interviewer-rated depressive symptoms one year later. This study highlights the importance of promoting autonomous motivation for therapy, especially among highly self-critical individuals.

Poster 51. How Can Teachers Foster Nursing Students' Competence and Emotional Wellbeing?

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Crary Pamela, *Edgewood College*

Diane Lauver, *University of Wisconsin Madison*

Humans have basic needs that, when met, foster wellbeing. According to Self-Determination Theory (Deci & Ryan, 1995) these needs are: reciprocal relationships, support of autonomy (i.e., volition), and perceived competence (i.e., confidence in abilities). Because nursing students often experience stress and associated ill-being, and because SDT had not been applied to nursing classrooms, we examined these ideas regarding wellbeing of nursing students. To examine whether perceived autonomy support from teachers influences nursing students' emotional wellbeing directly and indirectly through perceived competence in course work. In a cross-sectional, descriptive design, we recruited 154 baccalaureate nursing students at a Midwestern public university. Using valid questionnaires from prior research, participants answered questionnaires including: Learning Climate (perceived autonomy support from teachers in clinical and theory courses), Perceived competence (competence in clinical and theory courses), and Positive Affect (positive moods to reflect emotional wellbeing). We conducted bivariate correlations, hierarchical regressions for mediation (Baron & Kenny, 1986; Krause, et al., 2010), and Sobel tests for the significance of indirect relationships. We observed positive correlations among learning climate, competence, and positive affect scores ($p < 0.05$). In hierarchical regressions, learning climate (clinical and theory

courses) related to positive affect a) directly and b) indirectly through perceived competence (clinical and theory courses). Extending SDT research, we demonstrated how nurse-educators could influence students' emotional wellbeing. When nurse-educators support students' autonomy, they can influence students' emotional wellbeing directly as well as indirectly through students' perceived competence. Future nurse-researchers can test these relationships with a longitudinal intervention that is designed to improve nursing students' wellbeing.

Poster 52. Examining Meta-Motivational State Reversals as a Mechanism for Regulating Balanced Need Satisfaction

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Emily Oliver, Joanne Hudson, *Aberystwyth University*

Recent investigations of Self-Determination Theory (Deci & Ryan, 1985) have highlighted the importance of a balanced satisfaction of one's needs for well-being (cf. Sheldon & Gunz, 2009) however, it is unclear at present how individuals may attempt to seek out or regulate this balance. We posit that switching between mutually exclusive meta-motivational states, as discussed in reversal theory (Apter, 1982), may be one mechanism through which balance is achieved. Whilst regular reversals between states is required to be considered psychologically healthy, the precise triggers of reversals are unclear. Data from an ongoing laboratory-based study, using environmental manipulations of need satisfaction (e.g., Deci, Eghrari, Patrick, & Leone, 1994) and an adapted Stroop protocol to measure meta-motivational state, will be presented. It is hypothesised that the lability and frequency of individuals' reversals may contribute to well-being, through enabling a balance satisfaction of needs, whilst need thwarting may function to induce reversals.

Poster 53. Culture and Intrinsic Motivation

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The theory of self-determination and its precursor intrinsic motivation theory, both, organize the scheme of motivated behaviour in terms of individual's preferences for goal setting and taking steps to attain the goals using personal resources and assumes that a person has choice and control over the behavioural space. An assumption of clear boundary between self/environment and the other is maintained. This paper examines the evidence for an encompassing model of self that implies distributed notion of control and fuzzy boundaries between self and non-self. Geared toward maintaining a balance between 'Me' and 'We,' it implies regulating activities through self-control and positions motivation in relation to the embedding field. It strives to ensure the wellbeing of 'Us.' It acknowledges the systemic constraints of mental and ecological space. In this case motivation involves orchestrating a joint act in a relational enterprise.

