

8th International Self-Determination Theory Conference

Abstract Program Book

Wednesday, May 31, 2023

9:00 – 10:45 AM	Plenary Keynote by Richard Ryan	Peninsula 1-4
11:15 AM – 12:30 PM	Individual Talks 1	
Individual Talk 1A Theory & Methods Intrinsic Motivation		Biscayne
<p>Self-determination theory's intrinsic motivation inventory scale measuring COVID-19's effect upon motivation Tracy Dubin, West Los Angeles College & Medical University of South Carolina</p>		
<p>Much is documented on COVID-19's acute and lingering psychological and physiological effects, but little details its influence upon motivational drive. This observational study examined the relationship between COVID-19's effects on intrinsic motivation. Canvassed through convenience sampling, seventy-seven Southern California residents were categorized into two groups: previously and never COVID-19 positive. Both groups took the Interest/Enjoyment subscale of Self-Determination Theory's (SDT) Intrinsic Motivation Inventory (IMI) self-reported questionnaire, with their motivational scores compared using an independent samples t-test. While those who never had COVID-19 showed a slightly higher average IMI Interest/Enjoyment subscale score (M=5.75, SD=1.27) than those who previously had COVID-19 (M=5.48, SD=1.64), no statistical significance was found amongst COVID-19 diagnostic history and motivational levels [t(75)=.80, p=.21]. A potential problem for this study was its wording of its survey test, regarding "activity." Improvement could be made with rewording the survey and distributing it to populations outside of Southern California. Future psychological work necessities being done to increase the motivational drive within the ever-growing COVID-19 positive population, as does inspiring health and resilience amongst all who suffered through the pandemic. Self-Determination Theory scholars and psychologists must work together to restore this nation's wellbeing.</p>		
<p>Trajectories of intrinsic and extrinsic motivations in low-income students during adolescence</p>		
<p>Elisa Cavicchiolo, Department of Systems Medicine, Tor Vergata University of Rome</p>		
<p>Sara Manganelli, National Institute for the Evaluation of the Education System (INVALSI)</p>		
<p>Fabio Lucidi, Department of Developmental and Social Psychology, Sapienza University of Rome</p>		
<p>Over 20% of children and adolescents in the US and in Europe live in households with incomes below the poverty line. Research on the psychological consequences of poverty suggests that growing up in a family which lacks the means for providing material comforts might influence the motivational development of children and adolescents. Using latent growth modeling (LGM) and on the basis of Self-Determination Theory (SDT), we investigated the trajectories of intrinsic and extrinsic motivations in low-income students during adolescence. Furthermore, we identified the role of autonomy support by parents and teachers and peer relatedness among classmates in determining these trajectories. The study involved a sample of more than 200 adolescents officially certified by the Italian government as being below the poverty threshold. Data was collected by means of a four-wave research design over a period of two years. Results revealed a significant drop in levels of identified regulation over time, while all other forms of motivation, including intrinsic motivation, remained stable during the period considered. Low-income students therefore appear to experience a specific form of motivational decline during adolescence, so that they perceive studying as being less and less meaningful in relation to their goals, values, and identities. This decline is even more pronounced for second-generation and male low-income adolescents. However, parents and teachers were significant predictors of identified regulation at each time point, suggesting that their support for autonomy fosters identified regulation throughout adolescence. As regards the role of classmates, peer acceptance appears to sustain identified regulation, while having many friendships seems to have a negative impact on this kind of motivation. Our results suggest that various strategies are available to prevent or reduce this specific motivational decline in low-income adolescents, for example by promoting support for autonomy by teachers and parents and fostering peer acceptance among classmates.</p>		

The extended benefits of perceiving knowledge transfer and contribution to community while participating in extracurricular activities

Tanya Chichekian, Université de Sherbrooke

David Litalien, Université Laval

Laura Lemardelet

Catherine Maheux

Extracurricular activities (ECA) contribute to students' sense of belonging in school and engagement (Denault & Poulin, 2009). Such outcomes have often been anchored in motivational models examining the generalizing effects on school attendance (Denault & Guay, 2017), how motivation transfers between contexts (Vallerand, 1997), or between in and out-of-school activities (Hagger & Hamilton, 2018). Given that participation in ECAs can broaden students' awareness regarding their contribution to society (Eastwell & Rennie, 2002), this cross-sectional study sought to: (1) examine students' motivations for engaging in ECAs, (2) describe students' intentions to transfer knowledge gained from ECAs to the school context, and (3) investigate the potential of knowledge transferability and contribution to one's community in predicting situational and academic motivation. High school students (N = 285) participated in a year-long ECA where they conducted research on a topic and presented it in regional competitions. An online survey with self-report scales and two short-answer questions were administered to students asking about their academic motivation ($\alpha = .80$ to $.88$, Vallerand et al., 1992), their motivation while participating in the ECA ($\alpha = .72$ to $.84$, Guay et al., 2000), perceived knowledge transferability ($\alpha = .75$, Wang et al., 2020), and contribution to community ($\alpha = .94$, Vallerand, 2013). The main reason for engaging in the ECA was to present a topic that students found interesting or had an impact on themselves or the community (57%). Students also intended to transfer knowledge gained from their projects to future professional or academic contexts (49%). These results corroborated with a path analysis with excellent fit indices, where perceived knowledge transferability and contribution to community predicted students' autonomous motivations for engaging in the ECA, which then, predicted their academic motivation. Fostering contribution to one's community and highlighting the potential of knowledge transfer in motivational research are discussed.

Will they stay or will they go? Motivational profiles, retirement-related correlates, and retirement intentions among 58-72-year-old workers

Hallgeir Halvari, University of South-Eastern Norway

Anja Olafsen, University of South-Eastern Norway

Demographic changes indicate that the number of people aged 60 years and above will double the next 30 years, and politicians around the world have an interest in delaying retirement in order to benefit national economies by lowering the burden on public pension systems. In this study, it is examined whether and how combinations of multiple types of work motivation based on self-determination theory would be associated with retirement-related factors and retirement intentions. Using a person-centered approach to identify latent work motivation profiles among older workers, four profiles emerged: 1) the Low Motivation Profile with below average levels on most motivational regulations, but in particular lack of identified work regulation; 2) the Autonomous Motivation Profile with higher levels of autonomous motivation and lower levels of controlled motivation and amotivation; 3) the High Motivation Profile with simultaneously high autonomous and controlled motivation; and 4) the Amotivated Profile. Compared to the Low Motivation and Amotivated Profiles, the Autonomous and the High Motivation profiles show higher levels of vigor and lower levels of job stress, exhaustion and turnover-, and retirement intentions. However, the High Motivation Profile seem to pay a cost because they experience significantly more job stress than employees in the Autonomous profile. In addition, variable-based correlations showed higher levels of vigor and lower levels of job stress, exhaustion, and turnover intentions to be associated with lower levels of retirement intentions. The results are discussed in relation to managers and organizational endeavors to rebuild lost work identification and reduce extrinsic work motivation and amotivation in order to motivate older workers to stay longer at work.

Student diversity clubs in high schools promote self-determination, autonomy, and belongingness

Maria Di Stasio, Macewan University
Tianqing Zhou, University of Alberta
Suzanna Wong, University of Alberta
Jason Harley, McGill University

Gay-Straight Alliance (GSA) are student-led and teacher-supported school clubs that provide social support to students with diverse sexual orientations and gender identities. Its participants are typically LGBTQ+ students. In this research, we want to understand how a sense of empowerment and self-determining behavior can develop due to the person-context interaction from participation in these student-led clubs. We examine GSAs through the self-determination theory (SDT) lens and explore how social-contextual conditions facilitate the natural process of self-motivation and healthy psychological development. Our study used a mixed-method design to explore the role of GSAs on students' well-being determined by their level of self-determination and the psychological needs of relatedness, competence, and autonomy. In the first phase of this study, we surveyed 169 students aged 12-14 years in seven high schools in Alberta, Canada, about their experiences with school and family relationships and their levels of self-determination. The survey results showed that LGBTQ+ students had lower rates of self-determination on multiple subscales than cisgender students. However, students' awareness of GSAs increased self-determination. In phase 2, we conducted semi-structured interviews with both GSAs teachers and students to explore how GSAs provided opportunities for students to exercise their autonomy and self-determination. We interviewed six students and two teachers; our primary qualitative findings suggested the following themes: 1) Teachers/staff in GSAs create opportunities (e.g., voting, activity, and event plan) for students to exercise their autonomy and self-determination within their group. 2) Students in GSAs feel connected and have a sense of belongingness with others. Our research findings can further impact policy regarding GSAs and support the association between social-contextual factors that strengthen students' self-determination and well-being.

Promoting social and emotional learning in schools through self-determination theory

Betsy Ng, Nanyang Technological University, National Institute of Education

Besides the importance of academic knowledge, concerns have been raised about the lack of efforts in addressing the well-being and social development needs of the students. Hence, it is imperative to invest in understanding the ways to cultivate social-emotional competencies in students. One of the social-emotional competencies includes helping our students to recognise and manage their own emotions. This is a preliminary study that aims to investigate the framework of self-determination theory (SDT) on promoting social and emotional learning (SEL) in schools. SEL is an essential part of students' learning as it provides the relevant soft skills to prepare our learners for life beyond school, thus supporting their mental and social well-being. As SDT promotes self-determination in which individuals act according to their own volition towards their goals or desires, it could be the avenue to understand how individuals relate to each other, promoting individual self-efficacy, social-emotional competencies and well-being. To date, SDT-based practices in relation to SEL are not widely investigated. Hence, the key purpose of the study is to identify the relevant strategies in SDT to promote SEL in schools. This study has a strong relevance in the current educational context, in particularly reducing students' anxiety and stress, as well as supporting their social-emotional well-being. Practical implications and recommendations for this field of research are discussed. Furthermore, insights into the strategies in SDT to promote SEL in schools are included.

Seeking connection, autonomy and emotional feedback: A self-determination theory of self-regulation in attention deficit hyperactivity disorder

Rebecca Champ, University of Huddersfield, UK

Attention Deficit Hyperactivity Disorder (ADHD) is one of the most highly debated mental disorder diagnosis in practice today. Two decades of research have substantially contributed to evolving conceptualisations and understanding of the condition. However, this evolution has not extended to theoretical research. Current cognitive behavioural-based theories aim to identify the aetiology of ADHD and experience challenges in accommodating the full spectrum of both neurobiological and behavioural research evidence. Characterisations historically associated with

mental illness have generated public stigma, influencing low self-esteem, negative self-concept and identity development in ADHD individuals. Neurodiversity research and activism recognises a diversity of non-normative development and highlights the need for alternatives to deficit models of functioning. Recent research in psychology recommends developing approaches beyond symptom control and seeking to develop positive psychological factors and well-being. Aims: The perspective presented by self-determination theory (SDT) on human motivation, self-regulation and self-determination offers a new understanding of ADHD research evidence and symptomology. Methods: Using comparative analysis, we present current theories of ADHD, their challenges in aetiological accommodation, and the influence on treatment design and outcomes. We present SDT as an alternative approach to understanding interest and its role as a motivational factor in ADHD, the significance of organismic integration and the natural tendency toward growth and self-actualisation, and the value of integrated emotional regulation in self-regulation. Conclusions: We propose an ADHD framework grounded in SDT revealing a contrasting origin for psychopathology, modelling affect based self-regulation versus cognitive, and offering ADHD as a neurobiological difference both challenging and beneficial, generating a potential foundation for alternative treatment approaches with self-determination and positive identity outcomes.

A realist evaluation of Noise Solution: Moving beyond does it work to understand how, why, for whom, and under what conditions a digital music-making intervention improves the well-being of young people

Millie Daviss, University of East Anglia

*Kimberley Bartholomew (Presenter), University of East Anglia

Simon Glenister, Noise Solution

Aims: Noise Solution delivers 10-week programmes incorporating music-mentoring and digital technology. The aim is to impact on well-being by engaging and motivating young people (YP) facing challenging situations. Noise Solution pairs these often-marginalised YP with professional musicians who enable them to quickly create music that is authentic to them and share it with significant others via their digital platform. Impact data captured by the platform supports the positive effect of the intervention on well-being. This research aimed to explore the underlying mechanisms via which this change occurs using a realist evaluation. Methods: Realist evaluations try to understand how, why, for whom, and under which conditions interventions work. This involves identifying context-mechanism-outcome configurations (CMOCs). An iterative approach using focus groups with key stakeholders (e.g., YP and their families, music mentors, educational professionals, management), was adopted to extract CMOCs which were then collated and synthesised to develop a programme theory (PrT). Aspects of the PrT were subsequently tested using qualitative and quantitative data collected via the Noise Solution platform. Results: Initial findings from the PrT suggest that the intervention positively impacts the well-being of YP by enabling them to have feelings of agency throughout their journey. YP begin to take responsibility for their music making and feel in control of their own actions and future. The professional friendship developed with the music mentor, alongside the strengths-based digital narrative, also facilitate feelings of relatedness and competence. Self-determination theory (SDT) is, therefore, a plausible middle-range theory in which to situate the elicited PrT. Conclusion: The findings provide valuable insight into the application of SDT in practice. They are not only useful for Noise Solution, but can be transferred across settings and, therefore, deliver an evidence-based framework to support other well-being interventions targeting YP.

Individual Talk 1C Special Topics | Self-control, Regulation & Rehabilitation

Longboat

Harnessing the power of motivation to promote lasting behaviour change

Kaitlyn M. Werner, University of Pennsylvania

Brett Q. Ford, University of Toronto

Malte Friese, Saarland University

Wilhelm Hofmann, Ruhr University Bochum

Self-control has long been touted as a critical component of successful goal pursuit – the more willpower you have, the more likely you are to lead a happy and fulfilling life. However, an emerging line of research suggests that self-control can actually be effortless and that motivation may play a key role (Werner & Ford, 2021; Werner & Milyavskaya, 2019). To test this idea, we present data from 5 studies (n=6508) using cross-sectional, laboratory, and longitudinal methods, including conceptual replications across important life domains (e.g., health, finance, academics). We consistently

found that people with more autonomous motivation for a particular goal have greater preference for goal-related behaviours, less of a preference for possible temptations, experience less conflict when faced with a self-control dilemma, and have better habits that facilitate goal pursuit. Conversely, people with more controlled motivation for a particular goal have greater preference for temptations, experience more conflict when faced with a self-control dilemma, and have worse habits that detract from successful goal pursuit. Together, these findings suggest that people who pursue their goals for autonomous reasons are less likely to need self-control. Instead, the real need for self-control, and by extension the use of regulatory strategies, comes into play when people pursue goals for more controlled reasons because they are more likely to struggle between what they desire in-the-moment (temptations) and doing the right thing (pursuing their goal). Discussion focuses on recent theoretical advancements in self-control and behaviour change from a motivational and affective science perspective.

Exploring college students' internalization dynamics during COVID-19: A network analysis

Jihong Zhang, University of Iowa

Yurou Wang, University of Alabama

Jufei, Lu, University of Alabama

As the life challenge escalates, college students' academic motivation diminishes. Various studies address the decrease in students' learning motivation, but the dynamic trend of motivation change during the pandemic was not investigated adequately. Based on one of the dominant motivation theories, self-determination theory (SDT), this study tracked 115 Chinese college students' (age range: 17-22 years old) motivation changes during the pandemic (Spring 2022 semester). Participants were measured three times during the semester, including 10,354 observations (the missing rate is 28.2%). To understand students' motivation change during the pandemic, this study utilized the novel methodology of estimating psychological networks to map out the dynamic interactions between first-year college students' academic motivation during the COVID-19 pandemic. The results show that guilt-driven regulation measured at early time positively predicted identified internalization and integrated internalization measured at late time. Contradicting previous literature that controlled motivation harms autonomous types of motivation, guilt-driven motivation is beneficial for students to some extent, as through the feeling of guilt, students may realize that learning is important and could support their future goals and then adopt a more optimal type of motivation. However, ego-driven regulation negatively predicted autonomous motivation. Such results were consistent with previous research. Students who put too much energy into competitions will be less likely to have an intrinsic motivation towards learning, as they only enjoy competition instead of the joy of mastering new knowledge. This preliminary finding revealed that having a certain amount of guilt might be beneficial for Chinese college students. Guilty might help these students to form optimal types of motivation. However, it is still unclear whether such findings could apply to students from other cultures.

Assessing academic self-regulation in Portuguese students

Vera Monteiro, ISPA- Instituto Universitário

Natalie Santos, ISPA-Instituto Universitário

Academic self-regulation is a contextualized process in which students have an active, conscious, and voluntary role in setting learning goals that will guide how they monitor and control their cognition, motivation, and behavior. These strategies used by students during this self-regulation process will have a very relevant impact on the quality of their learning. Based on the theory of self-determination and different models of self-regulation in learning, our goal was to study the psychometric properties of three instruments for assessing academic self-regulation, particularly in the cognitive, behavioral, and motivational areas. These scales were adapted with 573 Portuguese students from the 6th to the 12th grade. We confirm the structural validity of the three instruments through exploratory structural equation modeling (ESEM). The motivational scale identified two types of reasons that students might use to regulate their motivation: Autonomous and controlled motivation. In the first case, students used strategies to increase their intrinsic motivation. In controlled motivation, students act out of external rewards or fear of punishment or due to internal pressures such as obligation and guilt. We also identified one dimension of cognitive self-regulation and three dimensions of behavioral self-regulation. All dimensions presented good levels of reliability. The relationship between the scales confirmed convergent and divergent validity. We have found that students more autonomously motivated

were more cognitively and behaviorally self-regulated. These results support the theoretical models that intrinsically motivated students are also those who use more effective self-regulation strategies in cognitive and behavioral terms. On the contrary, the relationships between controlled motivation and the remaining scales were either small or non-significant. Thus, the scales studied provide a useful set of tools that can be used to study self-regulation in an academic context.

Changing lives: Social support and basic psychological needs in the motivation to desist from crime

Claudia Odgers, University of Florida

Criminologists have studied how people who have committed multiple crimes shift to have a prosocial life. A good marriage quality is among the factors that scholars have associated with a successful path. However, others remain engaged in crime even though they have supportive families. Despite the advances in criminology, little interdisciplinary research has been done to investigate motivational processes that include psychological needs in the change process. This project aims to better understand how social support from significant others can impact the motivational process to desist from crime. This qualitative study was conducted in Chile by accessing a difficult population of 25 men who had committed crimes. Those men were interviewed in prison, under parole supervision or freedom during 2021 and 2022. Abductive thematic analysis will be applied to the data to examine the relationship between social support from significant others, psychological needs, and desistance from crime. The implications of basic psychological need theory, rehabilitation, and reentry programs will be discussed.

Individual Talk 1D Education | Teaching Style

Peninsula 1-4

The state of U.S. teachers' practice of engaging students in the classroom in 2022

Erika Patall, University of Southern California

Amanda Vite, University of Southern California

Diane Lee

Jeanette Zambrano

Bethany Hamilton Bhat

GoGuardian Research Team & Alan Arkatov

Teachers routinely report that student engagement is an ongoing concern. Fortunately, an extensive assortment of educational strategies that support or thwart engagement through students' psychological needs for autonomy, competence, and relatedness have been identified. To better understand teachers' engaging practices, a survey with over 1,100 full-time United States teachers from all 50 states was conducted in Spring 2022 with the purpose of cataloging: 1) the extent to which full-time United States teachers report exposing students to 18 need supportive or thwarting practices, 2) their perceptions of the factors affecting practice use, and 3) their perceptions of student engagement. Weighted results suggested that teachers reported very frequently using many, but not all, supportive practices. For example, 87% of teachers or more reported using relationship building, high expectation setting, perspective-taking, and personally relevant rationales often. However, only 48% to 62% of teachers reported using: culturally relevant teaching, provision of choice, incorporating student interests, and contextualized teaching practices often. Of concern, practices that thwart engagement were reportedly used regularly. Results also suggested differences by school level, subject, type of school, teacher gender, and student population, with more supportive practices occurring among elementary, non-STEM, female, public school teachers and teachers serving diverse learners. Teachers reported that practice effectiveness was most influential and having training was least influential in determining which practices they used. As expected, all supportive practices were positively correlated with teacher perceptions of students' engagement. Results point to opportunities to address gaps in the motivational classroom climate in order to enhance students' learning and development.