Poster 54. Materialism and Well-being in the UK and Chile: Need Satisfaction and Need Thwarting as Underlying Psychological Processes

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A growing body of evidence shows that materialistic values are linked to lower well-being. Self-determination theory (SDT) offers the main causal explanation through the role played by basic psychological need satisfaction fulfilment. However, recent research suggests that psychological need thwarting may also play an important role. Using Structural Equation Modelling in a large British sample (Study 1, N = 958), and extending previous research conducted in specific domains, we demonstrated for the first time that the endorsement of materialistic values is linked to well-being through the mediation of two different constructs: need satisfaction and need thwarting. We replicated our findings in a Chilean sample (Study 2, N = 258), a population which has never been studied before, either from the SDT nor from the materialism perspective. Results gave strong support for SDT postulates across cultures. Theoretical and applied implications are discussed, as well as directions for future research.

Poster 55. Community Involvement and Knowledge Integration: An Innovative Model Proposal for HRD Action Learning in SDT

Celestino Valentin, *Texas A&M University* ✉ Celestino.Valentin@tamu.edu

The purpose of this poster is to identify levels for engagement opportunities in “action learning” based on Self-Determination Theory, within an educational community setting. This is a conceptual study in action learning from a community relations perspective in an educational and non-profit environment. This study proposes new methods of learning for young academic scholars in which Human Resource Development is integrated as part of the action learning process utilizing Self-Determination Theory as a foundational basis of research. Methods of action learning are identified for educational purposes and designed to improve the learning experience for both the student and that of the community members in general.

Poster 56. Employee Engagement and Social Responsibility

Marie A. Valentin, *Texas A&M University - College Station* ✉ marie.valentin@tamu.edu

Corporations lose more than \$300 billion a year of productivity due to lack of employee engagement (Avery, McCay, & Wilson, 2007). According to the Gallop, nearly 20% of U.S. employees are disconnected and 54% are impartial about their job (Fleming, Coffman, & Harter, 2005). The purpose of this poster is to explore implications of motivational potential that are highly correlated to Self-determination theory [intrinsic motivating factors], in relation to social responsibility. This paper specifies key drivers of engagement within the theoretical framework of self-determination theory as it relates to employee engagement and social responsibility. A better understanding of employee's

motivational potential may prove to be a valuable asset for today's HRD professionals, and will play an important role in helping organizations to determine key intrinsic motivating drivers of engagement relevant to social responsibility, within the context of the organization, in order to manage and develop employee engagement (Albrecht, 2010).

Poster 57. Relationships Between Observed Pupil Engagement and Teacher Behavior in PE: Micro-Analysis of 5-minute Fluctuations in a Lesson

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Wim Beyers, Maarten Vansteenkiste, Bart Soenens, Nathalie Aelterman, Greet Cardon, Leen Haerens, *Ghent University*

SDT-based studies state that teachers who are supporting or thwarting students' needs for autonomy, competence and relatedness enhance positive or negative student outcomes, respectively (See Van den Berghe et al, 2012 for an overview). However, student behavior might also elucidate teacher behaviors, for instance when students show a lack of interest (e.g., Skinner & Belmont, 1993). The purpose of this study is to examine reciprocal interactions between need-supportive and need-thwarting teaching behaviors and student engagement. To investigate the nature of these relationships, teacher behavior and student engagement were observed during three five-minute intervals of 120 PE lessons. Validated observation tools were used to code need-support (Haerens et al., in press), need-thwarting (Van den Berghe et al, in revision), and student engagement (Aelterman et al., 2012). By means of SEM with cross-lagged analyses across three five-minute intervals, the directions of the relationships between teaching behavior and student engagement are tested.

Poster 58. Academic Aspirations and Psychological Well-being in Psychology Students

Maria Vanessa Vega Velarde, *PUCP* ✉ vanessa.vega@pucp.pe

Lennia Matos, *PUCP*

The current study examined the relationship between the type of academic aspirations (intrinsic or extrinsic) and psychological health (well-being or distress) in psychology students from Lima (Peru). In this research we study the academic aspirations which refer to the goals that students have in relation to their career. Previous studies have found that students that have intrinsic goals (personal growth, meaningful relationships and societal contribution) tend to have higher psychological well-being (Kasser & Ryan, 2001). Also students that have extrinsic goals (popularity, financial success and fame) tend to have psychological distress (Kasser & Ahuvia, 2002). A positive relationship between intrinsic academic goals and well-being, and between extrinsic academic goals and psychological distress among the students was expected. A negative relationship between intrinsic academic goals and psychological distress; and between extrinsic

academic goals and psychological well-being (Niemeec, Ryan & Deci, 2009) was expected. Results of our findings will be discussed.

Poster 59. The Why and What of Dieting Behaviors: Reciprocal Relations and Influences on Eating Behaviors Over Time in WeightWatchers

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Maarten Vansteenkiste, Liesbet Boone, *Ghent University*

In a three-wave longitudinal study among WeightWatchers (N=464, 5.2% male), we investigated how dietary goals and motives influence each other over time. Second, we investigated whether goals and motives predicted changes in need-frustration which, in turn, predicted changes in healthy eating behaviors and weight loss. Analyses revealed (a) that autonomous motives predicted increases in health-focused eating ($\beta = .14$, $p < .05$). Controlled motives predicted increases in appearance-focused eating ($\beta = .21$, $p < .01$) which in turn predicted increases in controlled motives for eating regulation ($\beta = .16$, $p < .05$). Further, autonomous motives predicted significant decreases in need-frustration ($\beta = -.20$, $p < .001$), whereas controlled motives predicted significant increases in need-frustration ($\beta = .14$, $p < .05$). Need-frustration, in turn, predicted decreases in healthy eating behaviors ($\beta = -.13$, $p < .05$). One-year weight loss was marginally related to more autonomous motives ($\beta = .14$, $p = .07$), but not to controlled motives ($\beta = -.13$, $p = .10$).

Poster 60. Perception of Physical Competence and Motivation to Exercises in Brazilian Adolescents

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Alexandro Andrad Andrade, Carla Liz, Tania Crocetta, Ricardo Brandt, Juliana Silva, Claudia Arab, Rod Batal, *Santa Catarina State University – UDESC*

Based on the Self-Determination Theory (SDT), the purpose of the study was to compare the self-determination and the practice of physical exercises of adolescents with different perceptions of their physical capabilities. 400 public high school students from Florianópolis/SC, Brazil, participated in the study. Self-evaluation scales of strength, flexibility and aerobic resistance (0=poor / 4=excellent) and a Brazilian version of the Behavioral Regulation in Exercise Questionnaire-2 – BREQ-2, were utilized as instruments. Adolescents with the best self-evaluation of their physical capabilities were significantly less amotivated ($p < 0,01$) and externally regulated (except for flexibility) ($p < 0,05$), having greater identified regulation ($p < 0,01$), intrinsic motivation ($p < 0,01$) and relative autonomy index ($p < 0,01$). They also practice significantly more physical exercises ($p < 0,01$) than those with negative self-evaluations. The results concur with the SDT assumptions and suggest that the positive perception of the physical capabilities is associated to the self-determination and the involvement in the practice of physical exercises.

Poster 61. The Power of Control and the Control of Power: The Relationship Between Self-Determination and Interpersonal Coercion

Abra Vigna, *University of Wisconsin-Madison* ✉ ajbankendorf@wisc.edu

Is the experience of feeling controlled in one's daily life related to the tendency to use coercive influence tactics in close relationships? Or is the experience of feeling free and choice-ful in one's life related to the tendency not to use emotionally coercive influence tactics in close relationships? This study sought to investigate these relationships by surveying 250 respondents on their experiences of daily self-determination perceived locus of causality and self-compassion. Responses were correlated with self-reports of the frequency of using emotionally coercive, physically coercive and verbal, non-coercive influence tactics. Controlling for gender and relationship status, preliminary results suggest that a phenomenological experience of freedom and choice-fulness is negatively related to the tendency to use coercive influence tactics, whereas the experience of feeling controlled or out-of-control is positively related to the tendency to use coercive influence tactics. These findings suggest that enhancing individual-level self-determination may positively impact interpersonal behavioral repertoires.