Accordance of student and teacher reports on instructional design of middle school math classes and its association with students' motivation

Barbara Otto, Hochschule Fresenius

Natalie Vannini, Hochschule Fresenius

Leon Ebel, Hochschule Fresenius

Research has already revealed the beneficial effects of autonomous motivation in the school context whereas controlled motivation is associated with negative academic outcomes. Furthermore, many empirical studies have shown that teachers' instructional design in classes plays a crucial role for the development of students' motivation. However, these studies use only student reports for their analyses. Little is known, whether the scientifically proven associations between students' motivation and the instructional design would still be detectable with a mixed-method design. Therefore, in this study we addressed this research question by (RQ1) investigating the congruence of teacher and student reports on the instructional design of middle school math classes; and (RQ2) exploring the associations between the instructional design and students' motivation and performance for both perspectives separately. In order to answer these research questions 3104 German students (138 middle school classes) and their mathematics teachers voluntarily participated. Students answered a questionnaire assessing autonomous motivation, controlled motivation as well as perceived instruction with respect to basic psychological need satisfaction (BPNS) in math class. Math teachers also reported about their instructional behavior (BPNS). Before analyzing, students' data were aggregated at the class level to match the number of mathematics teachers. Correlation analyses revealed that math teachers' and students' reports regarding the instructional design (RQ1) were moderately associated. With regard to RQ2 correlation analyses showed significant positive associations between student reported perceived BPNS in math class and students' autonomous motivation, but not with their controlled motivation for mathematics. On the contrary, teacher reported BPNS did not significantly correlate with students' autonomous motivation but was negatively associated with students' controlled motivation for mathematics. In sum, the study points to the relevance of need supportive teacher behavior in middle school mathematics classes. However, future studies might also implement further assessment methods like classroom observations.

Professors' teaching styles, students' hopes/fears and engagement: a qualitative study in a Peruvian music school

Dora Herrera, Pontifical Catholic University of Peru

Carlos Iberico, Pontifical Catholic University of Peru

Lennia Matos, Pontifical Catholic University of Peru

Yasmin Cerna, Pontifical Catholic University of Peru

Two theoretical approaches, Self Determination and Future Orientation theories, support the link between professors' teaching styles (autonomy-support/controlling), the cognitive component of future orientation (hopes/fears) and engagement/disengagement in university music students. The aims of this study are: 1) to offer a qualitative analysis related to previous quantitative research findings; 2) to demonstrate if professors' teaching styles (autonomy-support/controlling) are aligned with the students' perceptions of these styles; 3) to analyze the relationship between students' perceptions of professors' teaching styles, their hopes/fears and engagement related to their music career. To our knowledge, there are few qualitative studies in Peruvian music schools, then a research project was developed with seven dyads (professor-student) from the music program of a private university. Professors and students were interviewed separately, and data was analyzed using Atlas.ti 7.5.4 software. Findings pointed out that professors identified their motivating style mostly as autonomy supportive. Nevertheless, not all the students agreed with their professors' self-perception. It has been found that some professors' teaching styles were qualified by their students as controlling. This statement has been accepted by few professors. In relation to students' hopes, they were mostly related to music engagement. Data have shown a clear relationship between students' perception of their professors' teaching style, their hopes and music engagement. Only one dyad presented a relationship between the perception of the professor's controlling style, fears, and a lack of engagement. This qualitative analysis provides evidence to previous quantitative findings.

Conditions under which teachers are able to engage in open instruction environments

Julia Eckoldt, Freie Universität Berlin

Hilde Köster, Freie Universität Berlin

Daniel Rehfeldt, Freie Universität Berlin

The dissertation is based on the overriding question regarding the conditions under which teachers are able to engage in open instruction environments such as Freies Explorieren und Experimentieren (FEE). The intervention FEE was used to examine the extent to which the school as a work place on the one hand and the personal inputs of teachers on the other hand may influence the use of innovative teaching and learning methods. The empirical research was conducted as a PRE-INTER-POST-design using a sample of nine teachers. The analysis for the research was carried out using a structured content analysis. The results of the study show that teachers personal inputs influence open forms of instruction. Individual competencies and motivational approaches could be identified using Personality-Systems-Interaction-Theory (PSI) and Self-Determination Theory (SDT). The results also show how the dynamics of self-monitoring shows in teacher behaviour. Furthermore, it can be determined that professional knowledge, individual improvement and an orientation toward autonomy are more likely to influence the successful use of open instruction than self-infiltration and control orientation. As the study shows, pedagogical behaviour can be professionalized and altered when initial intuitive reactions are reflected and secondarily lead to context sensitive action.

Individual Talk 1E Health & Activity | Health Supports and Demands

Peninsula 5-7

Organismic health systems: the interplay between individual and system-level autonomy in healthcare policy and practice

Emily Oliver, Newcastle University

Fiona Duncan, Newcastle University

Shamini Gnani

Benjamin Rigby

Caroline Dodd-Reynolds

Applying self-determination theory to policy implementation is in its infancy, however, need-supportive communication by policymakers has demonstrated importance for healthcare practitioners' wellbeing and motivation. We extended these ideas by testing a model in which practitioners' basic needs are influenced by system-level characteristics, which are typically driven by policy contexts (e.g., performance monitoring approaches). We explored whether autonomy-supportive conditions led to innovation in implementation and more coherent approaches to delivery. Data from two separate studies are presented. First, from exercise referral schemes in the U.K. (Oliver et al., 2021); four regional service leads were interviewed to identify constraints and facilitators of inclusive practice. Second, from co-located mental health services in community settings (Duncan et al., 2022); relevant data were extracted from interviews with service users (n = 30) and service providers (n = 32) across six case study sites in England. In both contexts, findings supported the impact of operational environments on practitioners' need satisfaction. Short-term contracts, quantity-focused performance indicators, and vague commissioning arrangements created need frustration. Where partnership arrangements were characterised by trust, stability, and inclusion-focused targets, staff felt autonomously engaged in delivering value-aligned care. Some evidence suggested consequent impacts of autonomy on the system itself; there was also evidence of reactive defiance at an individual level in need-thwarting contexts. Operational environments, shaped by national and local policy approaches, impact the need satisfaction of service delivery staff. In need supportive conditions, healthcare practitioners are autonomously engaged, which in turn leads to innovation in delivery and ways of working and growth in the service itself. As such, we suggest that systems can be considered organismic

Motivational shifts in dietary process change: Results from longitudinal study

Magdalena Poraj-Weder, The Maria Grzegorzewska University

Dorota Jasielska, The Maria Grzegorzewska University

Michał Szulawski, The Maria Grzegorzewska University

Previous studies show that the motivation of people who try to change their eating habits is usually external and result-oriented, often defined in terms of "kilograms to lose". However, providing an appropriate support, the motivation should shift towards its internal forms in the course of the dietary change process. Clinical practice show that this is not always the case. People often tend to "lack or lose motivation", cease efforts to change their new eating habits, and return to their old ones, consequently losing any progress that was made (Buchanan & Sheffield, 2017). Therefore, the aim of our study was to investigate the 'motivational shifts' in the dietary change process and to verify how they are related to participant's perceived effectiveness. We assumed that: (H1) The perception of effectiveness will be related to the intensity of particular types of motivation characteristic at a given moment of the change process; and (H2) The

more autonomous the motivation is, the less important is the efficiency defined as weight loss, and the more important is the efficiency defined as dieting self-efficacy (Wilson-Barlow et al., 2014). Methods and results: The study was carried out on a nationwide research panel (N = 250, 50% women, 50% men). All participants were in the process of dietary change. Measurements were made three times: at the beginning, after one month, and after 4 months. The TRSQ (Williams et al., 2000), the DIET-SE (Stich et al., 2009) and the scale to measure the effectiveness of change recognized as weight loss were used. The results show that during the process, motivation may change in an undesirable direction, and with the decrease in the intensity of autonomous forms of regulation, the level of concentration on the goal, defined both in terms of dieting self-efficacy and losing unnecessary kilograms, decreases.

Holographic Memory Resolution®, psychological ill-being, and basic psychological needs

Mary Gaddy, Billings Clinic

Jamie Besel, Billings Clinic

Brent Baum, Healing Dimensions

Nicholas Coombs, Piedmont Research Strategies

Becky Kiesow, Billings Clinic

Geoffrey Williams, Billings Clinic

Study goals: Holographic Memory Resolution® (HMR) is a body- and client-centered technique utilized to address physical or emotional pain maintained as state-dependent memory. Employing a clean language approach, the facilitator empowers the client to use their personal internal language to transmit proof of safety to the specific moment and site of trauma encoding. Clients are offered resources to assist in resolving psychological and physiological distress in an effort to reduce state-bound symptoms. However, little is known about the interrelationships of HMR, psychological ill-being, and Self-Determination Theory's basic psychological need frustration. The purpose of this study was to examine whether need frustration changes with psychological ill-being in the setting of HMR therapy. Methods: This feasibility study enrolled 59 clients (53 of whom completed the HMR intervention) with a history of chronic pain (≥ 6 months). The HMR intervention was comprised of four in-person sessions. General linear mixed models were used to test for significant changes in health outcomes across HMR sessions. All models controlled for age and employed sex as a fixed effect. A proxy measure of psychological ill-being used aggregate scores of depression, somatic symptom burden, and Post-Traumatic Stress Disorder (PTSD). Associations of clients' first, last, and percent changes were assessed with the Pearson Correlation Matrix. Results: Over 75% of clients experienced an improvement in both need frustration and psychological ill-being throughout the study. Significant relationships were observed between need frustration and ill-being at baseline and clients' last sessions ($r = 0.61$ and 0.74 , respectively). A moderate correlation was observed between the change in need frustration and ill-being over the study duration. Additionally, change in need frustration fully mediated the variance in clients' ill-being levels. Conclusions: Needs frustration may contribute to understanding how HMR might reduce psychological ill-being for clients with chronic pain.

The prospective associations between autonomy support, basic psychological needs, motivation, and well-being amongst people with mild to borderline intellectual disabilities: A two-wave study

Noud Frielink, Tilburg University

Carlo Schuengel, VU University

Sanne van der Ven

Petri Embregts

Through recourse to self-determination theory, this study aimed to describe how satisfaction and frustration over the needs for autonomy, relatedness, and competence can change over time among people with mild-to-borderline intellectual disabilities (MBID), and consider how life events potentially influence these changes. Moreover, this study explored how these changes are prospectively associated with both how people with MBID perceive the support they receive from support staff and their own well-being/ill-being. Utilising a sample of 117 adults with MBID and a two-wave multi-informant study design, multiple regression analyses showed that at both time points, most constructs were statistically significantly correlated and, furthermore, remained statistically correlated despite a time lag of 4.5 years.

One exception was relatedness satisfaction at T0, which was not significantly correlated with any variable at T1. Moreover, the findings support the hypothesis that autonomy support from direct support staff is positively related to need satisfaction and negatively related to autonomy and relatedness frustration. However, after Bonferroni correction, only the interaction factor of autonomy support and life events was statistically significant: the more life events a person had experienced, the stronger the positive effect of autonomy support on autonomous motivation. Prospectively, neither autonomy support and life events nor need satisfaction and autonomous motivation were statistically associated with later well-being and ill-being. Although the results must be interpreted with caution, they underscore the expedience of self-determination theory as a guide for enhancing well-being and quality of life of people with MBID through autonomy-focused support.

Individual Talk 1F Work & Organizations | Motivators at Work

Merritt

One-year stability and change of autonomous career motivation in mid-adolescence

Toni Babarovic, Ivo Pilar Institute of Social Sciences

Iva Sverko, Ivo Pilar Institute of Social Sciences

Vocational development and career construction can be expressed on a continuum that represents different types of career motivation (internal, identified, positive introjected, negative introjected, external, and amotivation). By now, our data confirmed the existence of the simplex structure of six motivational dimensions and their hypothesized relations to constructs from self-determination theory and vocational behavior. This paper focuses on stability and change of autonomous career motivation in middle adolescence using one-year longitudinal data. The sample consisted of 1123 adolescents (three grade cohorts – 15 to 17 years in T1; 38% of boys) tested twice (springs 2021 & 2022) in their schools by computerized assessment. We applied Autonomous Career Motivation Scale which measures the six motivational dimensions from which the relative autonomy continuum can be calculated. We tested the time change in career motivation by ANOVA mix models including school grade and gender as between-group factors and GPA as covariate. We didn't find a significant time effect for the autonomy continuum and most of the motivational dimensions. Only an increase by time was found for external regulation, while a small decrease was found for amotivation. Interaction effects were mainly insignificant except small effects of time-gender interaction for positive introjected motivation which slightly increases for girls and decreases for boys, and of time-GPA interaction for amotivation which declines somewhat sharper for those with higher GPA. The correlations between repeated motivational measures vary from .44 to .58. We have concluded that autonomous career motivation remains quite stable in the one-year period and that this stability is mostly universal for boys and girls, a student from different grades and with different GPAs. The observed increase in external motivation could be attributed to the inevitable upcoming transition after high school.

Fostering deep and enduring change in community-based conservation and EDI programming

Mai Yasue, University of British Columbia

Philip Dearden, University of Victoria

Aidan Davidson

James Kirkpatrick

Alessia Kockel

Here we applied SDT to community-based conservation projects in farming and fishing communities in Australia and the Philippines. These case studies aimed to better understand why farmers and fishers engage in conservation and the socio-psychological impacts of these interventions. We used surveys and qualitative analyses with Basic Psychological Needs as coding frames to interpret the multifaceted impacts of community-based conservation and inform the design of resilient projects. The survey instruments that were adapted for these studies included the Motivation Toward the Environment Scale (MTES), BPN (BPN-at Work) and Portrait Values Questionnaire (and specifically the PVQ-RR). Respondents included 209 fishers from six communities and 162 landowners in Australia. The results of these studies suggest that community-members were driven by both autonomous (eg. learning, desire to help the environment and future generations) and extrinsic motivations (eg. payments, increased fish catch, social pressure). In some cases, we

observed motivational crowding-in, in which people who were initially driven by more extrinsic motivations, over time developed stronger autonomous motivations. These case studies indicated three important factors that helped to support autonomous motivation among community participants. First, build trusting relationships and solidarity between farmers and fishers within communities and staff from governmental or non-governmental conservation organizations. Second, ensure that governmental or non-governmental conservation staff help to foster a sense of self-efficacy through providing ongoing learning and feedback. Third, foster a sense of "collective efficacy" by showing community participants how their action in their own communities or farms can contribute to a wider goal of conservation beyond themselves or their communities. Beyond community-based conservation, this interdisciplinary presentation will apply these findings to the design of an institution-wide justice, equity, diversity and inclusion (JEDI) capacity-building program at a university in Canada. Here we will demonstrate how fostering Basic Psychological Needs can help to create socio-cultural change towards JEDI.

The unique role of autonomous career motivation in predicting middle adolescents' career behavior

Iva Sverko, Ivo Pilar Institute of Social Sciences

Toni Babarovic, Ivo Pilar Institute of Social Sciences

This paper presents our conceptualization of autonomous career motivation and discusses its role in the career construction of adolescents. We rely on the work of Sheldon and colleagues (2017) to develop the Autonomous Career Motivation Scale. Respondents are asked to answer why they think about their future career options by rating the personal relevance of 24 possible reasons that reflect six motivational dimensions (intrinsic, identified, positive introjected, negative introjected, external, and amotivation). By now, our data confirmed the existence of a simplex structure of six motivational dimensions and their hypothesized relations to autonomy as a trait, academic autonomous motivation, parental support, and multiple career behaviors. In this study, we examine autonomous career motivation in the nomological network of career constructs in a sample of middle adolescents (N=1737; age 15-17 years). We focus on the relative autonomy continuum to explore the unique importance of autonomous career motivation in career construction. According to the results, autonomous career motivation shares 32% of the common variance with career adaptability ($r = .56$). As career adaptability represents personal resources to cope with career construction tasks, both constructs may be seen as prerequisites for career behavior. Autonomous career motivation showed moderate relations to various career behaviors, i.e., career readiness, career decidedness, career decision-making difficulties, and engagement in the career construction process. When its predictive strength is considered, autonomous career motivation systematically showed incremental contribution over career adaptability in explaining all studied behaviors, by adding up to 13% of variance accounted for. Differences in predictive strength of autonomous career motivation for specific career behaviors are discussed, along with possible practical implications.

What motivates high performers to give their best in the context of competitions? A comparison between chefs in fine dining restaurants and professors at universities of excellence

Maximiliane Wilkesmann, TU Dortmund University

Uwe Wilkesmann, TU Dortmund University

Sabine Lauer

Research question What motivates Michelin starred chefs and professors who have worked on a university's excellence application to engage in these competitions? In order to analyze the issue of motivation of high performers in organizational competitions, we will also answer the question of how individual motivation and organizational goals are coupled. Theory As a theoretical underpinning, we combine the Self-Determination Theory (SDT) (Ryan & Deci, 2000, 2020) with the sociological theory of competition (Arora-Jonsson et al. 2021; Stark, 2020). We explain how the Guide Michelin competition and the awarding of stars work as well as the competition of the Excellence Initiative function in the German higher education system. We also use SDT to explain how the coupling between the goals of organizations in the competition and the goals of the individual member works. Empirical evidence First, SDT was used to measure the motivation of German Michelin starred chefs as part of a 2020 quantitative survey of all 309 chefs who were awarded one, two or three stars by Guide Michelin in 2019. In addition, data is included in the analysis of non-awarded chefs collected via two well-known gastronomy magazine newsletters in Germany in 2020. Second, SDT was used in a complete survey in 2022 among German professors at universities that were awarded in the German

Excellence Initiative and at universities that had not received awards. In our analyses, we find empirical evidence that in both cases the extrinsic motivation of recognition makes the crucial difference. In each case, intrinsic motivation as well as introductory motivation is very high for both awarded-winning and non-award-winning chefs and professors.

12:30 – 2:15 PM	Poster Session 1 See Poster Session Abstract Document	Atrium
2:15 – 3:45 PM	Symposia 1	
Symposium 1A	Theory & Methods Cutting-Edge Quantitative Methods Applied to Motivational Psychology in Education	Peninsula 1-4

GENERAL OVERVIEW

Advances in quantitative methods can go hand in hand with better use of available data and better theoretical understanding. For this to happen, researchers must apply methodological developments with a concern for their synergy with theory. Person-centered research holds great promise for getting closer to the real people in our samples. However, several considerations related to their implementation may make novice researchers fearful of making mistakes or mis-estimating clusters, which will have a significant effect on the results. As for the most recent developments in quantitative modeling, it becomes relevant to ask the question of how to properly separate the variance between the latent factors so that they correspond to both what is theoretically expected and what is manifested in the sample. The multidimensionality of the concepts related to SDT is undeniable, as are certain proximities between theoretical elements (needs, autonomous motivations, etc.). The power of quantitative tools to juggle these different aspects to offer clear and easily usable and interpretable models is what will offer the greatest outreach to the theory, its concepts and analyses, with a view to having the greatest practical impact

Autonomous motivation from high school to college: A longitudinal person-centered approach

David Litalien, Laval University

Transition to postsecondary studies, or college, can be particularly challenging as students have to adjust to a new program, a new institution, as well as new teaching practices, standards, and expectations (Hill, 2012). These challenges can take a toll on college students' perceived support, adjustment, and persistence, with some studies reporting that nearly 20% of students enrolled in a college program will quit before entering their second year (e.g., SRAM, 2020). Few studies investigate motivational changes through the passage from one level to another. Most studies on motivation fluctuations also assume that these changes are homogenous across students (e.g., Gillet et al., 2012), overlooking the possibility that the taken motivational trajectories may differ across subgroups of students (heterogeneous, e.g., increase for some, decrease for others). Based on a six-year longitudinal study and on self-determination theory, we investigated academic motivation trajectories of students from Grade 8 to the second year of college. We also investigated whether these trajectories are related to various predictors and educational outcomes. A total of 1738 students participated in this study (Mage at time 1 = 12.0 years; 57% female). Four distinct trajectories of autonomous motivation emerged from the person-centered analyses (piecewise growth mixture models): High and slightly decreasing, Decreasing, Decreasing and worsening, and Low and improving after transition. These trajectories and their associations with outcomes were partly aligned with expectations from self-determination theory. Students corresponding to the High and slightly decreasing and the Low and improving after transition trajectories reported more positive outcomes (e.g., achievement, persistence) than those corresponding to the remaining profiles. Demographic variables, performance and perceived competence were also explored as profile membership predictors.

Implications and considerations in using latent profile and transition analyses in longitudinal research within self-determination theory

William Gilbert, Laval University

Latent profile and transition analyses offer the possibility to uncover the dynamic combinations of motivation types experienced by students in relation to their schoolwork while also investigating their temporal stability. As the

popularity of these analyses increases, various considerations need to be considered by researchers when running their models to maximize their validity, stability, interpretability, and usefulness. These considerations include, among others, the use of an underlying measurement model of motivation that properly disaggregates students' specific and global levels of motivation, and that is completely longitudinally invariant. In this presentation, we present the important steps that should be followed to estimate latent profile and transition analyses. To illustrate these steps, we present original findings on the motivation profiles of 1940 university students assessed at either one or two measurement occasions separated by a 12-month interval (M_{age} at Time 1 = 21.56; SD_{age} = 4.99, 80.1% female). More specifically, we present a 4-profile solution (Self-determined, Moderately motivated, Extrinsically motivated, Amotivated) that was replicated at both measurement occasions. We also discuss the roles of important factors (educational climate, self-control, demographic characteristics) in predicting membership to these four profiles, as well as the implications of these profiles for students' psychological adjustment and academic performance.

The many advantages (and few caveats) of estimating the self-determination continuum using Bifactor S-1 modeling
Julien Bureau, Laval University

Statistical tools for modeling the self-determination continuum have been refined over the years. Although many researchers have been using composite scores (e.g., RAI, SDI) or bivariate correlations to estimate associations between motivation(s) and antecedents or outcomes, developments in statistical modeling of the self-determination continuum seem to have recently turned into a "space race" of modeling complexity (CFA vs ESEM, second-order vs bifactor), leading up to the most complex model, bifactor-ESEM, being pushed as the optimal model. In this presentation, I reconsider the elements that should be driving our modeling strategy. I present the theoretical paradox inherent to the bifactor-ESEM model applied to the self-determination continuum: orthogonality and redundancy at the positive end of the spectrum. I explain how the bifactor S-1 model presents an alternative by avoiding repetition from latent factors at the positive pole of the self-determination continuum. Through reanalysis of data from various domains, the statistical and theoretical advantages of the S-1 model are put forward. They are, respectively, a stronger and more precise prediction from the G-factor and an unambiguous theoretical interpretation of results, made possible by greater stability of estimation between studies and scales.

Statistical modeling of academic motivation and its impact on the links between motivation and its antecedents and consequences
Julien Chanal (Chair), University of Geneva

Statistical modeling of academic motivation is very diverse in the literature. Recently, this problematic became even more complex when researchers tried to evaluate simultaneously antecedents and consequences of motivation in multiple academic school-subjects and at different levels (contextual vs. situational). Based on the Hierarchical Model of Intrinsic and Extrinsic Motivation (HMIEM), researches demonstrated that between school-subject differentiation appears to be different depending of the regulation types' level of self-determination (i.e., the school-subject-specificity hypothesis), leading to different relationships between autonomous and controlled regulation types. These results highlighted the necessity to understand correctly the multiple sources of variability in the situational measurement made. The present presentation objectives are therefore (a) to evaluate which psychometric structure of academic motivation best fits the data when considering simultaneously contextual and situational measures of motivation, and (b) to determine whether the modeling choice influences the existing relationship between motivational constructs with other variables. Bootstrap resampling techniques were used on two datasets involving more than 500 students and assessing two different academic motivation questionnaires to evaluate which modeling appears to best fit the data. Statistical comparison of correlations between regulation types scores and outcomes depending on choices made in the modeling were also made. Results will be discussed in terms of implications and practical considerations for researchers working in the educational context using SDT measures.

Autonomy is often investigated as a component of the broader construct of need satisfaction with the needs of competence and relatedness. However, autonomy is a particularly important need in itself and one that plays a key role in maintaining one's united self-functioning. As such, autonomy should be critical at preserving individuals' mental organization and unity when facing life adversities and should act as a resilience factor. Evidence that autonomy can protect from aversive events and various life adversities will be presented, including transition to parenthood, work-family conflicts, and surviving the pandemic and floods.

Difficult infant temperament and intimate partner violence during the transition to parenthood: Dyadic associations with stress and autonomy thwarting

Julie Laurin, University of Montreal

Considering the bidirectional influences found within families, the necessity to consider child effects on parents has often been highlighted, but remain underexplored. Through its influence on stress, difficult temperament has been shown to rouse less autonomy-supportive parenting. Yet, it may also influence other family interpersonal communications. As stress consumes personal resources, it has been shown to spill into couple relationships, negatively influencing couples' ability to deal with conflict. The quality of couple conflicts may thus be tied in. As opposed to using problem solving or more positive discord skills, stress predicts more destructive tactics, as in intimate partner violence (IPV). Likewise, as stress is tied to a sense of lack of control over a situation, it might elicit controlling interpersonal behaviors, such as autonomy-thwarting behaviors. Moreover, stressful life events, like the transition to parenthood (TTP), can further undermine new parents' resources. The TTP is known to require major adaptation, typically linked to more stress and can be detrimental to couples' functioning. The current study investigates the contribution of infant negative affectivity to dyadic processes tied to IPV during the TTP. Using longitudinal data (N=194 couples, at T1:6 & T2:11 months postpartum), dyadic path analysis tested whether infant negative affectivity_{T1} is connected to stress_{T1}, which in turn would be linked to new parents' IPV_{T2}, and whether the link between stress_{T1} and IPV_{T2} is mediated by autonomy thwarting_{T1}. The APIM model fits the data well. Infant negative affectivity_{T1} was positively associated with both parents' stress_{T1}, which was linked with their own IPV_{T2} 5 months later (actor effects only). Support was found for the mediation, as perceived autonomy thwarting_{T1} explained part of the link between stress_{T1} and IPV_{T2} (indirect actor & partner effects). Infant negative affectivity is thus linked to IPV use during the TTP, through its relationship with parent stress and autonomy thwarting.

Autonomy at work and at home as critical resources to resolve and minimize impact of work-family conflicts

Nathalie Houliort, University of Quebec at Montreal

Managing work and personal responsibilities while preserving one's health has become a central issue for individuals, organizations, and society. Work-life conflicts (WFC) are conceptualized as daily adversities in which the role pressures, demands, or responsibilities from the work and non-work domains are mutually incompatible in some respect (Greenhaus & Beutell, 1985). Based on the Job Demands-Resources theory (Bakker & Demerouti, 2007), organizational and personal resources are essential to resolve these adversities or at least lessen their adverse outcomes (Liao et al., 2019; Wu et al., 2019). Self-determination theory (Deci & Ryan, 2000; Ryan & Deci, 2017) can offer another motivational perspective on these issues and a solid framework to understand the intricacies of workers' experience in juggling work and non-work demands. Three studies (two cross-sectional studies n1=175, n2=200, and one diary study over seven days n=150) aimed to examine how autonomy and the two other needs at work and in one's personal life (i.e. resources) relates to WFC and if autonomy in one sphere appears as more critical than the other to successfully resolve WFC and alleviate its negative impact. We also wished to examine the influence of daily levels of need satisfaction on WFC episodes' resolution and determine if the daily experience of WFC lessens workers' resources (i.e., psychological need satisfaction). Overall, results suggest that adverse outcomes on workers' subjective well-being and satisfaction generated by WFC are attenuated by the satisfaction of psychological needs, especially autonomy, and especially those from one's personal life. In addition, psychological needs satisfaction in both spheres is positively related to workers' subjective well-being through their positive association with coping success of the WFC episode, and variability in perceived coping success is related to variability in need satisfaction. These findings set the stage for new and exciting research avenues as well as effective interventions in the work-life interface domain.

The importance of collective needs for autonomy (and relatedness and competence) during the COVID-19 Pandemic: Evidence from longitudinal studies in Canadian black communities

Richard Koestner, McGill University

The talk outlines the particularly damaging health and psychological effects of the COVID-19 pandemic in Canadian Black communities and explores how distinguishing between personal and collective autonomy need satisfaction and frustration can shed light on pathways to resilience. The research explores (1) the coping of Black young adults during the first year of the pandemic, (2) the uptake of vaccination among Black adults during the second year, and (3) evidence for post-traumatic growth as the COVID-19 pandemic in the third year after the pandemic. The research points to the value of using SDT to understand resilience factors in racialized communities that faced the worst effects of the COVID-19 pandemic.

Making the past one's own: Integrative emotion regulation is central to processing past aversive experiences and united self-functioning

Frederick Phillippe (Chair), University of Quebec at Montreal

Autonomy is often conceptualized as important to motivation, but it is also key to making sense of one's life experiences in a coherent and harmonious fashion (ownership). To this effect, the emotion regulation style used to process a past event is key to this ownership. When amotivated or controlled emotion regulation are used to process past experiences, this only pushes away the emotion, which prevents the experience to align with other self-conceptual aspects and creates compensatory psychological symptoms. When integrative emotion regulation is used with respect to a particular experience it prevents symptoms and generates growth and eudemonic well-being. I will provide empirical support for these hypotheses across three longitudinal studies. In these studies, controlled and amotivated emotion regulation used to regulate a major life event (Study 1) and in the aftermath of a floods (Study 2) were found to predict increases in psychological symptoms (depression and anxiety) and increases in PTSD symptoms during the pandemic (Study 3). Integrative regulation did not predict psychological symptoms but created more eudemonic well-being over time. These results provide important insights to help develop new interventions to process difficult aversive life events.

Symposium 1C Special Topics | Morality & Virtues Development

Longboat

GENERAL OVERVIEW

Self-Determination Theory (SDT) has been blossoming in many areas of psychological research and application, while moral psychology has been booming. Yet, both trends have not taken much notice of each other. This is regrettable since SDT and moral psychology share many points of interest. For example, in virtue theory, it is assumed that moral motivation requires an appreciation of the intrinsic value of virtue. In Kantian approaches to morality, autonomy is a central feature. In moral psychology, the notion of an integration of self and morality has been pivotal. SDT gives these ideas greater contours. Conversely, addressing issues of moral psychology helps to expand SDT into new territory. In this symposium, we will highlight various points of intersection between SDT and morality when discussing issues around moral autonomy, virtues development, and moral identity. The symposium brings together theoretical and empirical contributions from an interdisciplinary and international group of scholars. It aims at continuing a conversation that was kick-started with the publication of a special issue on the relationship between SDT and morality in the Journal of Moral Education (Krettenauer & Curren, 2020).

Understanding moral agency through the lens of self-determination theory

Alexios Arvanitis, University of Crete

Self-Determination Theory (SDT) is characterized by its focus on organismic intrinsic tendencies that characterize both intrinsic motivation and organismic integration. The more these tendencies are supported the more there is increasing differentiation, assimilation and unity in functioning. The SDT view arguably lays out a path of human development that differs according to the tendencies of each individual. This type of 'subjectivity' seems to collide with a view of moral agency as the ability to set 'objective' standards that all rational people would accept. SDT can also be criticized on the grounds that it offers an account of well-being that builds on the cultivation of intrinsic tendencies, instead of

the cultivation of deep reflective thinking that is associated with rationality, virtue and wisdom. This criticism is related to the question of how SDT's view of human development can account both for personal autonomy (i.e., the cultivation of intrinsic tendencies) and moral autonomy (i.e., the cultivation of moral principles that go beyond intrinsic tendencies). The answer may lie somewhere within the reflective flexible thinking and the emotional integrative processes that are associated with autonomous functioning. Within these processes, the 'self' should somehow claim moral responsibility for going beyond intrinsic tendencies. Such agency is present in the concept of need crafting, whereby individuals can proactively manage their behavior toward their need satisfaction. Similarly, individuals can manage their behavior toward virtue development and wisdom, working within, but also going beyond, the path laid out by intrinsic tendencies. Wisdom would then constitute a developmental aspect of organismic integration that is conducive to organismic coherence and unity and allows individuals to experience the world through more 'objective' codes of conduct.

Integrating virtue and moral motivation

Matt Stichter, Washington State University

The acquisition of virtue, being a matter of degree, requires sufficient motivation to engage in an ongoing process of moral learning and self-improvement (e.g. becoming a more honest and kind person). However, merely saying that people need to be 'highly' or 'strongly' motivated does not provide much insight into how this kind of motivation gets sustained. Self-determination theory (SDT) can shed some light on the processes of developing virtue by focusing crucially on the type of motivation that should be associated with virtue (i.e. autonomous and integrated). SDT is an organismic theory that asserts that people grow by integrating aspects of their environment. In applying SDT in the field of morality, moral integration can be conceptualized both at the level of an activity, where a person acts on the basis of an integrated value, and at the level of an individual, where a person is generally morally integrated. We explain (1) what operating on the basis of an integrated value means motivationally in particular activities and instances, and (2) how morally integrated individuals exhibit the distinct properties of coherence and congruence. Probing deeper into the process of moral integration, we can approach moral virtue development through SDT.

Autonomous moral identity motivation: Relationships with age, decision-making and emotions

Tobias Krettenauer (Co-Chair) & Paul Lefebvre, Wilfrid Laurier University

Research following Self-Determination Theory (SDT) repeatedly demonstrated (a) that goals and values become more autonomous over the life course, (b) that autonomous motivation is more motivating relative to controlled motivation and (c) that it contributes more to subjective well-being. The present study seeks to expand these findings into a domain which has been rarely investigated in SDT research: ethics and morality. Specifically, we investigated how moral identity motivation (conceptualized as more or less external versus internal, as well as more or less approach-versus avoidance-oriented) relates to moral decision-making in hypothetical scenarios, to forecasted emotions (guilt, shame, pride) following these decisions, and to participants' age. The study was based on cross-sectional samples including young teenagers (13-14 years), older adolescents and young adults (17-20 years) as well as older adults (50+ years). Findings from SEM analyses provide evidence for four forms of moral identity motivation that vary with regard to their level of autonomy: internal-approach, internal-avoidance, external-approach, and external-avoidance motivation. Internal approach-oriented moral identity motivation was found to be the strongest predictor of moral-decision making, while external avoidance-oriented motivation fostered immoral decision-making in situations where self-interest and morality conflicted. Internal motivation was positively associated with forecasted feelings of guilt and authentic pride, whereas external motivation more strongly predicted shame and hubristic pride. Finally, internal moral identity motivation increased with age while external moral identity motivation decreased. Overall, these findings are highly consistent with important tenets of SDT and demonstrate the applicability of the theory to the moral domain.

Well-being, needs, and justice in self-determination theory and philosophy

Randall Curren (Co-Chair), University of Rochester

The discussion will highlight points of intersection between the contributions, put the theme of the symposium in the broader context of contemporary moral philosophy and point at promising directions of future research.

Symposium 1D **Education | Towards a Refined View on (De)motivating Teaching: A circumplex Approach Across Countries** Biscayne

GENERAL OVERVIEW

This symposium aims to advance our understanding regarding the effects and antecedents of different motivating (i.e., teacher structure and autonomy support) and demotivating (i.e., teacher chaos and control) styles that can be graphically situated within a circumplex approach (Aelterman et al., 2019). Findings among both teachers and students in secondary or higher education are presented, with participants coming from countries across the world (Australia, Belgium, Italy, Israel). The findings present validity information for the circumplex model, address the question which factors (i.e., motivation, need satisfaction, enthusiasm, self-compassion; presentations 1 & 4) predict teachers' use of (de)motivating teaching, how cognitive load relates to different motivating styles and structure in particular (presentation 2), and whether teachers adjust their teaching style as a function of the giftedness status of the student (presentation 3).

(De)motivating teaching styles: The Circumplex Model in the Croatian context

Aleksandra Huić, University of Zagreb

This study investigates the circumplex model of (de)motivating teaching styles in the Croatian educational context and extends previous literature by further examining antecedents of teacher (de)motivating styles. One study focused on Croatian elementary, middle and high school teachers (N=265) and examined motivation for teaching and principal's leadership style as individual and contextual factors shaping (de)motivating styles. The second study focused on Croatian higher education teachers (N=130), and examined approaches to teaching, level of professional training and importance of teaching for professional identity as antecedents, as well as the construct validity of the Situations in Schools – HE Questionnaire. Results show that both the SISQ and the SIS-HE are suitable for use with teachers at all levels of the Croatian educational context. Multidimensional scaling and correlational patterns confirm the circumplexity of the model, and the validity of the instruments in both studies. Internalized motivation for teaching was a positive predictor of motivating styles (autonomy-support and structure), while externalized motivation for teaching positively predicted demotivating styles (control and chaos). Teacher perceptions of their principal's transformational leadership styles did not have a significant role. The importance of teaching for higher education teachers' professional identity did not significantly predict their motivating style. However, more received professional training in teaching competencies predicted less use of the chaotic motivating style. Teacher-centered teaching approach predicted more use of controlling and chaotic styles, while the student-centered approach predicted more use of autonomy-support and structure, and less use of chaos. Findings have both theoretical and practical implications.

Teachers' motivating styles: A deeper understanding of the 'structure' construct and its implications for student cognitive load

Paul Evans, UNSW Sydney

Teachers' motivating styles: A deeper understanding of the 'structure' construct and its implications for student cognitive load Paul Evans Maarten Vansteenkiste Philip Parker Andrew Kingsford-Smith Sijing (Fiona) Zhou It is well established that teachers' motivating styles characterised by autonomy support and structure have positive effects on student motivation, engagement, and learning. In this presentation, we share a program of research aiming to more fully understand the construct of structure in relation to cognitive load theory, a theory of instruction based on the capacities and limitations of working memory and long-term memory. In our first study, 1,287 students from 88 classes across 4 high schools in Australia completed the Situations in Schools measure alongside measures of cognitive load, teachers' instructional strategies, motivation, and engagement. The results are consistent with previous research on autonomy support and structure, and aligned with the instructional implications of cognitive load theory. Teachers' load-reducing instructional strategies were effective at reducing extraneous cognitive load, with strong, positive outcomes for motivation, engagement, and achievement. These load-reducing instructional strategies are generally consistent with a teaching style characterised by autonomy support and structure, but controlling teaching was found to moderate the effectiveness of load-reducing instructional strategies. These results suggest promising directions for understanding the relationship between motivation and cognitive load.

Do teachers motivate gifted learners in a different way? The role of effectiveness, entity, and giftedness beliefs

Sabine Sypré, Universiteit Gent

Several studies have shown that gifted students are less motivated to put effort in their schoolwork compared to typical students, which can lead to underachievement. Therefore, it is critical to find effective ways to motivate gifted students. Teachers may adapt their motivating teaching style as a function of the cognitive ability of children, leading them to use different teaching practices in interaction with gifted vs. typical children. Grounded in Self-Determination Theory (SDT) and the literature on teacher beliefs and mindsets, the present study examined whether teachers adapt their motivational teaching style as a function of the cognitive ability of students and which factors can explain the variability in teachers' use of (de)motivating styles among gifted versus typical students. We examined the role of different types of beliefs, including teachers' beliefs regarding the effectiveness of a specific style as a function of the cognitive ability of the student, the malleability of intelligence, and misconceptions about giftedness more generally. Results of linear mixed modeling among 122 teachers in secondary education (73% female; Mage = 39.52 years) indicated that teachers made more use of autonomy-supportive and chaotic and less use of controlling and structuring practices towards cognitively gifted, relative to typical, students, with differences in the perceived effectiveness of teaching styles by type of student explaining this variability. Regardless of students' giftedness status, teachers' fixed mindset related positively to the use of a controlling and chaotic style and experience in giftedness education related positively to the use of autonomy support. Misconceptions regarding giftedness did not relate to teachers' motivating style. These results inform prevention efforts aimed at improving teachers' motivating styles, to the benefit of the motivation of both cognitively gifted and typical students.

What favors the adoption of a motivating teaching style? Looking beyond need satisfaction

Angelica Moè (presented by Idit Katz), University of Padova (Ben-Gurion University of the Negev)

Student autonomous motivation and engagement as well as teacher wellbeing are closely linked with teacher adoption of a need supportive and structuring style. This suggests the importance to seek out which factors favors teacher adoption of a motivating style and prevent them using more controlling or chaotic modalities. Previous research focused mainly on teacher need satisfaction and need frustration. This research will consider also a few dispositional factors such as enthusiasm, emotion regulation and self-compassion. The results of three studies involving roughly one thousand secondary school teachers ($n=949$) invited to fill in the Situations-in-School scale (SIS) to assess adoption of (de)motivating styles as well as measures of need/satisfaction frustration, felt/displayed enthusiasm, emotion regulation, self-compassion/derogation, will be presented by emphasizing the interplay of factors involved. A range of practical ways to foster teacher adoption of supportive modalities and to curb the preference for demotivating chaotic and controlling styles will be discussed.

Symposium 1D

Health and Activity | Basic Psychological Needs in Health Professions

Canaveral

Education

A review of the effect of assessments on motivation in Health Professions Education students, and its context and mechanisms

Rashmi Kusrkar (Chair), Amsterdam UMC Faculty of Medicine, Vrije Universiteit

Introduction The effect of assessments on student motivation has been neglected in the debate on effect of assessments on learning. The research questions for this review were: How do assessments affect student motivation in Health Professions Education? Which mechanisms lead to what outcomes in which contexts? Methods Empirical papers or reviews using quantitative/qualitative/mixed methods were included. We chose realist synthesis method as we wanted to study complex interventions which can have context-dependent intended and unintended consequences. Results We classified assessments in the 24 included articles depending on whether they stimulated autonomous (AM) or controlled motivation (CM) and studied their context, mechanism and outcomes. The context required for AM stimulation was that the assessment was: interesting, innovative, mastery-based, and conducted longitudinally, introduced seamlessly, embedding student autonomy, having pass/fail grading, including reflection, having

collaborative elements, co-constructed with students, and having authenticity with clinical practice. The outcomes of assessments stimulating AM were higher creativity and study effort, skill development, higher self-regulation and interest in the topic, better learning approach, increased competence, and engagement. CM stimulation happened in the context of the existence of assessment, presence of grades, focus on factual knowledge, desire to fulfil supervisor's expectations, competitive element, performance pressure, fear of failure, and conflicting agendas. The outcomes of assessments stimulating CM were strategic learning, which happened at the expense of learning for future practice. The mechanisms will be presented at the conference. Conclusion We found that students strategically learned what was expected in the assessments at the expense of what is needed in the health professions practice. This finding is more alarming in light of SDT's claim that stimulation of CM through incentives has a long-term deleterious effect on AM.