Poster 62. No Work is Motivating if the Climate Lacks Warmth: The Importance of Autonomy Supportive Coworkers and Managers in Elderly Care

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We investigate how elderly caregivers perceive support from both their managers and coworkers, and how these perceptions contribute to their work motivation as individuals and performance as a team. Using a mixed-methods approach, we collected data from two samples. Study 1 involved qualitative interviews with 12 elderly caregivers and social workers, and Study 2 had 238 elderly caregivers complete an online questionnaire. Results indicated that supportive managers and caregivers helped create a warm work climate that positively influenced motivation, whereas uninvolved managers and rigorous regulations led to a controlling climate that restrained employee self-development and motivation. In addition, managers and coworkers differentially satisfied caregivers' basic needs for competence, autonomy, and relatedness, all of which related to various degrees of motivation and perceptions of team quality. These findings are valuable for organizations wishing to develop and optimize successful climates and work teams for elderly caregivers in societies with rapidly aging populations.

Poster 63. Autonomy Support and Intrinsic Goal Progress Expectancy and Its Links to Longitudinal Study Effort and Subjective Well-Being:

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Knut Skjesol, Tor Egil Bagøien, Sven Olav Ulstad, *Nord-Trøndelag University College*

We tested a Self-Determination Theory (SDT; Deci & Ryan, 2000) process model of subjective well-being among students at Norwegian Folk High Schools. In this model we hypothesized that students' intrinsic goal progress expectancy in chosen study activity and perceived autonomy support from teachers would be positively associated with intrinsic and identified regulations of activity. In turn, intrinsic regulation would positively affect subjective well-being at the end of the school-year (8 months later), whereas the identified regulation – subjective well-being link would be indirect through effort. In addition, the higher the identified regulation among students, the more their psychological well-being would be contingent on or moderated by effort in activity. Results supported all predictions.

Poster 64. Identified Approach and Identified Avoidance Regulation in Leisure, Paid Work, and School-Based Work

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Introjected regulation involves internal rewards and punishments whereas identified regulation involves valuing a goal as being personally important (Ryan & Deci, 2000). Research supports sub-dividing introjection into approach and avoidance dimensions (Assor et al., 2009); a possibility also noted—but not previously examined—with identification (Ryan & Deci, 1999; Vansteenkiste et al., 2010). Based on the above, this study: (a) developed identified approach and avoidance items (e.g., I do ____ to: “accomplish valued goals” and “prevent negative outcomes”, respectively); (b) had undergraduate students rate how important these two identification dimensions, along with intrinsic and integrated regulation, were in their leisure and school-based “work” (e.g., studying); and (c) had adults rate how important these same regulations were in their leisure and paid work. Results suggest that the two identification dimensions are distinct and, at least in terms of school-based work, are both more important than either intrinsic or integrated regulation.

Poster 65. Mapping the Moment-to-Moment Motivation and Well-Being at Work: A Mix-Method and Multi-Level Investigation

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People often have multiple duties in their job and their motivation varies from activities (Fernet, et al., 2008). If people experience their daily motivation differently across contexts, how do such differences affect their well-being? Past empirical evidence on

this topic is sparse, as researchers have often ignored the interactions between people's situational motivation and contextual factors that allow them to behave adaptively across different events at work (Johns, 2006). This research intended to study the within person fluctuation of motivation and well-being to understand how situations affect people's self-determined motivation and multi-dimensions of well-being at daily work. Both qualitative and quantitative inquiries were conducted using the day reconstruction method (Kahneman, et al., 2004). Results showed that participants' self-determined motivation not only varied with affective, cognitive and behavioural reactions towards different working situations, but also predicted different levels of vitality and engagement. Practical implications from different levels of comparisons were discussed.

Poster 66. Academic Achievement Motivation in Middle Childhood: Comparison between the United States and Japan

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This cross-cultural study examined academic achievement motivation among elementary school children in the US and Japan. One hundred and forty-eight students from an American elementary school and 213 students from a Japanese elementary school completed a measure of academic achievement attitudes. The results indicated American children have higher achievement motivation for enjoy school, aspiration, and try hard, but not for excellent learn. Conversely, Japanese children have higher achievement motivation for excellent learn only. In fact, these findings may reflect an interesting cultural difference. For example, in the concept "enjoy school" in the question, it is possible that this difference may indicate that Japanese children often feel shame when they make a mistake in class or miss a question (Crystal, Parrott, Okazaki, & Watanabe, 2001), so they may not want to show their academic ability to others. Further results and implications of this study will be discussed in this poster.

Poster 67. Chinese Pupils' Interpersonal Relationships Influence Learning and Engagement Through the Satisfaction of Basic Psychological Needs

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Previous research (for a review, see Martin & Dowson, 2009) found interpersonal relationships significantly influence students' motivation, engagement and achievement. This study aims to examine the mediational and longitudinal predictive effects of basic psychological needs satisfaction within the above influence. Firstly, the Basic Needs Satisfaction in General Scale (BNSG-S) was adapted into Chinese, administered in a sample of 467 elementary school students, and was found to correlate significantly with various measures such as interpersonal relationships, learning engagement, self-esteem, and subjective well-being. Then we ran structural equation models, finding that

students' interpersonal relationships with peers, parents and teachers can predict their learning engagement. We also found this predictive effect was mediated by satisfaction of all three basic psychological needs (autonomy, competence and relatedness). Furthermore, results of a 3-stage longitudinal causal model partially supported our prediction that the satisfaction of students' basic psychological needs promotes later learning engagement.

Poster 68. The Effect of a New Danish School Structure on Student Engagement, Through Basic Needs Satisfaction

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The link between school-structure and basic need satisfaction has not received attention from SDT-researchers. The present study examines whether a new school-structure in Denmark facilitates increased student engagement through satisfaction of the three basic needs. The school-structure is characterized by a utilization of competence-differentiation and age-integration of the students in a new format, where each characteristic is achieved in two different group-types in which all students are participating every day. Results from the study can elucidate the connection between school-structure and motivation+engagement and help prevent dropout and increase student well-being. The poster will present arguments for the relation between motivation, engagement and school structure. It will further present data from a pilot-study (N(students)=around 100) used to validate the questionnaire that will be used to collect data in the main project. This will be longitudinal and be done as a Ph.D. project, with data-collection running from Christmas 2013 - Christmas 2014.

Poster 69. The Role of Psychological Need Satisfaction and Self-Determined Motivation for Physical Activity

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Self-determined motivation has been hypothesized to mediate the link between psychological need fulfillment and behavioral outcomes in exercise behavior. This study aimed to examine relations between psychological needs, self-determined motivation and exercise behaviour and the mediational role of self-determined motivation in the association of psychological needs with exercise. Adult active members of an Internet based exercise program (N=1091) between 18 and 78 years of age completed a test battery consisting of The Basic Psychological Needs in Exercise Scale, The Behavioral Regulation in Exercise Questionnaire-2 and Leisure-Time Exercise Questionnaire. Need satisfaction predicted self-determined motivation which in turn predicted physical

activity. Self-determined motivation mediated the association between need satisfaction and outcomes, and this mediation effect was stronger for women and older adults. The results confirm the SDT hypotheses regarding mediation and contribute to the on-going discussion of the complexity of exercise motivation and physical activity behaviour.