Role, relevance, and strategies to promote a needs-supportive learning environment in dental education

Cesar Orsini, Norwich Medical School

Dental education is based on cumulative experiences and interactions between educators, learners, patients, and the clinical learning environment, which are instrumental in building environments conducive to autonomous motivation despite dental education programmes' controlling and stressful characteristics. The quality of these interactions may be explained by how social factors satisfy/frustrate learners' basic psychological needs (BPNs). Therefore, we aim to discuss the role and implications of BPNs in dental education across four studies analysing differences and predicting value of relevant determinants and consequences of BPNs, and strategies suggested by clinical educators to promote a needs-supportive learning experience. Methods: 1,859 undergraduates and 9 educators participated across 4 studies. Studies 1-2-3 were cross-sectional and questionnaire-based and measured motivation, BPNs, learning environment, feedback, course experience, passion for studying, study strategies, self-esteem, and vitality. Study 4 involved semi-structured interviews with clinical educators that were thematically analysed. Results/Findings: An autonomy-supportive learning environment and feedback positively predicted learners' self-determined motivation mediated by BPN satisfaction. Course experience positively predicted BPN satisfaction and negatively predicted BPN frustration. BPNs satisfaction positively predicted harmonious passion, deep study strategies, self-esteem, and vitality. BPN frustration positively predicted obsessive passion and surface study strategies. Moreover, high intrinsic motivation clusters reported higher BPN satisfaction irrespective of controlled motivation scores. Themes like empowering, supporting, and building rapport with learners were identified for promoting BPN satisfaction in the classroom and chair-side teaching. Conclusion: Dental educators should pay special attention to designing and implementing BPN supporting learning experiences at the macro and micro-curricular levels.

The importance of relatedness for ethnic minority students in medical education

Anouk Wouters, Amsterdam UMC

Diversity among the medical workforce is essential for providing excellent and culturally competent care to the diverse patient population. Certain student groups are underrepresented in medical education. This research focuses on students with an ethnic minority background in particular as they face difficulty in successfully completing the medical study. We aim to discuss how students' educational experiences affect the motivation of students with an ethnic minority background, and how their educational experiences could be enhanced. Methods: Two qualitative studies (one focus group study and one interview study) on the experiences and support needs of ethnic minority students in medical education. Results/Findings: When making their study choice, ethnic minority students' motivation is significantly shaped by the context with many family expectations and their desire to make their own choice. In their education, negative experiences that influenced students' motivation were related to discrimination in the learning environment, lack of ethnic minority role models, lack of belongingness, lack of a medical network, differences in cultural communication and language, and examiner bias in clinical assessments. The students suggested the following interventions for improving the learning environment: increase awareness about diversity and other religions, provide support groups, increase the number and visibility of ethnic minority role models, and facilitate support in networking. Conclusion: The research suggests that ethnic minority students' ethnicity-related educational experiences mainly affect their feelings of relatedness in the learning and practical environment. Not fitting in and a lack of role models compromised their feelings of relatedness. An environment needs to be created in the medical (learning) environment where students with an ethnic minority background can feel that they belong.

The impact of self-leadership practices on burnout symptoms in first-year physician residents

Jessica Wells, HCA Healthcare Graduate Medical Education

This study examined the relationship between self-leadership practices and levels of burnout among physician learners in first-year residency graduate medical education (GME) training programs in a complex healthcare system in the United States. The well-being of our nation's physician leaders is negatively impacting organizational success at an alarming rate (Han et al., 2019, p. 788; Panagioti et al., 2018, p. 1320). Burnout is an organizational-level problem; therefore, leaders have a common goal of identifying and resolving individual, team, and organizational barriers to well-being (Shanafelt et al., 2017, p. 1829; Shanafelt & Noseworthy, 2017, p. 131). Burnout can originate early in a physician's career and persist throughout their professional life, which may impede individual and organizational thriving (Dyrbye & Shanafelt, 2016, p. 133; Slavin, 2019, p. 771). It is paramount for GME leaders to address burnout in the formative training years to help create foundational skills for lifelong physician flourishing, thereby contributing to organizational health. A promising approach to burnout in GME is the utilization of self-leadership concepts which are founded on STD foundations

3:50 – 4:50 PM

Rapid Talks 1 & Workshops 1

Rapid Talks

Rapid Talk 1 A

SDT & Well-being | Basic Needs & Well-being Across Cultures

Longboat

Basic psychological needs as a measure of digital well-being across cultures

Laura Moradbakhti, Imperial College London
Fangzhou You, Imperial College London
Rafael Calvo, Imperial College London
Celine Mougnot, Imperial College London
Sebastian Deterding, Imperial College London
Juan Pablo Bermudez, Imperial College London

With the increasing use of technological devices in our daily life, digital wellbeing is more important than ever. The Self-Determination Theory (SDT; Deci and Ryan, 1985; Ryan and Deci, 2000) has successfully been applied to various domains, providing key insights into human motivation and wellbeing (Deci & Ryan, 2008; Ryan & Deci, 2017). In our work, we apply the SDT to understand how technologies should be designed to positively contribute to basic psychological need (BPN) satisfaction and subsequently digital wellbeing. As recent studies have shown (Hassenzahl et al., 2010; Peters et al., 2017; Stiegemeier et al., 2022), including BPN satisfaction as a measure of user experience can support design processes and provide practitioners and researchers insights into users' motivation to engage with technology, their acceptance of technology and lastly technologies' influence on user wellbeing (Peters, 2022). The Motivation, Engagement and Thriving in User Experience (METUX; Peters et al., 2018) scales have been developed for designers to measure users' BPN satisfaction at different spheres of technology interaction, namely the interface, task, behaviour and life spheres. However, until now, there is no translation of these scales which does not allow for cross-cultural comparability. Specifically, with previous SDT research on individualistic and collectivistic cultures, we want to ensure that the METUX scales are valid across different cultures. Therefore, we have translated the scales - following the Translation, Review, Adjudication, Pre-testing and Documentation (TRAPD) method - in both Chinese and German. Further, we are conducting three online studies in Germany, UK and China (each country min. N = 300). We believe that it is highly relevant for the research community to 1) be informed about cultural differences and similarities regarding BPN satisfaction in the different spheres of technology interaction and 2) have an officially translated and validated version to refer to, when conducting research.

The application of a wellbeing-supportive design toolkit for a cross-cultural research

Fangzhou You, Imperial College London
Laura Moradbakhti, Imperial College London
Rafael A. Calvo, Imperial College London

Celine Mougenot, Imperial College London
Sebastian Deterding, Imperial College London
Juan Pablo Bermudez, Imperial College London

Digital wellbeing in HCI research has gained growing interest due to concerns over the impact of technologies on psychological health. Designers will need to be equipped with knowledge of wellbeing-driven design and methodologies in their design practice, which enables them to deliver a better technology experience and respect the psychological demands of their product users (Peters et al., 2020). We adopt participatory design workshops based on the Self Determination Theory (SDT) (Ryan and Deci, 2017) to explore how users' Basic Psychological Needs (BPN) satisfaction can be satisfied through design practice and identify opportunities to improve the technology experience and ultimately support user wellbeing. The Motivation, Engagement and Thriving in User Experience (METUX) (Peters et al., 2018) has been developed for providing designers practical tools to fill the gaps between users' unfulfilled BPN satisfaction and technology use, through interface, task, behaviour and life spheres. A METUX-based design toolkit has been developed to better understand how user wellbeing through design can be made (Peters, 2022b), consisting of heuristic design guidelines, strategies, and design tools. Nevertheless, the toolkit was examined and applied within an English-speaking western culture (Peters, 2022a). To ensure the toolkit was valid for our target population in China, we translated the design toolkit into Chinese, using culture-specific translation procedures (Ordudari, 2007). It is essential to not only translate factual messages, but also emotional messages to convey information more accurately when conducting cross-cultural research (Kolb, 2008). We are projected to introduce the translated toolkit to a Chinese technology company and conduct the study respectively in China and Sweden, to provide validated evidence for the application of the toolkit in different cultures. We hope to contribute to the translation from 'research to practice' using a design-led methodology and the validation of the wellbeing-supportive toolkit across cultures.

Types and hierarchy of needs Promoting employees' psychological health: Motivational power of financial compensation programs compared with need-supportive behaviors of managers

Paifang Zhang, Jining Dongyuan Petrochemical Co.LTD

To construct a general theory of motivation, I wrote the book "The Need Thoughts in the Golden Age of Motivation Research", in which I analyzed and integrated the famous theory of motivation since the 1930s, absorbed their proven theoretical essence, and developed my theory of needs. In particular, I creatively put forward a comprehensive and systematic classification method, named Types & Hierarchy of Needs, based on the oriental holistic dialectical way of thinking. According to the different natures of subjectivity, the needs of the subject and the needs of the environment are distinguished. In addition, subject needs are divided into individual needs, individual group needs, and social needs according to the differences in subject types. Individual needs can be divided into five categories: physiological needs, affective needs, cognitive needs, self-needs, and relatedness needs. Also, each need is subdivided according to the content. As a specific need, it can be divided into five levels of organic improvement according to the different levels of satisfaction pursued: survival level, security level, health level, achievement level, and perfection level. The image of the tree can be used as a model to represent the types and hierarchy of needs. The main branches of a trunk represent five types of individual needs: physiological needs, affective needs, cognitive needs, self-needs, and relatedness needs; The roots, stems, leaves, flowers, and fruits of the tree are respectively used to describe the level of survival, security, health, achievement, and perfection. As a kind of instrumental theory, it can fill in some theoretical gaps, improve the systematic and explanatory ability of the theory, and have flexible applicability, which is worth further verification and promotion. Keywords: needs, individual needs, Types & Hierarchy of Needs

Promoting employees' psychological health: Motivational power of financial compensation programs compared with need-supportive behaviors of managers

Necati Aydin, Alfaisal University

Self-determination theory defines autonomy, competence, and relatedness as the core psychological needs like water and oxygen. Belief in God seems to contradict this theory. Belief seems to take away autonomy and require submission to God. It also promotes the idea of the impotence of human beings and their need to seek constant help from God instead of self-sufficiency and competence. In this paper, we will explore how self and God centered autonomy and competence differ from

each other and how we might reconcile both. We will attempt to redefine autonomy and competence within the concept of belief in an omnipotent God and an impotent human being. We will discuss these concepts based on secular and religious ontology and epistemology. We will compare confidence building based on belief in God vs. belief in self-competence. We will present the pedagogical implications of redefining God centered autonomy, competence, and relatedness.

Are you happy? A qualitative research of Chinese vocational college students' well-being

Wei Zhang, University of Surrey

Well-being is as a critical and effective approach to facilitate self-worth. The benefits of promoting well-being in educational contexts have been confirmed worldwide, particularly in western contexts and in academic universities. However, what is less known is understanding how promoting well-being can affect students in Chinese contexts and specifically those in higher education vocational contexts. This study adopted a critical and interpretive approach that uses both PERMA and self-determination theory to explore: what are Chinese vocational college students' perceptions of well-being and how well-being is affected from students' own perspective. Forty students attended activity-oriented focus groups to determine their perceptions of well-being through (1) tell a story - an experience that made you feel happy; (2) share and rank - existing goals and the motives under these goals; (3) If I were you - support they want to get. Thematic analysis revealed that (1) higher vocational education students are happy but have a low sense of meaning in life; (2) they regard doing something meaningful as an important standard of well-being; (3) the presence or absence of goals make a significant difference to their well-being rather than goal content; (4) even students have the same goals, but the level of well-being varies with their motivation type. (5) motivation type is not static, but changes with perceived elements of well-being. The implications are useful for Chinese vocational colleges to implement quality education and for educators, especially for personal tutors, to boost students' well-being through goals and motivation. It also demonstrates that wellbeing in Chinese contexts may need to be theorised differently.

Rapid Talk 1 B

Special Topics | Emotion Regulation & Identity Development

Merritt

Emotional inner peace as a result of authorship, susceptibility to control and interest-taking Using episodes of work-family conflict to examine how coping and emotion regulation interact

Krystyna Adamska, University of Gdansk

Pawel Jurek, University of Gdansk

Sonam Rinchen, Royal University of Bhutan

Inner peace is a category which describes a state of body and mind that is free of negative emotions, particularly free of fear. It is not a permanent state, rather achievable condition which is coupled with a positive attitude towards oneself and others. In a study conducted in a Polish sample (N = 774) we checked if authorship, susceptibility to control and interest taking predict different kinds of fear, proud, compassion and curiosity. The expectations were built on the concept of autonomy, rooted in the self-determination theory, which assumes that autonomy consists of authorship, susceptibility to control and interest-taking. The results of our study do not confirm hierarchical structure of the concept of autonomy, both in terms of confirmation factor analysis and internal validity. Instead, we observed positive correlation between authorship, proud and compassion and positive correlation between susceptibility to control and fear. The inner peace status of interest-taking is dubious, as it positively correlates with fear (and susceptibility to control). The inner emotional peace (higher authorship, lower susceptibility to control and lower fear than in a group of non-practitioners) was expected in a group of yoga practitioners. The lack of emotional peace was expected in a group of those who reach for stimulants. Both predictions were confirmed. The results are discussed in relation to contemporary knowledge of anxiety.

Using episodes of work-family conflict to examine how coping and emotion regulation interact

Charles-Etienne Lavoie, UQAM (LRCO)

Nathalie Houlfort, UQAM (LRCO)

Recent developments in the literature on work-family conflict have highlighted the relevance of examining this phenomenon from an episodic approach (Maertz et al., 2019), and have thus opened up several calls for the development of new measurement instruments suitable for this approach, especially for assessing coping with these

episodes. At the same time, developments on the topic of emotional regulation (ER) from the Self-Determination Theory perspective (Roth et al., 2019), identified integrative (autonomous), suppressive (controlled), and dysregulated (amotivated) styles of ER. Since the literature identifies some apparent overlap between the concepts of coping and ER (e.g., Compas et al., 2014), this first cross-sectional study in an ongoing series aimed to examine how coping and ER strategies 1) are distinct from each other, and 2) interact to predict the successful resolution of a work-family conflict episodes. To do so, we first developed a measure of coping strategies with role conflict covering the six categories presented in Maertz et al.'s (2019) taxonomy. 245 participants were then recruited via the ProlificAcademic online platform and were asked to complete a 30 minute survey. The results of linear and moderation analyses show that the six categories of coping strategies and the three RE styles not only predict successful resolution of the conflict episode by themselves, but also that some interactions exist between the constructs in ways that support SDT's propositions. For instance, autonomous and controlled RE were positively associated with episode resolution, but amotivated ER was not; avoidance coping was negatively associated with resolution, but not when interacting with high levels of autonomous RE. These exploratory results suggest relationships between coping strategies and ER styles that are interesting for both theory and practice, and the following studies of this research project will aim to replicate, confirm, and deepen them.

Parenting with passion: A look at determinants and outcomes

Catherine Cimon-Paquet, Université du Québec à Montréal

Laurie Décarpentrie, Université du Québec à Montréal

Geneviève A Mageau, Université de Montréal

Robert J Vallerand, Université du Québec à Montréal

The parental role is one of the most important social identities that adults can have (Cowan & Cowan, 1992). Many parents derive great satisfaction from this role and for many, parenting may be considered a passion. Yet, parenting also comes with its own challenges, which can make it difficult to integrate into one's identity. The dualistic model of passion (Vallerand, 2015) posits that a passion for parenting can be harmonious (HP) if it is well-integrated with other spheres of life, or it can be obsessive (OP) if parents feel controlled by this role. This research examined if parents experience different forms of passion toward parenting and investigated potential determinants and outcomes. Study 1 (n = 538, M child age = 7,3 years) aimed at validating the Passion Scale adapted to parenting, whereas Study 2 (n = 339, M child age = 8,1 years) aimed to examine correlates of OP and HP. Specifically, autonomy support and conditional regard from a coparent were included as potential antecedents, while parental mental health (general and within the parental role) and parenting behaviors (autonomy support, warmth, structure, and coercion) were included as putative outcomes. Overall, results first revealed that, as expected, HP and OP may be assessed reliably toward the parenting role. Path analyses then showed that higher levels of HP were related to higher levels of parental well-being and positive parenting behaviors. Conversely, higher levels of OP were associated with higher levels of parental ill-being and coercion toward the child. As for antecedents, autonomy support from a coparent was related to higher HP and OP, yet conditional regard was only associated with higher OP. These results suggest that the different ways parents integrate or feel internal pressure regarding their passion for parenting could have distinct implications for their mental health and parenting behaviors.

The role of parental identity in parents' well-being and early parenting during the transition to parenthood

Charlotte Schrooyen, Ghent University

Bart Soenens, Ghent University

Wim Beyers, Ghent University

For many persons, becoming a mother or father is one of the most rewarding experiences in life. However, the transition to parenthood is also characterized as a challenging period. Indeed, research shows large heterogeneity in young parents' well-being and early parenting. It is important to gain insight in the sources of these differences. While this transition is essentially an identity-changing episode, as it adds a new and enduring dimension to an individual's sense of self, little research has been done on parental identity. Parental identity can be defined as the degree to which parents have a clear and well-explored view on their parental role. We deepened the study of this concept from an

additional approach, that is, the quality of parents' motives for identity commitments which can be more volitional (autonomous) or more pressured (controlled). A four-wave longitudinal study was conducted among 288 couples in their transition to parenthood. Overall, dyadic latent growth curve analyses confirmed that a mature and self-endorsed parental identity (characterized by high commitment, low rumination, and autonomous motivation) predicts better well-being. Further analyses will be conducted with regard to early parenting. Results may inform future preventions and interventions benefiting both parents and their children's early development.

Workshops & Interest Groups

<p>Workshop on autonomy-supportive teaching and mentoring Johnmarshall Reeve, Prof., Australian Catholic University Haya Kaplan, Prof., Kaye Academic College of Education</p>	Peninsula 1-4
<p>A deep dive into the dynamic nature of (de)motivating leadership: The leadership compass as a refreshing tool for practice Nathalie Aelterman, PhD, Co-founder of Impetus Academy</p>	Peninsula 5-7
<p>Supporting psychological needs and motivation through story-based learning Austin Welch & Richard Flemming, Co-founders of Sage Media</p>	Biscayne
<p>SDT and health policy Emily Oliver, Prof. Population Health Sciences Institute, Newcastle University Arlen Moller, Prof., Dept. of Psychology, Illinois Institute of Technology</p>	Canaveral

5:00 – 6:00 PM	Keynotes 1	
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Keynotes 1A	Peninsula 1-4
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Why and how to support autonomy when it's difficult to do so (and matters the most)
 Mireille Joussemet, University of Montreal

The basic psychological need for autonomy is central to human development. I will first present an integrative review of research coming from various theoretical frameworks that all point to the importance of considering children's experiences when exerting the parenting role (Joussemet & Grolnick, 2022). In addition to promoting children's socio-emotional learning (Kurdi et al., 2021), parental autonomy support (PAS), also facilitates cognitive and physical development.

PAS is thus a protective and promotive factor for children but unfortunately, it can be quite challenging to provide, perhaps especially in early childhood (Joussemet & Mageau, 2022) and when children's temperament is more reactive (Andreadakis et al., 2020). Moreover, the parenting role involves socialization, and I argue that it is a bigger challenge to promote identified motivation than to preserve intrinsic motivation (e.g., clean-up vs. play). Sadly, children are probably deprived of PAS when they need it the most.

Effective and accessible programs are thus needed to help parents provide AS across all situations and developmental periods. I will go over new results from our (Geneviève Mageau and I) assessment of the *How-to Parenting Program* (Faber & Mazlish, 1980), derived from Ginott's work. This experiential parenting group builds on perspective-taking and teaches 30 concrete communication skills.

With our recent studies, we learned that (a) it is possible to deliver this parenting group with great fidelity (Lafontaine et al., submitted), (b) its positive impact on child mental health is maintained over time (e.g., Mageau et al., 2022), and (c) its effects are generally not moderated by parents' cultural background (hierarchical vs. egalitarian; Saïb et al., submitted). In addition, a pilot study suggests that this program is more helpful than a treatment-as-usual condition, when delivered online to parents of preschoolers (Corbeil et al., 2023). Our new, current RCT has the same design, with observations and long-term follow-ups.

In sum, PAS is certainly worthwhile, and though it can be challenging, it can be also be learnt. Sharing this know-how can prove useful at all times, perhaps particularly when facing crucial, stressful, and challenging situations.

What we've learnt from meta-analysis of SDT regulation types and how we can build a perpetually updating meta-analysis of our entire field

Josh Howard, Monash University

Wouldn't it be nice if we could visit a website and instantly conduct a comprehensive meta-analysis containing whatever psychological variables we were interested in? In this presentation I'll be recapping meta-analytic studies I've conducted with colleagues on regulation types and outlining a path to achieve this new type of living, all-encompassing, and readily available meta-analysis. As a field we've assembled huge amounts of data and identified many interesting results. However, there's so much more we could achieve as a community by combining efforts. By compiling all of our existing data into a single, centralized database we would have assembled the history of SDT-related effects. From this, meta-analyses could be conducted containing any variables of interest in real time, and by anyone, via an online user interface. This idea is sometimes referred to as a "living" meta-analysis or a Community Augmented Meta-Analysis (CAMA). The key challenge to this idea is the scale of data being produced and ensuring that all newly collected datasets are being included. To solve this scaling issue, I'll be discussing a crowdsourcing approach in which we, as SDT researcher, code our own data as we collect and publish it. The end result of this collaborative effort would be a continually updating record of SDT findings that everyone is free to interreact with. In time this practice may become a new aspect of open-science.

Keynotes 1B

Peninsula 5-7

Psychological needs and values: Tensions in design engineering

Rafael Calvo, Imperial College London

As a Design Engineer I "make things" and like to focus on the positive impact that our work has on the world. Occasionally, we try to anticipate its unintended consequences. What we rarely do is ask "what are the values by which we judge the systems we create?". In this talk, I will review some of my work on AI and how it led to using Self-Determination Theory to judge its impact. I will also consider how core to debates about AI, like Weizenbaum's ELIZA chatbot (1966), and those between Carl Rogers and BF Skinner are still relevant at the time of ChatGPT. This requires reflecting on how advances in Intelligent Systems are shaping today's world, and how those debates may inform our views on how technologies can support or hinder psychological needs satisfaction. In this talk, I will be reflecting on the ethical considerations that arise from my research and how I have personally attempted to address them with my work on SDT. This is not a talk on ethics, but rather a personal, and therefore partial, description of the dilemmas of working with AI.

Challenging the beliefs driving a controlling style in coaching and education: What the research reveals

Leen Haerens, Ghent University

Sports coaches and teachers are entrusted with the vital task of helping youngsters learn and grow in safe and nurturing environments. Yet, sometimes, they may resort to a controlling (i.e., pressuring and autonomy-thwarting) style of coaching and teaching. This keynote will present the latest SDT-based research on the detrimental effects of a controlling coaching and teaching style for young people's motivation and well-being, their growth and development, and even their performance. In doing so, it will challenge three pervasive laymen's beliefs.

The first belief is that certain controlling practices are needed for instilling discipline and promoting respect. SDT's distinction between a controlling and a structuring style is essential in this regard. Although both a controlling and structuring style entail a directive socialization approach, the extent to which these styles thwart versus nurture people's needs differs. Our most recent work on the circumplex approach to teaching and coaching reveals that respect and discipline typically follow need-supportive rather than controlling communication. Evidence will be presented that directiveness is perceived as more legitimate and has a more positive impact when it is provided in a structuring rather than controlling way, and when it is combined with autonomy-support.

The second belief is that a controlling style is beneficial in some situations or that specific people benefit from a controlling style: "Is a controlling approach justified or warranted when students display disruptive behavior?" and

"Are some youngsters more resilient or even immune for a controlling style?". Findings from experimental vignette-based studies as well as longitudinal repeated measures field studies will be presented to answer these questions. The third belief is that the periodic use of a controlling style is no longer detrimental if it is combined with a generally need-supportive style, or when it is embedded in a broader empowering climate. To address this belief, we rely on profile analyses to gain more refined insights into the impact of different combinations of styles. Multilevel analyses allow to explore the dynamic interaction between coaches' and educators' generic styles and situational or periodic instances of control. The keynote will conclude with a summary of the factors that lead to a controlling style as such insights are essential to develop effective interventions to help coaches and educators in adopting a more need-supportive style to create safer and more motivating learning environments that foster growth and development.

Thursday, June 1, 2023

8:30 – 9:45 AM

Individual Talks 2

Individual Talk 2A Theory & Methods | Goal-Content Theory

Peninsula 1-4

The double-edged sword of extrinsic goal attainment: Attaining extrinsic goals is associated with increased need satisfaction and frustration

William Ryan, University of Toronto

Past research from SDT indicates that having intrinsic aspirations as well as attaining them is positively associated with well-being. When it comes to extrinsic aspirations, while evidence supports a negative relation between extrinsic aspirations and well-being, the relation between extrinsic attainment and well-being outcomes is mixed. In this study we apply SDT's dual-process model to examine basic psychological need support and need thwarting as separate mediators, or potential mechanisms, by which extrinsic attainment relates to well-being. In other words, we explore whether extrinsic attainment may act as a "double-edged" sword, associated with both greater need satisfaction and greater need frustration, and thus with variable implications for well-being. Results from an online sample (N= 1,892) of adults in the United States replicate previous findings regarding the relation between intrinsic attainment and well-being (via increased need satisfaction and reduced frustration). Extrinsic attainment was indeed associated with greater need satisfaction and greater need frustration. Basic need satisfaction was a stronger mediator of the relation between extrinsic attainment and positive affect, whereas basic need frustration was a stronger mediator when negative affect was the outcome. Overall extrinsic attainment was associated with both greater positive affect and greater negative affect (but less strongly). Implications for Goal Contents Theory are discussed.

Aspire to rest? The relationship between aspirations, psychological well-being and leisure time activity

Dorota Jasielska, The Maria Grzegorzewska University

Michał Szulawski, The Maria Grzegorzewska University

Magdalena Poraj-Weder, The Maria Grzegorzewska University

Introduction Leisure refers to the activities that people choose to participate for their own sake, mostly searching fun, relax and personal development. By providing a wide range of positive emotions, leisure time can greatly contribute to subjective well-being (Grenville-Cleave & Roffey, 2021). A question arises, do people always know what activities will have a beneficial impact on their well-being and to what extent their decisions are determined by the level of their aspirations? The aim of our study was to identify aspiration profiles and examine their associations with different types of leisure activities. In particular, we were interested how orientation towards achieving internal/external/transcendent goals was linked to the choice of the leisure activity (oriented to relaxation, entertainment, health and self-development) and to what degree they were linked to well-being and leisure time satisfaction. Method and results The study was carried out on a nationwide research panel (N = 608, 52,3 % women, 47 % men). Participants completed following research instruments: Aspiration Index (Kasser & Ryan, 1993; 1996), Psychological Well-being Scale (Ryff &

Keyes, 1995) and a newly constructed Scale of Leisure Time Satisfaction (Jasielska, Szulawski & Poraj-Weder, 2022). Then, they were asked to describe their leisure activities and categorize them as belonging to a one of the three categories (oriented to relaxation, entertainment, health and self-development). A person-focused, latent profile analysis (LPA) revealed several classes that differed regarding their aspiration profile. The classes differed in terms of their preferences for the leisure time activities, leisure time satisfaction and the level of psychological well-being. Interestingly, the leisure time satisfaction was not related to the level of psychological well-being.

Association between work values and basic psychological need satisfaction and frustration at work using a person-centered approach

Mathieu Busque-Carrier, Université de Sherbrooke
Yann Le Corff, Université de Sherbrooke
Catherine Ratelle

Work values are defined as beliefs specific to the career context that serve as criteria for assessing jobs and work environments. According to the self-determination theory, all values do not contribute similarly to foster basic psychological needs (BPN), which are psychological nutrients that contribute to individuals' growth, well-being, and integrity (Ryan & Deci, 2000). Previous studies using a variable-centered approach showed that endorsing growth-oriented or intrinsic work values (i.e., beliefs in line with human tendencies for actualization) contribute to BPN satisfaction, whereas instrumental or extrinsic work values (i.e., beliefs focused on rewards and praise from others) lead to BPN frustration. Since behaviors are guided by the interplay between values (Schwartz, 2012), a person-centered approach can be used to detect complex interactions among variables. Thus, the goal of this talk is to describe the association between work values and BPN satisfaction and frustration at work using a person-centered approach. Work values and BPN were assessed in two samples of French-Canadian adults ($n_1 = 476$; $n_2 = 459$). Latent profile analyses (LPA) were conducted to identify distinct profiles of work values, which were then compared on BPN satisfaction and frustration. Results showed that the level of BPN satisfaction at work is mostly a function of the endorsement level of intrinsic work values independently of the level of endorsement of extrinsic values. Hence, intrinsic work values appear to have a protective effect over valuing extrinsic work values. However, less optimal profiles (i.e. lower levels of intrinsic values) of work values did not show the highest level of BPN frustration at work. This underlines the need to consider BPN satisfaction and frustration independently instead of as belonging to a same continuum. These results support the relevance of considering work values within a person-centered approach in career development and organizational interventions.

What's hidden in the subscales: value subcategories predicting adolescents' well-being, ill-being, and risk-taking behaviors

Vanessa Kurdi, University of Reading
Gabrielle Martinelli, Université de Montréal
Mireille Joussemet
Jeanne Tessier
Geneviève A. Mageau

Self-determination theory research finds that attributing more importance to intrinsic values (e.g., community contribution, meaningful relationships, and personal growth) over extrinsic values (e.g., fame, wealth, and image) is linked to greater well-being. However, most studies in the literature have been conducted cross-sectionally with adult samples, examining one type of value relative to the other. Considering that adolescence is an important period for the development of values and mental health, longitudinal studies examining these values with adolescent samples could shed light on the emergence of intrinsic and extrinsic values and their impact. This longitudinal study involving 647 adolescents (57% girls; $M = 15.5$ y.o.) had two aims: (1) to examine how value importance predicted adolescents' well- and ill-being (measured with life satisfaction, depression, and anxiety) and risk-taking behaviors 2 years later while controlling for age, gender, and outcomes at baseline, and (2) to explore how the six subcategories of values predicted the outcomes. The first SEM-based model showed that intrinsic and extrinsic values did not predict, independently or interactively, any outcome 2 years later. A second SEM-based model with value subcategories indicated that meaningful relationships predicted higher well-being ($\beta = .17$; $p = .007$) and lower ill-being ($\beta = -.17$; $p = .037$).

Surprisingly, valuing personal growth predicted a decrease in adolescents' well-being ($\beta = -.18$; $p = .006$). Finally, only image predicted an increase in risk-taking behaviors ($\beta = .18$; $p = .030$). No other value subcategory predicted the measured outcomes. Examining the six subcategories of values proved fruitful to predict adolescent outcomes. Specifically, valuing meaningful relationships seemed to act as a protective factor. In contrast, rating personal growth goals as important represented a risk factor for adolescents' well-being in this sample. The degree to which values measured in the Aspiration Index are developmentally appropriate for adolescents will be discussed.

Individual Talk 2B Special Topics | Mindfulness

Peninsula 5-7

Daily employee mindfulness and self-determined responses to stressful work situations: Evidence from two experience sampling studies

James Donald, University of Sydney

Richard Ryan, Australian Catholic University

This project examines the influence of employees' daily mindfulness on their responses to daily stressors at work. Drawing on self-determination theory, we anticipate that employees' daily mindfulness will precipitate responses to daily stressors that are autonomously regulated and prosocial in orientation. We conducted two daily diary studies (Study 1, $n = 148$; Study 2, $n = 44$; both studies ran for 20 consecutive working days) to examine these possibilities. In Study 1, with employees across three university campuses, we found that employee mindfulness predicted autonomously-motivated responses to daily work-stressors. In Study 2, with employees at two government agencies, we replicated the findings of Study 1 and also found that employees' daily mindfulness predicted more altruistic responses to daily work-stressors. We discuss the implications of these findings for workplaces seeking to build employee resilience, highlighting the role of mindfulness in promoting employees' self-determined responses to stress. We also add to prior theorizing within SDT on the role of mindfulness in promoting autonomous regulations and extend this to interpersonal workplace contexts.

Using Mindfulness to enhance self-determination in a call center

Paula Daoust, BCBSKS

Call centers typically have high turnover. Rigid requirements for adherence to protocols, scripts, and schedules with extensive feedback metrics is detrimental to employee's sense of self-determination and contributes to the high turnover rate. Two cohorts of call center employees participated in a four-week mindfulness program to examine the impact pre- and post-program on self-determination (measured with the Work Need Satisfaction Scale) and pre- and post-program quality of life (measured with the QOLI). In addition, real-time measures of stress, pre- and post-individual mindfulness sessions, using a digital stress thermometer were taken. Qualitative data post session was collected. The contents of each session, results of the study, and implications for future work will be shared in this presentation.

Mindfulness and satisfaction of basic psychological needs

Polina Beloborodova, Virginia Commonwealth University

Kirk Warren, Carnegie Mellon University

Conceptualized as a receptive awareness of and attention to the present moment experience, mindfulness is regarded by Self-Determination Theory as a critical psychological factor that facilitates the fulfillment of basic psychological needs for autonomy, relatedness, and competence. In this talk, we summarize 20 years of research on the topic and present new empirical evidence from two ecological momentary assessment (EMA) studies. Study 1 reports previously unpublished community sample ($N = 74$) data from the seminal Brown & Ryan (2003) paper. Using two-level random-coefficients restricted maximum likelihood (REML) multilevel models, we show that in addition to predicting daily autonomy, trait mindfulness predicts daily felt competence ($b = 0.24$, 95% CI [0.08, 0.39], $p = .003$) and relatedness ($b = 0.37$, 95% CI [0.10, 0.63], $p = .006$). In Study 2, we present the results of a randomized controlled trial of a smartphone-delivered mindfulness training effects on EMA-measured basic psychological needs in a racially and ethnically diverse college student sample ($N = 78$). Data collection is scheduled for the spring semester of 2023. To test those effects, we will use REML multilevel models to compare slopes in pre-training (baseline) period to training, and post-training

periods in mindfulness and control groups for each outcome (autonomy, relatedness, and competence). We expect that participants in the mindfulness group will enjoy a higher positive training effect on their basic needs in the training and post-training periods than participants in the control group. Thus, we present both observational and causal evidence on the connection between mindfulness and basic psychological needs.

The unexpected predictive role of dispositional mindfulness on BMI in nurses

Deborah Rosen, Grand Canyon University

This quantitative correlational-predictive study examined the extent to which dispositional mindfulness and dietary behaviors of cognitive restraint, emotional eating, and uncontrolled eating, considered both collectively and individually, predict BMI in nurses in the United States. Mindfulness theory and restraint theory provided the foundation for the study. Two research questions were established to address the problem space regarding the predictive relationship as a collective model and as individual variables. Dispositional mindfulness was measured by the Mindfulness Attention Awareness Scale; cognitive restraint, emotional eating, and uncontrolled eating by the Three Factor Eating Questionnaire (R18-V2); and BMI by height and weight collected in a demographic questionnaire. The study included primary data collected from a convenience sample of 157 nurses who participated in a volunteer panel on the SurveyMonkey platform online. Data analysis included descriptive statistics and multiple linear regression to answer the research questions. Results of the multiple linear regression demonstrated that dispositional mindfulness, cognitive restraint, emotional eating, and uncontrolled eating, considered collectively, significantly predict BMI in nurses, $F(4, 152) = 5.210, p < .001$. Two of the individual variables were found to have a significant positive relationship with BMI, including dispositional mindfulness ($\beta = .302, p = .002$) and uncontrolled eating ($\beta = .335, p = .012$). Cognitive restraint and emotional eating, considered individually, did not significantly predict BMI. The positive and significant relationship between dispositional mindfulness and BMI in nurses was unexpected when compared to previous research on the topic in other populations. Nurses' selflessness, attention to the needs of others, emotional regulation, and their lack of self-care behaviors are discussed as potential mechanisms for the unexpected relationship. The findings can be used to inform nurses, and their employers, about the factors that predict obesity in this critically important population.

Individual Talk 2C **Development & Parenting | Practicing Parental Need Support**

Longboat

5 Stories of real parents who applied SDT with their children

Patrick Ney

Understanding parental control and structure in anxious and non-anxious children: An observational study

Madeline Levitt, Weill Cornell Medicine

Wendy Grolnick, Clark University

Jacquelyn Raftery-Helmer, Worcester State University

Controlling or restrictive parenting behaviors have been linked to the development and maintenance of child anxiety (Grolnick et al., 1997), while the relation between parental structure and child anxiety has yet to be explored. This observational study used a Self-Determination Theory (Ryan & Deci, 2017) framework to examine parental controllingness and structure during parent-child interactions in a sample of clinically anxious and non-anxious children. Fifty-two children ages 7-17 ($M = 11.79$) in grades 1-12 and their parent (45 mothers, 7 fathers) participated. Twenty-five children were diagnosed with a clinical anxiety disorder and 27 children did not meet clinical criteria. Children and their parents participated in two video recorded conversations—one on something that makes the child anxious (anxiety conversation) and one on an area of parent-child conflict (conflict conversation). Parent and child behaviors were coded by raters blind to study groups (anxious and non-anxious) and hypotheses for parental controllingness and structure, and child engagement and affect. Results revealed that parents of anxious children were equally controlling when discussing their child's anxiety and parent-child conflict ($t(24) = -.29, p = .78$), whereas parents of non-anxious children were more controlling when discussing parent-child conflict compared to child anxiety ($t(26) = -3.35, p < .001$). In regression analyses, higher ratings of parental structure, but not control, were associated with children's higher engagement ($t = 2.76, p < .001, \beta = .56$) and more positive affect ($t = 2.81, p < .001, \beta = .47$) in the conversations, and

these associations were stronger and significant only in the anxious group. These findings underscore the importance of examining parental structure alongside control in parent-child interactions using observational methods. Results highlight the vital role of parents' provision of structure for the experience of anxious children in particular, and can help inform clinical care.

Reciprocal and combined effects of parents' and teachers' support on children's task persistence and performance

Gintas Silinskas, Department of Psychology, University of Jyväskylä, Finland

Eve Kikas, Department of Psychology, Tallinn University, Estonia

Saule Raiziene, Department of Psychology, Vilnius University, Lithuania

The goal of this study was to investigate the reciprocal longitudinal associations between parental homework support (help, monitoring, and autonomy), teachers' support during class tasks (help, monitoring, and autonomy), and children's task persistence and performance. In addition, we investigated the combined (moderation) effects of the dimensions of parents' and teachers' support on children's task persistence and performance. Data from 525 Lithuanian children (mean age = 8.25, girls 47%) their parents (n = 525) and teachers (n = 40) were collected twice—at the beginning and at the end of Grade 2. Children completed tests in reading and mathematics, and test administrators (professional school psychologists) evaluated children's task persistence when working on these tests. Parents answered questionnaires concerning frequency and type of homework support they had provided. Teachers answered questionnaires on the frequency and type of support towards each child in their classrooms. First, the results showed that parents and teachers often monitored their children's homework completion and classwork, and only sometimes helped directly. Second, poor children's performance evoked more frequent parental help and monitoring, whereas teachers increased their help in relation to children's poor performance and low task persistence. Third, help from parents negatively predicted children's task persistence, whereas teachers' help had a positive effect on children's task persistence. As for children's performance, increased parental help negatively but parental autonomy positively predicted performance at the end of Grade 2. Finally, the interaction term "teacher monitoring x teacher autonomy" predicted children's task persistence, and the interaction term "parent autonomy x teacher autonomy" predicted academic performance. In both cases, teacher autonomy strengthened the effects of the predictor. Overall, the findings suggest that support for autonomy that children receive from their close environments (parents and teachers) can play a direct and moderating role in the development of children's task persistence and academic performance.

Homeschooling and unschooling: A direct application of self-determination and cognitive evaluation theory

Gina Riley, CUNY Hunter College

Unschooling is a variation of homeschooling where, instead of following a set curriculum, children and teens learn through everyday life experiences. As an increasing number of families are choosing to unschool, it becomes important to further study the workings of this philosophical and educational choice. It is estimated that approximately 12% of families who homeschool, unschool their children, and this number is significantly increasing post-pandemic. The unschooling environment itself tends to provide space for self-directed and intrinsically motivated learning, and seems to be a direct educational application of Deci and Ryan's (1985) Self-Determination Theory and Cognitive Evaluation Theory. Within this presentation, the speaker will describe and expand upon how the unschooling environment is a modern example of true, intrinsically motivated learning. The speaker will also discuss how homeschooling and unschooling families tend to naturally provide the three psychological needs developed within Cognitive Evaluation Theory, specifically the needs of competence, autonomy, and relatedness.

Individual Talk 2D **Education** | Supporting Student Motivation

Canavera

Mixed-methods approach to assess pedagogical teaching quality after a video-based online coaching

Jessica Maier, University of Potsdam

In this project, a 6-month video-based online coaching based on the MyTeachingPartner-Program, modified by Richartz for sports contexts, was adapted for the context of physical education to improve teaching quality. This professional development program is based on a generic observation tool called Classroom Assessment Scoring System (CLASS, Pianta, La Paro & Hamre, 2008). In terms of theoretical/empirical basis, Self-Determination Theory is

highly relevant to several quality dimensions of the CLASS. For example, supporting the basic need for autonomy is central to the Regard for Student Perspectives dimension. Support of relatedness is primarily important for the Positive Climate and Teacher Sensitivity dimensions. Support of the basic need for competence is considered in the Teacher Sensitivity dimension, as well as in the Instructional Learning Formats and Quality of Feedback dimensions. During the high-intensity coaching, qualitative and quantitative data were collected on five physical education teachers who participated in the intervention. In this presentation, I specifically address three of seven data sources that were collected for all teachers. These are data from a children's questionnaire based on cognitive evaluation and basic need theory, CLASS scores from five different measurement points, and qualitative observational data from individual lesson settings. Results of the data triangulation show that the results of these different perspectives are only partially consistent. A great deal of agreement is evident between the data from the CLASS observations and the setting descriptions. In contrast, however, there is a large divergence between the results of these two observational data sets and the data from the children's questionnaires. Content and methodological issues are discussed. Overall, a mixed-methods approach seems promising for further research in this area to shed light on this complex construct of teaching quality from multiple perspectives. Pianta, R., LaParo, K. & Hamre, B. (2008). *The Classroom Assessment Scoring System K-3 Manual*.