Poster 70. Perceptions of (De)Motivating Teachers: Students' Recall of Autonomy Support and Grades in Written Narratives from the U.S.

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There has been a significant amount of research within self-determination theory that has examined the beneficial effects of having autonomy supportive teachers in the classroom. The present research sought to use a more novel approach to examine how students recall their past motivating and demotivating teachers in both U.S. and Chinese samples. In addition to completing self-report measures, students were asked to write three narratives regarding their last class teacher, their most motivating teacher, and their most demotivating teacher. Using a repeated measures design, results indicate that, for the U.S., the most motivating teacher was recalled as being more autonomy supportive and focused more on student learning, whereas the most demotivating teacher focused more on grades and student performance. The supplementary self-report measures provide additional evidence to support this hypothesis for both the U.S. and China, and therefore we expect the same pattern of results for the Chinese narrative responses.

Poster 71. The Self-Determination of Gender and Its Relation to Subjective Well-Being

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In light of previous research showing that nonconformity with traditional gender roles is negatively associated with subjective well-being (e.g., Rieger & Savin-Williams, 2012), we propose that gender-nonconforming individuals may have fewer culturally-scripted opportunities for psychologically need-fulfilling interactions. Undergraduate participants (N = 120) completed self-report and narrative measures of their gender role attributes (i.e., masculine and feminine personality traits, interests/activities, and narrative themes in autobiographical memories), as well as self-report measures of their need fulfillment and subjective well-being. Mediational analyses will first test the extent to which gender-nonconforming attributes predict decreased levels of hedonic well-being (happiness) due to the effects they have on need fulfillment. Moderational analyses will then test the possibility that gender-nonconforming attributes may predict increased levels of eudaimonic well-being (meaningfulness) when they are subjectively experienced as self-determined, as indexed through both self-report and narrative measures of gender role internalization.

Poster 72. Student-Centered Learning: The Effects of Motivation, Affect, and Engagement on Performance

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This study examined the effect of student motivation on affect and performance in a first-year problem-based psychology program. Autonomous-, controlled-, and a-motivation were measured at the start and end of the academic year. Positive/negative affect was measured at the end of the year. Analysis revealed that autonomous-, controlled-, and a-motivation remained stable during the year. Using SEM we examined a model in which motivation at Time 1 predicted motivation at Time 2. Motivation at Time 2 predicted the level of positive and negative affect students experienced. Students' affect predicted their engagement in group meetings, which in turn predicted grades and successful completion of the program, $R^2(34, N = 260) = 51.34$, $p = .03$; CFI = .99; TLI = .98; RMSEA = .04. These results indicate that the effect of motivation on grade performance and successful completion might be mediated through experience of positive/negative affect and engagement in group meetings.

Poster 73. Pressure On Parents: An Examination Why Some Parents are More Controlling

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In a series of three studies we examined a model in which pressure to be an achievement-promoting parent and parents' own controlled orientation were modeled as antecedents of child-invested contingent self-esteem which, in turn, was related to more controlling parenting. In the first study our model hold among parents of both elementary and secondary school children while using parent and child reports of parenting. The next study showed our model could be generalized to a sample of Chinese parents, with Chinese, relative to Belgian, parents reporting more controlling parenting because of experiences of elevated pressures. Finally we conducted an experimental study in which we manipulated the degree of pressure on parents who were working with their children on a puzzle task. We successfully manipulated the pressure on parents and showed associations with proximal antecedents of parenting style. We currently are developing a coding system to analyze the videotaped interactions.

Poster 74. The Influence of General Causality Orientation on Work Behavior

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Under Self-Determination Theory by Deci and Ryan, we hypothesized that general causality orientation as a stable individual difference could have new explanations to employees' work behavior. We sampled 143 employees from 20 enterprises in Beijing. We used GCOS, PANAS, Creative Performance Scale and Subjective Vitality Scales to measure employees' general causality orientation and work behavior. Analyses with SPSS supported parts of hypotheses. The results showed that General causality orientation effectively predicted work behavior. The mediating mechanism of emotion was found between autonomous orientation and creative performance, autonomous orientation and mental health, impersonal orientation and creative performance.