Addressing digital distraction in college classrooms: Policies, enforcement, and students' basic psychological needs

Abraham Flanigan, Georgia Southern University

Anna Brady, Georgia Southern University

Yan Dai

Emily Ray

The prevalence and negative consequences of student digital distraction in the classroom require college instructors to proactively regulate student use of digital devices to protect the integrity of the learning environment. The present paper used the tenets of Self-Determination Theory as a lens to analyze findings from 46 peer-reviewed research articles to illustrate how and why common policies and strategies intended to curb student digital distraction can inadvertently threaten students' basic psychological needs for autonomy, competence, and relatedness in the classroom and, subsequently, alienate students against instructors. Articles chosen for this analysis investigated undergraduate perceptions of, and reactions to, digital distraction-related course policies and the strategies used by instructors to enforce those policies. Two independent raters reviewed each article to identify findings related to how course policies and enforcement strategies affected undergraduates' basic psychological needs for autonomy, competence, and relatedness in the classroom. Findings revealed that digital distraction policies and enforcement strategies affect undergraduates' basic psychological needs. For instance, restricting device use can negatively impact students' perceived autonomy to choose which tools they use to learn during class. Similarly, because many undergraduates believe typing makes it easier to take notes and learn, restricting laptop use in the classroom can hinder undergraduates' perceived competence for learning. Furthermore, enforcing technology policies in a confrontational manner—such as reprimanding students out in front of their classmates—can sour student perceptions of student-instructor rapport and threaten students' need for relatedness with their instructor. Based on these findings, we will identify evidence-based policies and enforcement strategies that can be used to curb student digital distraction without threatening students' basic psychological needs or alienating students against instructors.

Mastery learning system: An innovation in self-determined learning

Mark Gutkowski, Avenues: The World School

In the 2017-2018 school year, Avenues: The World School piloted the Mastery Learning System (MLS), a special program for 10th graders designed to maximize student autonomy in school. Fifteen students in the pilot exchanged regular classes, i.e. Art & Design, English, History and Science, for a substantial amount of space and time during the school week in order to develop personalized projects that aligned with school-sanctioned learning outcomes. Our team collected both quantitative and qualitative data in the form of questionnaires and in-person interviews with students, parents and faculty to assess the experience. The results of the pilot were positive with respondents indicating a high-level of satisfaction and engagement with the experience. In order to confirm the results, we ran the pilot again with another 16 students in 2018-2019 and replicated the student and family results from the previous year.

We also examined the impact of this experience on student standardized test scores, i.e. comparing pre-MLS ISA test results to 11th grade PSAT scores, and found no statistically-significant changes across these first two cohorts of students. As we have continued to develop and expand the MLS, the most impressive aspect has been the high-quality project work that students have achieved during the experience. Some of the more adventurous projects (e.g. a 3D printed drone designed and programmed from scratch; the Avenues Law Review, the first high-school law review in the country; a particle accelerator, et al.) continued to develop over the next few years and garnered substantial recognition from outside the Avenues community. Given the radical re-invention of school that the MLS represents, we read all of these results as positive steps forward in the advancement of a novel pedagogical model, grounded in the basic tenets of self-determination theory and potentially replicable in schools around the world.

Meeting students basic psychological needs through ungrading

Daniel Guberman, Purdue University
Chantal Levesque-Bristol, Purdue University
Wonki Lee, Purdue University

Decades of evidence demonstrates that a focus on extrinsic goals (such as rewards or avoiding punishment) deters well-being (Bradshaw, et al. 2022). Yet, throughout higher education we find courses structured around grading systems that rely on grades as extrinsic tools to motivate students. Most instructors must assign grades at the end of a course, even if they are aware of the problematic use of grades. Due to the negative impact of such systems, as scholars and practitioners of SDT we should explore the range of possible alternative feedback structures. Such structures should result in end-of-course grades that fulfill professional requirements, while also empowering students through their active role in the feedback and reflection process to meet their basic psychological needs. In this presentation we study an implementation of the alternative approach commonly termed “ungrading,” in which students receive feedback on their work but not grades. Final grades are determined by the students through self-reflection and discussion with the instructor about their achievements in the course. We share quantitative and qualitative data spanning five class iterations of a music history course taking place before, during, and after the COVID-19 pandemic. Quantitative data includes the Learning Climate Questionnaire (Williams and Deci, 1996), the Situational Motivation Scale (Guay, Vallerand, and Blanchard 2000) and the Basic Psychological Needs Satisfaction Scale (Deci & Ryan, 2000; Gagné, 2003). Qualitative data is drawn from both student reflections about their learning as part of the self-assessment process and open-ended questions about their experiences in the class. These are accompanied by instructor reflections on perceived changes in the course and workload. We also share strategies that have helped instructors to experiment with alternative grading structures, based on consultations with faculty from around the United States in a variety of disciplines and course types.

Individual Talk 2E **Health and Activity** | Supporting Athletes' Motivation & Long-term Commitment to Sport

Merritt

University students' motivational profile in sports: Variable- and person-centered approaches to sport motivation regulations

Masato Kawabata, Nanyang Technological University

The purpose of the present study was to investigate Japanese university student's motivational profile in sports from a perspective of Organismic Integration Theory. Participants were 737 Japanese university students (569 men, 168 women; $M = 19.2$, $SD = 0.9$), who took part in sports regularly. They completed a survey package consisting of a Japanese version of the Sport Motivation Scale-II (SMS-II; Pelletier et al., 2013) and other psychological scales (e.g., the Subjective Vitality Scale; Ryan & Frederick, 1997). All the scales were previously translated/adapted into Japanese by using back-translation and team approaches. Participant's sport regulation responses were analyzed with bi-factor exploratory structural equation modeling (ESEM) and latent profile analysis (LPA). The overall fit of the bi-factor ESEM model was satisfactorily ($CFI = .987$, $TLI = .958$, $SRMR = .013$, $RMSEA = .044$). Through a series of LPAs, 5 classes were identified. The profiles of the sport regulation scores differed qualitatively (profile shape) and quantitatively (profile level) across the classes. Of the 5 classes, 2 classes (Class 4: 15.5%; Class 5: 7.3%) presented a moderately and very high level of global motivation, respectively. Class 4 showed a moderately high level of intrinsic regulation, whereas Class 5 indicated a very high level of integrated regulation. Three other classes (Class 1: 21.8%; Class 2: 16.3%; Class 3: 27.4%)

presented an average or a low level of global motivation. Class 3 showed the lowest level of global motivation among the classes. A 2 (Gender) x 5 (Class) ANOVA on the vitality score revealed that the vitality score of two classes with a high level of global motivation (Classes 4 and 5) was significantly higher than three other classes (Classes 1-3). The findings of the present study indicated that adequate support should be given to the student-athletes presenting a maladaptive motivational profile.

The role of the leaders' and coaches' (de)motivating style in members' dropout intentions: A multi-informant and multi-level perspective

Tom De Clerck, Ghent University - Department of Movement and Sports Sciences

Nele Van Doren, Ghent University - Department of Movement and Sports Sciences

Leen Haerens, Ghent University - Department of Movement and Sports Sciences

Despite the benefits of lifelong organized sports participation (i.e., sports participation in sports clubs), a significant number of sports club members quit organized sports as they grow older. An abundant number of SDT studies have proven that the context of the sports club has an important influence on members' dropout, highlighting the role of the coach in members' attitude towards their sport. In addition, SDT literature suggests that the leaders of sports clubs (i.e., board members) can have an impact on member outcomes through their influence on the coaches. Yet, this issue is still underexplored. In this study, we examine for the first time the role of both the leaders' and coaches' (de)motivating style in members' dropout intentions. To this end, we adopt a novel multilevel and multi-informant approach, collecting data from at least three coaches within Flemish sports club, as well as at least three members within the coaches' teams. Our main research goal is to study whether the leaders' (de)motivating style as perceived by the coaches relates to the coaches' (de)motivating style as perceived by the members of their teams, and in turn to the members' dropout intentions (i.e., trickle-down effect). Preliminary results of data collected within 18 sports clubs (involving 68 coaches and 371 sports team members) indicated that the leaders' reliance on motivating styles (i.e., autonomy support and structure) reduced the coaches' reliance on a chaotic style, which in turn diminished the members' intentions to drop out. Apart from contextual factors, also the years of experience seemed to play a pivotal role in the coaches' (de)motivating style, with experienced coaches relying less on an autonomy-supportive and a structuring style. The preliminary results suggest that board members can influence members' dropout intentions via their impact on coaches. The final results will be discussed at the 2023 SDT conference.

Changes in amotivation was the only credible predictor of dropout in a sample of Swedish youth soccer players during the COVID-19 Pandemic

Linus Jonsson, Halmstad University

Jenny Back, Halmstad University

Urban Johnson, Halmstad University

Petra Svedburg, Halmstad University

Andreas Ivarsson, Halmstad University

Background: Regular sport participation is essential for youths physical, mental, and social health. Research shows, however, that sports participation peaks at around 10-14 years of age before declining through adolescence. Soccer, which is the most popular youth sport in Sweden, is no exception to dropout problems during adolescence. Objectives: The purpose was to examine longitudinal changes in youth soccer players motivational regulations during the first year of the Covid-19 pandemic in Sweden, and how longitudinal changes in motivational regulations predicts dropout from youth soccer. Design: Three-wave survey. Methods: Self-reported data was collected from 325 youth soccer players between 11 and 17 years of age ($M = 13.08$) at the beginning of the season in 2019 (T1) and 2020 (T2) and dropout data was reported by the coaches at the end of the season in 2021 (T3). Latent change score analyses, using Bayesian estimator, was used to examine change in the players motivational regulations. Results: There was a credible increase in amotivation ($\beta = 0.14$) and a credible decrease in identified regulation ($\beta = -0.41$) between T1 and T2. Changes in amotivation ($\beta = 0.15$) between T1 and T2 were the only credible predictor of dropout from soccer at T3. Conclusions: To reduce the risk of dropout from youth soccer, during an ongoing pandemic, it is important to mitigate increases in amotivation.

Intersectionality of sex, race/ethnicity, and sport level differentiates coach-created motivational climates and psychological needs

Tsz Lun (Alan) Chu, University of Wisconsin - Green Bay

Trent Petrie, University of North Texas

Alec Treacy, Florida State University

Tao Zhang, University of North Texas

Erin Albert, University of North Carolina at Charlotte

Identity influences individuals' perceptions of their environments, such as in sport. This study explored (1) the intersection of athletes' sex, race/ethnicity, and sport level related to their perceived coach-created motivational climates and psychological need satisfaction and frustration, and (2) the primary facets of these variables that contribute to group differences. Participants were 406 high school athletes (Mage = 15.47; 42.3% female) and 440 collegiate athletes (Mage = 19.73; 53.9% female) in the U.S. They completed the Empowering and Disempowering Motivational Climate Questionnaire and validated measures of psychological need satisfaction and frustration. To examine intersectionality, 2 (male, female) \times 3 (Black, Hispanic/Latinx, White) \times 2 (high school, college) MANOVAs and follow-up descriptive discriminant analyses were conducted on two sets of dependent variables: (1) coach-created climates (task-involving, autonomy-supportive, relatedness-supportive, ego-involving, and controlling); and (2) psychological needs (autonomy satisfaction, competence satisfaction, relatedness satisfaction, autonomy frustration, competence frustration, and relatedness frustration). Results indicated three significant interaction effects: (1) sex by race on coach-created climates, Pillai's Trace = .029, $F(10, 1662) = 2.40$, $p = .008$, $\eta^2 = .014$, primarily ego-involving ($r_s = -.60$) and controlling ($r_s = -.92$); (2) sex by level on coach-created climates, Pillai's Trace = .016, $F(5, 830) = 2.75$, $p = .018$, $\eta^2 = .016$, primarily task-involving ($r_s = -.50$), ego-involving ($r_s = -.46$), and controlling ($r_s = -.42$); and (3) sex by race on psychological needs, Pillai's Trace = .042, $F(12, 1660) = 2.976$, $p < .001$, $\eta^2 = .021$, primarily competence satisfaction ($r_s = .56$), autonomy frustration ($r_s = -.36$), competence frustration ($r_s = -.60$), and relatedness frustration ($r_s = -.68$). Overall, Black male athletes perceive more disempowering coach-created climates and psychology need frustration compared to other sex by race combinations. Coaches and athletic staff should mitigate these negative racialized and gendered sport experiences through need-supportive strategies.

Individual Talk 2F

Work & Organizations | Fostering Well-being in the Workplace

Biscayne

An employee wellbeing model from SDT perspective: Precious and rare as a diamond

Ozge Kantas, St. John Fisher University

Melis Abacioglu, Wellbees

Employee well-being strategies are getting more and more attention, as we see in the governmental and non-governmental organizations' highlights of social sustainability policy of ESG (Environmental, Social, and Corporate Governance) by the United Nations Global Compact, in the Surgeon General's framework of Workplace Mental Health, or in the National Institute for Occupational Safety and Health of Center for Disease Control and Prevention. Although such frameworks include important facets of well-being, they do not provide a theoretical background of where to start with. Based on the Self-Determination Theory, we formulated a diamond-shaped model of employee well-being and tested for its fit with cross-cultural data. Accordingly, psychological safety, as sustained by the satisfaction of three basic needs, covaries with inclusive management, supportive leadership, and autonomously chosen non-work related well-being activities (environmental, social, spiritual, physical, emotional, and intellectual). These in turn predict higher positive affect and lower negative affect at work, bridge more for skill and talent gap, and higher satisfaction and engagement. Through these mediator variables, fewer mentally ill days at work and higher vitality in life can be observed with 17% and 71% of the explained variance respectively. The model fits the data well so far, $X^2(17) = 27.1$, $p = .05$, CFI = .95, GFI = .99, RMSEA = .10. Data collection is still in progress. The findings are promising to contribute to the well-being science from an SDT perspective, especially to provide action steps for what to start with. Applications and implications have the potential to speak for the necessary organizational attempts as a sustainability strategy for the desired goals of increased vitality, satisfaction, and engagement like a diamond point engraving in each step.

Well-being and the evolving place of work: The increased importance of manager autonomy support and self-determined motivation in a COVID normal working world

Mark Lee, RMIT University

The COVID-19 pandemic has had a widespread impact on how and where millions of people work across the globe. By normalizing alternative working arrangements, such as working from home and hybrid working, this radical shift has had serious implications for people's well-being and mental health. Previous research has identified a critical role for manager autonomy support and self-determined motivation at work, and we examined how these factors interact with these changing work arrangements to impact well-being and mental health for professional workers more broadly. In a sample of 403 professional workers from Australia, New Zealand, the United Kingdom, and United States, we found that manager autonomy support and quality of motivation were universally among the most important predictors of mental health and well-being, regardless of work arrangements. Satisfaction and frustration of basic psychological needs at work mediated these relationships, with satisfaction of autonomy the strongest predictor of job satisfaction and well-being, and competence frustration the strongest predictor of psychological distress. Interestingly, we found a complex relationship among work arrangements, self-determined motivation for work and well-being. Work arrangements were not initially a substantial predictor of well-being, however the addition of self-determined motivation for work amplified the influence of work arrangements. Therefore, it appears that the evolving work environment acts to amplify the effects of these critical self-determined aspects of work. The ability of distal managers to be autonomy supportive and to promote the satisfaction of workers autonomy and competence needs is now more critical than ever. We discuss practical suggestions for how this might be done.

Dispositional gratitude prospectively predicts workplace well-being through the mediation of basic psychological need satisfaction: Evidence from three longitudinal studies in Chile

Wenceslao Unanue, Business School, Universidad Adolfo Ibáñez, Chile

Valentina Reyes, Facultad de Economía y Negocios, Universidad Diego Portales, Chile

Jesús Unanue, Facultad de Economía y Negocios, Universidad Andres Bello, Santiago, Chile

The study of the link between gratitude and well-being at work is very limited: Research is mostly cross-sectional and the mediators are underexplored. Aiming to extend previous studies, first, I theorized that gratitude predicts job well-being longitudinally. Additionally, drawing on Self-determination theory (SDT), I theorize that the satisfaction of the needs for autonomy, competence and relatedness (BPNS) mediates the mentioned link. Thus, I conducted three three-wave longitudinal studies with one (N = 725), three (N = 1841), and six (N = 2045) months between each wave respectively in Chile. Consistently, all studies supported the hypotheses: Gratitude predicts longitudinally well-being at work through the mediation of BPNS. More specifically, Gratitude at T1 prospectively predicts higher BPNS at T2, which in turn prospectively predicts higher engagement and job satisfaction, as well as lower burnout, job insecurity and turnover intentions at T3. Key implications for gratitude and SDT research are discussed.

A multi-level intervention to optimize motivation and promote wellness among employees

Christopher Niemiec, University of Rochester

Anja Olafsen, University of South-Eastern Norway

Geoffrey Williams, University of South-Eastern Norway

Work is an integral part of adults' lives, as work-related activities occupy a substantial portion of employees' waking hours and contribute to development of a personal identity. It is unfortunate that two-thirds of American employees report that their work is a significant source of stress, which can contribute to mental health problems and absenteeism. Indeed, work-related stress has been estimated to cost \$500 billion per year in the U.S. due to health care utilization and lost productivity. As work has become more psychologically demanding, research suggests that organizational interventions can attenuate adverse experiences and promote engagement, health, and performance among employees. Herein, we will describe the design of a multi-level intervention that is intended to optimize work motivation and support psychological and physical health among employees. This intervention is based on the principles of self-determination theory and job crafting—frameworks that represent influential bodies of research showing that organizational interventions can enhance employee well-being and performance by focusing on

leadership and job characteristics, respectively. However, these frameworks target different “levels” within the organization. By combining these frameworks into the design of the multi-level intervention described herein, we aim to take a more holistic approach to the facilitation of employee motivation, well-being, and work functioning. The intervention for managers will include training on how to provide need support to employees and it will emphasize the importance of maintaining a need-supportive style at work going forward. The intervention for employees will include training on crafting at work and training elements to reinforce content, consolidate learning, and internalize employees’ crafting going forward.

10:05 – 11:05 AM

Keynotes 2

Keynotes 2A

Peninsula 1-4

Deconstructing the experience of growth: Autonomy, competence, and the hero’s journey

Scott Rigby, founder/CEO of Immersyve and motivationWorks

The concept of growth plays an important role in SDT as both a fundamental characteristic of life and a need-satisfying experience often linked to our basic need for competence. In years of applied commercial research, our group has found the experience “I am growing,” to be a consistent driver of sustained engagement and value. As such, we’ve wanted to better understand the phenomenology of growth, which has led to some interesting deconstructions and potential new conceptualizations that integrate basic needs with experiences such as novelty, exploration, and surprise. In this talk, I’ll unpack some of these ideas, the work inspiring them, and implications for further research and application.

When choice motivates and when it does not: Research on choice, autonomy, and well-being

Idit Katz, Ben-Gurion University

Choice provision is a well-known and preferred practice among parents and teachers aiming to enhance students' internalization of the actions' value and experience of autonomy. However, there is some evidence that choice provision does not always promote motivation and can even, in some cases, hinder or reduce it . Based on the theoretical assumptions of Self-Determination Theory, I will argue that the provision of choice is beneficial and can promote motivation if it is provided by significant others (parents and or teachers) in a way that supports the psychological needs of the chooser for autonomy, competence, and relatedness. Namely, when the choice is provided in a need-supporting environment, it enhances motivation, but providing choice in a need- thwarting climate can be harmful. I will present a few studies conducted with colleagues and students, focusing on the question: When choice motivates, and when it does not? We examined this question in the context of "significant life choices," such as a first career choice, as these choices have long life effects. The consequences of making this decision out of controlled rather than autonomous reasons might be significant. In these studies, we measured the following: a). The level at which significant others support the chooser's needs (i.e., was the choice made in a need- supportive or need- depriving environment?); b). How autonomous are the choosers in making their choice? (i.e., was the choice made out of autonomous motives such as interest, joy, or understanding the value of the action? or was it made out of compulsion or to avoid shame or guilt?); c). What are the choice outcomes (i.e., how persistent, successful in the chosen activity, and satisfied with the choice the chooser is?). In addition, various mechanisms that can mediate or moderate the association between the support provided, the motivation to choose, and the choice outcomes were examined. Reinforcing SDT basic assumptions, the findings of these studies show that meaningful choices provided in a need- supportive environment promote chooser autonomy, choice satisfaction, well-being, persistence, and success in the chosen task. In this talk, I will suggest future research directions to understand better the benefits and drawbacks of choice provision.

Keynotes 2B

Peninsula 5-7

Aspiring, acquiring, and retiring: What we know and where we could go with goal content theory research

Emma Bradshaw, Australian Catholic University

Goal Contents Theory (GCT) has become a trusted lens for understanding how people's aspirations shape their well-being. This talk will begin with an overview of what we have learned from GCT research, focusing primarily on recent meta-analytic evidence a meta-analysis of GCT ($k = 92$, $N = 70,110$) that the benefits of intrinsic aspiring and the costs of extrinsic aspiring may be universal. The address will then turn to new and exciting research that could steer GCT in novel directions. Of particular interest will be research focusses on what happens when we reflect on our intrinsic and extrinsic accomplishments. The focus of GCT research has tended to be on what we aspire for in the future, but what are the aftereffects of the intrinsic and extrinsic goals we have already accomplished? In answer to this question, I will review evidence about the consequences of reflecting on one's intrinsic and extrinsic accomplishments, paying special attention to how those effects may be particularly relevant to adults in late life. I will also outline emerging evidence that the acquisition of extrinsic goals is something of a "double-edged sword", with links to both basic psychological need satisfaction and basic psychological need frustration. My goal for this presentation is to convey that, despite the passing of 30 years and the publication of hundreds of empirical studies, what we have learned from GCT may still be just the beginning. I hope this talk is an exciting opportunity to explore the latest developments in GCT research, and to connect with others who are passionate about understanding the myriad ways our aspirations shape our lives.

The tripartite structure of the meta-need for autonomy: Freedom, inner compass, and true-volition

Avi Assor, Ben Gurion University

The need for autonomy was defined by Ryan and Deci (2017) as the desire to feel a sense of true volition and self-endorsement regarding what we do. Although this conceptualization proved to be extremely useful, the definition of the need for autonomy as involving mainly true-volition or self-endorsement may be incomplete. The purpose of this talk is to try to propose a more complete definition of the need for autonomy involving two additional components: (1) Having and realizing an authentic inner compass (AIC), and (2) Freedom to direct oneself. Actions satisfying these two autonomy aspects, and/or other needs and authentic personal inclinations, are posited to promote the experiences of true volition and self-endorsement, which further contributes to well-being and resilience.

Following a brief description of the three need autonomy components, I will present five reasons why the addition of the two components is important: (1) A logical-psychological argument: Freedom and AIC formation & realization are essential for true self-direction, (2) Freedom and AIC are important aspects of autonomy according to SDT, other psychological theories, and important philosophical analyses (e.g., Berlin, 1969). By including freedom and AIC in the concept of the meta- need for autonomy, we find a place within SDT for aspects of autonomy that other serious analyses have found important, and we also make SDT more internally consistent. (3) The concepts of true volition & self- endorsement do not specify what exactly people need to feel autonomous. Freedom and AIC do. (4) The concepts of freedom and AIC allow a much better distinction between the need for autonomy and other needs than does the concept of true volition & self-endorsement. Therefore, adding these components increases the explanatory and predictive power of the need for autonomy construct, (5) The concept of AIC led to the introduction of important new aspects of autonomy support: Intrinsic value demonstration, and fostering inner valuing.

The last part will present empirical evidence supporting the tripartite conception. In this part, I will focus mainly on experimental and correlational evidence demonstrating the contribution of the experience of having and realizing an AIC to well-being and resilience, also when controlling for the effects of the needs for competence, relatedness and autonomy as assessed by the Chen et al (2015) measure.

Theoretically and practically, distinguishing between the Freedom & AIC components of the meta-need for autonomy is important because each component requires the enactment of somewhat different autonomy- supportive practices, and has unique benefits.

11:15 – 12:45 PM

Symposia 2

Symposium 2A

Special Topics | Motivational Challenges During the COVID-19 Pandemic:

Peninsula 1-4

Refreshing Insights from Global Studies

GENERAL OVERVIEW

Since the last SDT-conference in the Netherlands in 2019, the world was exposed to a global pandemic by the spread of the coronavirus. We were required to stay at home, have online meetings, and to keep physical distance from those we love. The present conference was postponed for one year due to the pandemic. Although challenging in many ways, this 2.5 years-long period also provided an opportunity for research addressing various motivational-behavioral themes. In this symposium, four speakers from diverse countries are brought together to bring their own unique viewpoint on the role of motivation and the factors supporting motivation, thereby making use of cross-sectional, longitudinal, and experimental designs. Specifically, the role of different types of motivation in predicting Canadian citizens' intention to adhere to health-protective behaviors is addressed in the first talk (Dr. Guay; presenter 1). Presenting data that span the entire pandemic in Belgium, the role of shifts in hospitalization numbers and risk perceptions as precursors of autonomous motivation to adhere to health-protective behavior is addressed in the second talk (Drs. Waterschoot; presenter 2). Turning to the role of communication, the third talk presents findings from a world-wide experimental study on the role of autonomy-supportive and controlling communication in fostering autonomous motivation to adhere to health-protective behavior (Dr. Legate, presenter 3). Finally, the role of governmental trust and conspiracism as distal predictors of Belgian citizens' vaccination intentions, with motivation and the lack thereof serving as an explanatory mechanisms, is addressed in the last presentation (Dra. Van Oost; presenter 4).

COVID-19 illegal social gatherings: Predicting rule compliance from autonomous and controlled forms of motivation
Frédérique Guay, Laval University

The purpose of this study was to identify predictors of rule compliance regarding private gatherings during the 2020 Christmas holidays in the province of Quebec (Canada), where gatherings were ruled as illegal, with few exceptions. We used the self-determination theory framework to predict rule compliance as a function of autonomous, controlled-approach and controlled-avoidance motivations. Moreover, we measured psychological distress among participants as well as anxiety of COVID-19 exposure. Motivation and psychological distress measures were taken a couple of days prior to the holiday period, whereas rule compliance was measured approximately 10 days later, in early January. A total of 1332 individuals filled the first online survey and 627 completed the follow-up measure. Rule compliance was predicted positively by autonomous motivation, but negatively by controlled-avoidance motivation. Controlled approach was not a significant predictor of rule compliance. Controlled-approach, psychological distress, anxiety to catch COVID-19, gender, age, marital status and educational levels were non-significant predictor of compliance. Public health officials have long recognized the importance of supporting community to follow public health measures. Nonetheless, there are still many governments that take a heavy-handed approach to control the virus. This article contributes to an interesting finding in that regard: the avoidant type of controlled motivation is the one that will backfire whereas the approach one will produce no benefits and could even have secondary negative consequences for wellness. Thus, in line with many findings in the motivation literature, one of the best possible solutions that governments could put in place would be to justify the importance of the established rules so that we can better control the spread of COVID-19.

'Danced with viruses': The associations between the epidemiology of the COVID-19 crisis, people's risk perception and their motivation for health-safe behaviors

Joachim Waterschoot (Chair), Ghent University

Aim. To manage the COVID-19 pandemic, governments imposed invasive behavioral measures to limit the virus circulation. Because the adherence to these measures depended on people's type of motivation, the current presentation addresses two studies that were conducted in the light of a long-term, national research project, named 'the Motivation Barometer'. Herein, we discuss the role of the epidemiology of COVID-19 and how it impacted, first, people's risk perception and (Study 1), second, people's motivation to adhere the measures (Study 2), evenmore demonstrating how this impacted the epidemiology itself further in time.**Method.** Data was collected during the Belgian crisis, spanning 24 months (March 2020 – 2022; n1 = 241,275; n2 = 183,766). **Results.** In terms of people's risk perception, their perceived severity was more prominent than the perceived probability to be infected, up until Omicron emerged. At both the between-persons and between-days levels, perceived severity was the most strongly related to autonomous motivation. In their turn, results of Study 2 demonstrate that infection and hospitalization rates

resulted in higher autonomous motivation on the same day, which in turn related to decreasing infections and hospitalizations 43 and 50 days later in time. Conclusion. The Motivation Barometer allowed us to reveal unseen dynamics during the COVID-19 crisis, with the crisis impacting people's risk perception which in his turn affected people's autonomous motivation, acting as a psychological predictor of people's behavioral adherence.

A global experiment on motivating social distancing during the COVID-19 Pandemic

Nicole Legate, Illinois Institute of Technology

This global experiment aimed to find generalizable outcomes of differing motivational messages about social distancing comparing an autonomy-supportive message that promoted choice and agency with a controlling message that was forceful and shaming in 25,718 people across 89 countries. The autonomy-supportive message decreased feelings of defying social distancing recommendations relative to the controlling message, and the controlling message increased controlled motivation, a less effective form of motivation, relative to no message. Message type did not impact intentions to socially distance, but people's existing motivations predicted behavioral intentions in expected ways. Findings were generalizable across a geographically diverse sample and suggest the potential harm of using shaming and pressuring language in public health communication, with implications for the current and future global health challenges. In addition to discussing specific findings, we also reflect on lessons learned from this major undertaking, and what self-determination theory can offer big team open science projects (and vice versa).

Understanding the motivational mechanisms underlying the effect of conspiracism and government trust on COVID-19 vaccination intentions

Pascaline Van Oost, University of Louvain

Aims. Reaching high vaccination rates is crucial to limit the spread of COVID-19 and control the pandemic. In spite of this, vaccination hesitancy is still very much present in a sizeable portion of the population. Bridging the literature on Self-Determination Theory and the work on conspiracism and trust in authorities, the present research examines how trust in authorities and conspiracism shape vaccination intentions, and unveils the underlying motivational mechanisms at play (identified and external motivations, distrust-based and effort-based amotivations). Methods. Using Structural Equation Modeling, we tested mediational models in two independent Belgian samples, in February 2021 (T1) and April 2021 (T2) (Total N = 8264). Results. At T1 and T2, conspiracism and trust in government both predicted COVID-19 vaccination intentions, respectively negatively and positively. Motivational factors fully accounted for these relations, with identified motivation showing the largest positive effect. Our model provided satisfactory fit at both points in time, but also across two linguistic contexts. Interestingly, while differences emerged at T2, with French-speaking Belgians conveying lower levels in government trust and higher levels of conspiracism than Dutch speakers did, the model showed remarkable stability. Conclusions. These results highlight the importance of integrating both distal (trust in government, conspiracism) and proximal (motivational) variables to shed light on citizens' vaccination intentions.

Symposium 2B

Development & Parenting | New Developments in SDT-Based Research on

Canaveral

Parenting: Predictors, Concomitants, and Interventions

GENERAL OVERVIEW

Children tend to thrive when their parents behave in ways that satisfy their psychological needs. However, parenting comes with its challenges and, despite good intentions, parents can struggle implementing these positive behaviors. In this symposium, we present research on the predictors of parental behaviors (Flamant, Ratelle), on interventions aimed at improving parental need supportive behaviors (Grolnick), and on outcomes of parental strategies in the context of rule breaking (Robichaud).

Are all parent-adolescent negotiations equally favourable? The role of adolescents' communication style, social domain, and mothers' authoritarianism and family history

Nele Flamant, Ghent University

Although negotiation is generally considered an adaptive way for adolescents to express disagreement in the parent-child relationship, previous research on the correlates of adolescents' negotiation has reported rather mixed effects. Potentially, this is because parents do not always positively appraise and respond to adolescents' negotiation. The present study examines how mothers' appraisals and responses to negotiation vary as a function of mothers' personal characteristics (i.e., authoritarianism and their own parenting history), adolescents' communication style, and the social domain of the negotiation. 476 mothers of 9th and 10th grade adolescents in Belgium (Mage = 44.93 years old) reported on their authoritarianism and parenting history, and then read a vignette-based scenario depicting an adolescent's negotiation attempt. Using a between-person 2 x 2 design, we experimentally manipulated adolescents' communication style (autonomy-supportive versus controlling) and social domain (personal versus multifaceted). The results showed that mothers were more likely to positively appraise the negotiation attempt and respond to it in more constructive ways if their adolescent adopted an autonomy-supportive instead of a controlling communication style, and when the situation involved a personal rather than a multifaceted issue. Moreover, mothers high in authoritarianism and those with a psychologically controlling parenting history had a more negative attitude towards adolescents' negotiation. Overall, the results support the idea that both adolescents and their parents are active agents who dynamically and bidirectionally influence one another.

Where does need supportive parenting come from? The role of parents' psychological need satisfaction and frustration

Catherine Ratelle (Co-Chair), Université Laval

Parental involvement in their children's schooling is a key ingredient of their academic learning and success. Elementary school students succeed more in school when their parents are involved in their schooling in general and in more specific ways (e.g., helping with homework). Using a self-determination theory perspective, parental psychological needs are examined as a key mechanism in promoting optimal school involvement (i.e., behaving in autonomy supportive, warm, and structuring ways). To date, little research has examined psychological need satisfaction in parents generally and none, to our knowledge, in the schooling context. A first step relied on an inductive approach where parents (N = 79) of elementary school students were asked to talk about their experience during their involvement in their child's schooling, how homework and lessons went, and what they perceived to be facilitators and barriers to their involvement. Content analyses suggested that (1) parents' psychological needs are manifested in the context of their school involvement, (2) while their needs are generally satisfied, the need for autonomy appears to be the least stratified/most thwarted, and (3) their need for relatedness is the most satisfied one. A second step entailed validating these findings using a deductive approach that allows generalization. Two large samples of parents of elementary school children were surveyed over two consecutive school years (Sample 1; N1 = 1017) or each beginning and end of the school year for two years (Sample 2; N2 = 1448). Results corroborated those obtained with an inductive approach. They also showed that the satisfaction of parents' psychological needs during their school involvement explained the quality of their behaviors. Specifically, autonomy and competence needs were mostly linked to their autonomy supportive and structuring behaviors while their relatedness was linked to their involvement.

Effectiveness of a brief preventive intervention based in SDT: The parent check-in

Wendy Grolnick (Co-Chair), Clark University

While parenting interventions are a treatment of choice for preventing emotional and behavioral problems in children (Kumpfer & Alvarado, 2003), most focus on behavior management with less focus on autonomy support, an important facilitator of children's adjustment (Grolnick et al., 1997). The Parent Check-In was thus developed as a preventive parenting intervention based in SDT. The Parent Check-In is a two-session assessment- and feedback-based individualized intervention for parents of children aged 8-12 designed to facilitate autonomy support, structure and involvement. This study is a randomized controlled trial of the Parent Check-In. Fifty-seven parents (Intervention group: N = 31, Waitlist group: N = 26) participated. Parents and children completed questionnaires before being randomly assigned to group and again one month following the intervention. Groups did not differ at pre-test. Repeated measures ANOVAs showed a time x condition effect for parental efficacy, with the intervention group increasing. For child-report variables, a time x condition effect indicated that autonomy support increased in the

intervention relative to the waitlist group. A time x condition effect was also present for identified self-regulation of responsibilities, with the intervention group increasing and the waitlist decreasing. Child hostility also decreased more in the intervention group relative to the waitlist. Effects of the intervention on child reports of hostility, depression, and parental structure were moderated by maternal education, with stronger effects for families with lower education. Effects were also stronger for children with more internalizing symptoms. Finally, changes in parenting were associated with changes in child symptomatology. The more autonomy support, structure, and warmth increased, the more conduct problems decreased. The more controlling behavior decreased, the more conduct problems, aggression, and depression decreased. Results suggest that the Parent Check-In is effective in increasing adaptive parenting, especially parental autonomy support.

Logical consequences in rule-breaking settings: An effective alternative to mild punishments?

Jean-Michel Robichaud, Université de Moncton

Rule-breaking settings can be challenging for parents. Indeed, interventions targeting compliance (e.g., constraints under the form of mild punishments [MP]) often hinder children's internalization, while those fostering internalization (e.g., reasoning) sometimes lack effectiveness to elicit compliance. Research suggests that logical consequences (LC)—a form of constraint aiming to address the problem created by children's misdeed rather than making them experience aversion (as do MP)—could ensure compliance while minimizing need frustration and facilitating internalization. Yet, whether the benefits of LC generalize across transgressions (e.g., personal vs non-personal) and constraints (e.g., harsh or intrusive) remains unclear. This presentation summarizes research on LC addressing these questions. Four experimental and two field studies have examined LC in rule-breaking settings (Ntotal = 1148 mothers and children aged from 8 to 19). Experimental studies have compared the role of LC, MP and reasoning on indicators of compliance, internalization and psychological needs. In field studies, youths rated parents' tendency to use LC (vs MP) and reported on similar outcomes. Across designs and respondents, results show that when transgressions involve non-personal issues, LC are more effective than MP to foster internalization (and similarly to reasoning), while being at least as effective as MP to elicit compliance (and more than reasoning). When transgressions are considered personal issues, or when constraints are need-frustrating (e.g., intrusive), however, all constraints (LC or MP) lose their advantages over reasoning. Observed distinctions between LC and MP were not attributable to differences in harshness. Results highlight LC as a valuable complementary intervention to reasoning in persistent rule-breaking setting and stress the importance of considering children's psychological needs and perceptions of issues underlying transgressions when intervening. The potential of LC (vs MP) to support children's psychological needs will be discussed.

Symposium 2C **Education | Using SDT Research to Improve Education for Kids, Kindergarten through High School** Biscayne

GENERAL OVERVIEW

Formal inclusion of SDT in the classroom has been slow to grab hold in the United States, though it has been taking place. This panel will offer reports from a variety of schools where self-determination theory has begun to make inroads, followed by a discussion with audience members about best approaches to increase SDT's presence in the classroom.

Leadership development in high-school students

Eileen "Lee" Dieck, The Masters

Lee Dieck's program to develop ethical leaders in high school encourages autonomous self-exploration and identification of personal values. When combined with strategies to foster relatedness in the classroom, students are better able to bring their authentic selves into discussions about feeling greater effectance as they face future challenges. This combination of agency, self-endorsement, caring relationships, and competence-building aims to prepare students for important life choices after graduation, and helps them understand leadership challenges in both their school community and the world at-large. Dr. Dieck will include specific techniques employed and discussion of what has been learned.

OIT replacing Aristotle in prosocial character development

Tim Leet, Columbus Academy

Despite advancements in the pedagogy of academic learning, American schools' pedagogy of character formation remains stubbornly wedded to Aristotelian assumptions. Organismic Integration Theory offers a vastly superior framework for approaching character— moral identity formation — than Aristotelean notions of virtue and pronesis. Tim Leet will discuss OIT-based strategies that have transformed his work with adolescents. While OIT is a powerful model for describing how values are internalized, it is less immediately helpful in determining "which" values. Recognition of our basic psychological needs and their role in well-being suggest that SDT can offer direction here, as well.

A coast-to-coast overview of SDT educational practices in the United States

David Streight (Chair), Heart of Character

David Streight will make brief mentions of SDT-based initiatives in North Carolina, Texas, and Oregon before a deeper description of a high school's autonomy-supported transformation from "out of control" to fully-functioning in post-Katrina New Orleans, and a suburban school district in Oregon that saw so much growth in two elementary schools from self-determination theory's recommendations that district administrators decided "we should be doing that in all our schools."

Public school application of SDT

Dan Drmacich, Rochester Coalition for Public Education

Dan Drmacich, retired principal of Rochester, NY's School Without Walls High School, will describe how many of the Self-Determination Theory elements are incorporated into the daily educational experience of its students and staff, through graduation requirements, curriculum development, pedagogy, decision-making, teacher-student relationships, scheduling, assessments, staff hiring, character development and service to the community.

Symposium 2D

Work & Organizations | A Playbook for Effective Application of SDT to

Peninsula 5-7

Product Design

GENERAL OVERVIEW

The symposium will lay the journey we at Immersyve Inc. -- a research and consulting company that focuses on user experiences and human motivation when engaging in any activity, from video games and virtual worlds to employee training, to health interventions -- take customers on to better understand and apply Self-Determination Theory to their design problems. The talks in this session will illustrate how essential empathy is to effectively applying SDT to real world problems, and the practical steps we take to help our partners be more successful.

Building a competence ramp when consulting to better support autonomous design

Troy Skinner (Chair), Immersyve, Inc.

Starting with outcomes (engagement, revenue), finishing with components of motivation. Linear equation models, correlations, looking at proven formulas for product engagement

Esther Sampaio Santos & Jonathan Frye, Immersyve, Inc.

Writing upside down (conclusions before data); having a point of view, and communicating it concretely with examples and best practices

Dayne McClurg, Immersyve, Inc.