Poster 75. Cross-Cultural Study: Effects of Parental Conditional Regard on U.S. and Chinese students

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This study examined how perceived conditional regard by parents and teachers in the past impact life-satisfaction in the present, across two distinct cultures. A total of 232 Chinese and 235 U.S. college students completed measures of domain-specific perceptions of conditional regard, self-regulation (SRQ-L) and life-satisfaction (LSAT). Structural Equation Modeling (SEM) was utilized to check for model fit. T-test and bivariate correlations were also computed. We predicted that Chinese students would perceive parents and teachers to be more controlling than U.S. students; and in both samples, perceived autonomy-support would predict greater life-satisfaction. Our findings indicate significant correlations between relative autonomy index and life-satisfaction for both U.S. and Chinese students. The more autonomy support they received by their parents and teachers, the more they were satisfied with their lives. Results are discussed in terms of SDT's viewpoint of basic psychological need for autonomy across cultures.

Poster 76. The Self-Determined Motivation at the Physical Education Class and Its Relation with the Adherence to the Teenager Exercise

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The aim of this research is to examine the relation between controlled motivation, autonomous motivation and amotivation to physical education class and switching motivational stages to the exercise. 285 high school students participated (Mage= 16.4 years; SD=1.34; range= 15-21), 121 male and 164 female. An adaptation of the physical education from the Sport Motivation Scale and the Questionnaire from the Stages of Change in the Physical Activity were used. The reliability of each motivational stage was: autonomous alpha=.94, controlled alpha=.84, and amotivation alpha=.60. Autonomous motivation showed lower values in pre-contemplation (M= 3.56) and contemplation (M=4.05) in comparison with preparation (p<.05; M=4.95) and maintenance (p<.001; M=5.21). In contrast, amotivation got higher values in pre-contemplation (p<.05; M=4.05) in comparison with preparation (M=2.91), action (M=2.60) and maintenance (M=2.86). The results confirm the motivational differences are associated with the changing stages.

Poster 77. Engaging Children in Therapy: Employing Self-Determination Theory to Support Practitioners

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Allied health practitioners work with children with a range of developmental, behavioural and social challenges. There is growing evidence about what interventions are most appropriate to support these children in attaining the skills they need to participate in daily activities. The research literature is also replete with evidence which supports specific intervention protocols to achieve specific functional outcomes. Self-Determination Theory, however, provides a structure whereby practitioners can look at the process in which they engage when they deliver therapy in order to optimize children's motivation and engagement. This presentation highlights how current best practice guidelines such as being goal-directed, family centred and embedding interventions in ecologically meaningful contexts can be understood within the structure of SDT. As such this can provide practitioners with a way of viewing interventions in a way that will support children to become more independent in the different spheres of their daily lives.

Poster 78. The Relationship of Motivation to Goal Orientation of Golfers.

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The study explored the relationship of goal perspective theory (GPT) and the self determination theory (SDT) within the context of golf. The Sport Motivation Scale and the Task and Ego Orientation in Sport Questionnaire were administered to golfers (N = 1,607) who played weekly at private, semi- private or public golf courses. Pearson product-moment correlation coefficients were computed to determine significant relationships. Positive significant ($p < .01$) relationships were found between goal orientations and the three factors comprising 'Intrinsic Motivation (IM)'. Positive significant ($p < .01$) relationships were also found between goal orientations and the three factors comprising 'Extrinsic Motivation'. A negative significant ($p < .01$) relationship was found between 'task orientation' and 'Amotivation'. The study supports the relationship between GPT and SDT. Age, gender, skill level and the type of course played further influenced the relationship between goal orientation and motivation.

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