12:45 – 2:30 PM

Poster Session 2

See Poster Session Abstract Document

Atrium

2:30 – 3:45 PM

Individual Talks 3

Individual Talk 3A Theory & Methods | Experiments in BPNT

Biscayne

"What are my doing for (their) living:" Basic needs satisfaction, benevolence and creativity in different work contexts

Konstantinos Papachristopoulos, Athens School of Fine Arts

Jacques Forest, UQAM

Extensive research during recent years recognizes that positive impact to society is linked to expanded and enriched meaning and well-being in life (Martela & Steger, 2022). Less emphasis, however, has been placed on how our beliefs of our positive impact as employees relate to how intrinsically motivated, engaged and creative we are at work. The purpose of the presentation is to summarize the results of four (4) relevant research (cross sectional (2), diary research, experimental research) that have been conducted in Greece and Canada, in different settings (e.g., artists, volunteers, young entrepreneurs, teachers) and have taken place within the framework of the MUSES (Marie Skłodowska-Curie Actions) research project. Findings provide evidence for the positive relationship between a sense of "delivering the common good" through my work and positive outcomes for employees (e.g., meaning, engagement, creativity, resilience) and organizations (e.g., innovative work behavior, positive organizational behavior). In the research, mediating variables such as basic needs' satisfaction (Ryan & Hawley, 2017) and autonomous motivation are studied. Moreover, it has been shown that affective commitment with our work's beneficiaries seems to be the strongest predictive factor for creativity and well-being in the field of work. Finally, practical applications and future research are suggested. BIBLIOGRAPHY Martela F., Steger M., (2022). The role of significance relative to the other dimensions of meaning in life – an examination utilizing the three-dimensional meaning in life scale, *The Journal of Positive Psychology*. Ryan, R. M., & Hawley, P. (2017). Naturally good? Basic psychological needs and the proximal and evolutionary bases of human benevolence. In K. W. Brown & M. R. Leary (Eds.), *The Oxford handbook of hypo-egoic phenomena* (σελ. 205–221). Oxford University Press

Countering threats to a sense of competence among African American middle school students

Natasha Bowen, College of Social Work, Ohio State University

Substantial racial disparities in academic performance fuel lifelong inequities in opportunities and well-being across racial/ethnic groups in the US. Stereotype threat based on negative societal stereotypes of ability can undermine the sense of competence of African American students and, according to SDT, hurt their academic performance. We report on an experimental study of two versions of a 15-minute affirmation writing intervention designed to counter stereotype threat. Consistent with SDT, we hypothesized that both psychological and social environmental factors influence students' sense of competence. Methods The sample comprised 236 African American middle school students. Students were randomly assigned to a neutral or self-affirmation essay condition (psychological), or one of two parallel conditions that included teachers reading students' essays (social environmental). Longitudinal hierarchical linear models compared quarterly grade trajectories in social studies (SS), math, and language arts (LA) across conditions. The focus on African American students allowed for within-group tests of interactions of condition, time, and gender. Results On average, students had declining grade trajectories over the school year. Consistent with previous studies, writing self-affirming essays slowed the decline of African American students' SS grades relative to those writing neutral essays. Being female was consistently associated with higher grades in all three subject areas. Compared to affirmation-only students, those whose teachers read their affirming essays had higher SS grades over the school year. Comparable effects were not found for Math and LA grades. Conclusions Consistent with SDT and literature on stereotype threat, we found that writing an affirmation essay, especially when teachers also read the essays, benefited the SS grades of African American students. The intervention did not affect the more highly emphasized subjects of Math and LA. However, given its low cost and brevity, the intervention can be beneficial for African American middle school students.

Charitable pressure: Social proof can reduce charitable giving by thwarting autonomy

Kiki Koutmeridou, DonorVoice

Stefano Di Domenico, Department of Psychology, University of Toronto Scarborough

We're social creatures, we take our cues from the people around us. That's why social proof has become a popular marketing technique; people are nudged towards an action by being informed that many others have taken it. Fundraisers have eagerly adopted social proof nudges in their efforts to increase people's donation amount. But does social proof actually work? Might it instead backfire because donors feel pressured into giving? In our online experiment featuring a food bank (N = 593), participants were randomly assigned into either a social proof condition, in which they were told that most other donors give a specific amount, or a control condition in which the charity's mission was simply described. We found that social proof resulted in lower donation amounts and that feelings of pressure (thwarted autonomy) mediated this effect. These findings suggest that social proof nudges should be used with caution.

Basic psychological needs and outcomes of an SDT-based training program: Comparison of rural farmers in Palestine and Malawi

Nobuo R. Sayanagi, Yamanashi Eiwa College

Jiro Aikawa, Japan International Cooperation Agency

Monami Omura, Japan International Cooperation Agency Ogata Sadako Research Institute for Peace and Development

Hitoshi Fujiie, Japan International Cooperation Agency Ogata Sadako Research Institute for Peace and Development

This presentation will examine the relationship between BPN satisfaction and frustration and the outcomes of a farmer training program that was designed based upon SDT principles. Mixed-method surveys, combining interviews with questionnaires, were conducted with rural farmers and their trainers in Palestine and Malawi. Project records were also used to supplement the analyses. Twelve trainers and 27 farmers participated in the Palestinian survey, and 7 trainers and 18 farmers participated in the Malawian survey. All participants were involved in the SHEP (smallholder horticulture empowerment and promotion) approach, which was developed incorporating SDT principles. Analyses identified possible factors that satisfied and thwarted farmers' BPNs, including the sociopolitical environment surrounding the farmers, favorability of climate conditions, the method and manner of trainers' interaction with farmers, and contents of the training. In general, satisfaction of BPNs were associated with positive outcomes such as higher yields, higher income from crop sales, and continuous adaptation of trained methods and techniques, and BPN frustration was associated with disinterest in the trained techniques as well as self-reports of frequent negative emotions. The unique sociopolitical contexts in which the study was conducted in, including perceived oppression of human rights and acute poverty, provides unique perspectives on the significance of BPNs that are subtle in WEIRD (white, educated, industrialized, rich, and democratic) samples. Issues in quantitative measurement are also discussed.

Individual Talk 3B **SDT & Well-being** | Cross-cultural Perspectives on Needs & Need Support Canaveral

"Motivated to lead": How self-determination theory can inform impactful community-led development interventions

Elene Coete and Barbara Toizer

Basic psychological needs satisfaction and frustration prospectively mediates the link between dispositional gratitude and life satisfaction: Longitudinal evidence from a representative sample in Chile

Jesus Unanue, Facultad de Economía y Negocios, Universidad Andres Bello, Santiago, Chile

Wenceslao Unanue, Escuela de Negocios, Universidad Adolfo Ibáñez, Santiago, Chile

Juan Carlos Oyanedel, Facultad de Educación y Ciencias Sociales, Universidad Andres Bello, Santiago, Chile

Xavier Oriol, Research Institute on Quality of Life, University of Girona, Spain

Marcos Gomez, Escuela de Negocios, Universidad Adolfo Ibáñez, Santiago, Chile

Research has consistently found that gratitude predicts life satisfaction. Unfortunately, only a few underlying psychological processes (e.g., mediators) have been tested, using only cross-sectional designs. Nonetheless, novel methodological research argues that mediations should be tested using only longitudinal or experimental data. Thus, we extended current research into the gratitude-life satisfaction link by testing, longitudinally, two unexplored mediators: the satisfaction (BPNs) and frustration (BNPF) of the three basic psychological needs for autonomy, competence and relatedness as proposed by Self-determination theory (SDT). A three-wave longitudinal design

among a representative sample of Chilean adults found support for our hypothesis: Gratitude at T1 predicts higher BPNS and lower BPNF at T2, which in turns predicts higher life satisfaction at T3. Key theoretical and practical implications for gratitude and SDT research are discussed.

The effects of self-determined motivation for extracurricular activities motivation in high-school students across cultures
Developing automated methods for classify SDT-related communication patterns: Exploring governments' Covid-related autonomy supportive vs. controlling communication styles and constituent reactions on Twitter

Jérémie Verner-Filion, Université du Québec en Outaouais

Anne Holding, New York University

Isabelle Gingras, McGill University

Richard Koestner, McGill University

The developmental consequences of extracurricular activities and the effects they might have on school achievement and adaptation have been the object of growing interest. This study investigated the effects of self-determined motivation for extracurricular activities on indicators of students' self-reported (i.e., academic motivation, need satisfaction in school, subjective overscheduling, mood in school, perceived stress in school and dropout intentions) functioning in a sample of 886 high-school students (Mage = 14.95, SDage = 1.77) in four countries, namely China (n = 267), the USA (n = 281), Canada (n = 195), and France (n = 143). Moreover, teacher-reports of students' motivation, self-efficacy, optimism, and school days missed were collected for a sub-sample of the Canadian, American, and French samples (N = 219). Globally, findings revealed that across cultures, self-determined motivation for extracurricular activities was positively associated with indicators of academic adaptation for student and teacher-rated outcomes. Further analyses revealed that these effects were mediated by self-determined academic motivation and need satisfaction in school, while being invariant across cultures. Together, these findings underscore the benefits of self-determined motivation for extracurricular activities across cultures regarding pertinent outcomes related to academic engagement and adaptation.

Individual Talk 3C **Special Topics | SDT & Technology**

Peninsula 5-7

Developing automated methods for classify SDT-related communication patterns: Exploring governments' Covid-related autonomy supportive vs. controlling communication styles and constituent reactions on Twitter

Arlen C. Moller, Illinois Institute of Technology

Harsh Patel, Illinois Institute of Technology

Kai Shu, Illinois Institute of Technology

Ophir Frieder, Georgetown University

Tanishq Malhotra, Illinois Institute of Technology

Sanjiv Kapoor and Nicole Legate, Illinois Institute of Technology

Background. Self-determination theory (SDT) research has often found that autonomy-supportive communication styles can encourage more compliance (and less defiance) relative to controlling communication styles. Social media platforms have become a valuable tool for 2-way communication between government officials and constituents. Natural language processing (NLP) tools can rapidly categorize linguistic features of textual data, including communication styles and emotions, facilitating investigation of these SDT-related dynamics over time on a large scale. This work represents an early-stage effort toward developing and applying NLP tools for this purpose. **Methods.** We identified Twitter accounts belonging to government officials in Illinois (n=20), and collected their Covid-related tweets (n=4,122) and replies to those tweets (n=71,353) from March 2020 to December 2021. Next, we identified a subset of government tweets related to restrictive policies (n=209). To analyze style and sentiments, we used the Linguistic Inquiry and Word Count (LIWC) program, a dictionary-based NLP tool. Following SDT-guided research by Oliver et al. (2008) and Vaughn (2019), we developed custom LIWC dictionaries to identify autonomy-supportive and controlling styles. Replies were classified using previously-validated LIWC dictionaries (eight affect and motivation related variables). **Results.** Exploratory analysis using Pearson correlations found null or inconsistent associations between government tweet style (autonomy-supportive vs. controlling) and emotion expressed in replies. **Discussion.** Given the increasing availability of rich, time varying, textual data sets, this feasibility study represents a promising direction for SDT-guided research on communication and motivation. It was exploratory, retrospective, and employed simple NLP methods. The sample of data was limited to Covid-related communication, on one social media platform, in one U.S. state. Future research should develop more sophisticated methods of NLP (e.g., deep

learning), using textual data from multiple platforms, extend regional diversity, employ pre-registration, and move toward prospective predictive modeling of both psychological and behavioral outcomes.

How social identity autonomy fosters long-term engagement: Case studies in video games

Jonathan Frye, Immersyve, Inc.

Troy Skinner, Immersyve, Inc.

Dayne McClurg, Immersyve, Inc.

Brittany Vincente, Immersyve, Inc.

Chris Andrade, Immersyve, Inc.

This talk will examine the ways in which video create a structure for users to develop social identity, setting up goals that have real social value, and ultimately how this autonomous goal pursuit leads to better engagement outcomes. Data will be presented from a variety of studies on video games that show components of social identity and the impact on long-term engagement and motivation. Two methodologies will be exhibited, including diary studies over the first week or two of gameplay as well as single point studies of players who have been playing a game for months or years. The results will show how experiences that foster a better sense of identity, create opportunities for social comparison, and encourage players to recognize one another leads to better long-term engagement outcomes. The implications for these results stretch far beyond the video game space to experiences that engage through social interaction or in a social environment.

Facilitating motivation in a technological world: Applying Self-Determination Theory to human-technology interaction Autonomy support. Learning environments, and learning technologies: A new model

James Szalma, University of Central Florida

Although researchers and practitioners in human factors/ergonomics have acknowledged the importance of user intentions and goals for designing interfaces or tasks, they have not, until recently, applied currently theories of motivation to the design of technology. Szalma (2014) established an initial set of principles and design guidelines based on self-determination theory of motivation. Szalma (2014) argued that in addition to environmental characteristics that influence perception and cognition, the context also has motivational characteristics ('motivational affordances') that shape the form of motivation a person experiences. Theory and research in motivation, specifically self-determination theory, is sufficiently cohesive to apply the principles and guidelines to technology design. However, questions and challenges remain that may constrain such application. This is, in part, due to the fact that both physical and social contexts influence motivation. With respect to the latter, the context may be hierarchical, including both the proximal environment in which the person engages in an activity, and the distal social context, e.g., multiple levels within a socio-technical system. One major challenge to applying the principles described by Szalma (2014) is how those principles can be applied in organizations so that goals that promote the well-being of the user are not undermined by the goals of those in positions of social power (e.g., supervisors, executives). A second challenge is determining how we can facilitate positive experiences with technology when the use of that technology, and the context in which it is used, is often structured in a way that undermines attainment of the types of goals associated with psychological well-being. In this presentation I will discuss approaches to applying the principles of motivational design to proximal contexts (i.e., interfaces embedded in a physical and social environment) as well as the challenges associated with application of the principles to the distal context.

Autonomy support. Learning environments, and learning technologies: A new model University L3/L4 learners' language learning beliefs and motivation

Gerald Ardito, Manhattanville College

Jon Dron, Athabasca University

This presentation proposes a model for understanding and operationalizing the relationship between learning environments and their relative degrees of autonomy support (Bureau, et al., 2022; Reeve & Jang, 2006) and the learning technologies used by teachers and students (Dron, 2021). We are theorizing a positive relationship between the degree of support for student autonomy, competence, and relatedness in a K-12 learning environment and the types and range of learning technologies employed by the teachers and students within it. To support this theoretical model, two case studies are presented. The case studies demonstrate that these types of learning environments generate far more complexity, in the form of recursion and iteration, than do traditional learning environments. While these types of distributed learning networks have been observed in adult learning settings (Anderson & Dron, 2010; Clarà & Barberà, 2013), they have only been rarely observed in K-12 classrooms. Implications for teacher education and teacher education research are discussed.

University L3/L4 learners' language learning beliefs and motivation

Anna-Liisa Jogi, Tallinn University

Merilyn Meristo, Tallinn University

Schools providing general education in Estonia are autonomous, having the freedom to decide about curriculum, as well as about at what age foreign language learning (LL) starts. L2 usually starts at the age of 7-9 years, followed by L3 at the age of 9-12 and often by L4 at the age of 14-16. L2 is overwhelmingly English, with a few cases of German and French. L3 is either Russian, German, French or Finnish, and for L4, the choice is over 10 languages depending on the school's needs and possibilities. However, L4 can be optional, depending on the particular school. LL mindsets have mostly been studied in the context of L2, raising questions regarding the context of L3/L4. This study contributes to filling in this gap by exploring which LL beliefs predict autonomous or controlling motivation in LL. 203 university students, who were enrolled in L3/L4 courses, participated in the survey that consisted of Beliefs About Language Learning Inventory (BALLI) and Intrinsic Motivation Inventory. For data analysis, a separate regression model was run for each BALLI item explaining either autonomous or controlled motivation. Gender and the age of starting to learn L2 were used as covariates. 13 beliefs out of 34 predicted autonomous motivation. The following beliefs' effect sizes were medium or high ($\beta > .30$): If I get to speak this language very well, I will have many opportunities to use it; It is important to repeat and practice a lot; Some languages are easier to learn than others; I would like to learn this language so that I can get to know its speakers better. Contradictorily, only 4 beliefs predicted controlled motivation and their effect size remained low (β s between .15 and .20). Interestingly, gender or the age of starting to learn L2 were not related to LL motivation.

Feeling able, being understood: The need for competence in learning a new language

W.L. Quint Oga-Baldwin, Waseda University

Richard M. Ryan, Australian Catholic University

According to self-determination theory, the need to feel competent is one of a well-recognized trio of basic psychological needs, alongside the need for autonomy and relatedness. Unlike a generalized or domain specific feeling of ability, the need for competence is met when learners feel situationally able to understand and affect the world around them. In language learning, this means the feeling of success in the use and comprehension of the new language. This situated, contextual sense of ability helps to explain the complex and dynamic development of motivation and motivation within the language learner. In this review, we focus on the competence third of the basic needs triad as it applies both theoretically and empirically to the study of learning a new language. Recent meta-analyses shows that competence need satisfaction is a powerful correlate of motivation and achievement in education generally (Bureau et al., 2022), with predictive effects particular to language learning (Joe et al., 2017). Based on this evidence, we present a case for how both inter- and intra-individual experiences of need satisfaction can improve both achievement and desire to continue learning a new language. We conclude with a case for how satisfying the need for competence in language education can go beyond the feeling of success in the classroom, and build towards well-being through a contextual balance of the basic psychological needs.

Motivation, multilingualism and the modern languages classroom: an SDT perspective

Abigail Parrish, University of Sheffield

Elizabeth Bailey, University of Lincoln

Language learning in schools in England has been repeatedly described as being 'in crisis' since it was made an optional subject in 2004. Although 'crisis' may not be appropriate for a situation lasting almost two decades, the low numbers of students taking the subject are cause for concern. Attempted solutions tend to focus on policy factors, but as SDT-focused researchers we believe it is more effective to look at students themselves. This project used self-determination theory as a framework for understanding factors impacting students' motivation to study languages, with a view to providing a strategy to support both increased uptake and student wellbeing. The study was conducted in secondary schools in England (Phase 1 n = 422, Phase 2 n TBC). Students aged 11-16 who were studying a language

(French, Spanish or German) completed an online questionnaire including scales from the Basic Psychological Needs Satisfaction & Frustration Scale and the Self-Regulation Questionnaire (Academic), as well as the Ungspråk questionnaire developed by Haukås et al (2021) to look at multilingualism. Phase 1 involved schools with largely monolingual populations; Phase 2 involves more multilingual schools. Initial findings suggest that multilingualism predicts both a desire to choose to study a language and motivation in language lessons, and that multilingual students are more likely to feel that their basic psychological needs are satisfied in language classes. We argue that schools need to do more recognise the value of students' multilingualism and that treating school-level language learning as a pathway to multilingualism rather than purely in terms of exam success is more likely to support student motivation and thriving. Haukås, Å., Storto, A. & Tiurikova, I. (2021). Developing and validating a questionnaire on young learners' multilingualism and multilingual identity. *Language Learning Journal*, 49(4), 404-419.

The dynamic effects between autonomous motivation and achievement; New perspective

Abdullah Alamer, King Faisal University

Researchers in educational psychology and self-determination theory often examine the directional effect of motivation on a different set of outcomes such as mathematics, reading, science, and language achievement. Consistent findings support the positive effect of autonomous motivation on achievement. However, little is known about the dynamic effects between autonomous motivation and achievement. For example, are there cases where achievement leads to an increase in autonomous motivation? To answer this question, 226 language students at a Saudi public university were followed over 17 weeks at three time points. To precisely evaluate the possible directional effects over time, the newly developed technique, the random-intercept cross-lagged panel model (RI-CLPM) was adopted alongside the latent growth curve (LGC) analysis. The results showed that autonomous motivation at Time 1 appeared to be the basis for increased language achievement at Time 2 while achievement at Time 1 did not lead to an increase in autonomous motivation at Time 2. Furthermore, the results suggested that language achievement at Time 2 predicted an increase in autonomous motivation at Time 3, but not the other way around. Although the results of the LGC analysis showed that there is a simultaneous growth in motivation and language achievement over time, the RI-CLPM clarifies the ways in which the two variables depend on each other in the long-term perspective. The results of this study add to the literature on self-determination theory by showing the longitudinal directions and trajectories that autonomous motivation and learning achievement go through among language students.

Individual Talk 3E **Education | Supporting Teacher**

Merritt

Motivation

Motivating teachers for school improvement planning: A four-field analysis of leadership and motivational styles between two countries and two school-contexts

Kelly Summers, Northern Illinois University

Matteo Carmignola, Salzburg University of Education Stefan Zweig

Stephen Tonks, Northern Illinois University

Introduction. This paper explores associations among school principal leadership and teacher motivation specifically within the context of school improvement planning in central Europe and the United States. How a leader approaches school improvement planning can impact the motivation of the teachers who are part of the team and is worthy of examination. Specific research questions in the study include: 1) How do perceptions of leadership within the context of school improvement change as a result of being considered a "failing school" when compared to non-failing schools in both the United States and in Central Europe? 2) What are the psychometric properties of the Systems Interactions Theory Leadership Questionnaire, a measure of Principal Leadership, in the Context of School Improvement in a U.S. sample? Method. Two samples of teachers were included in the data collection, $n = 2396$ Austrian participants and $n = 1,018$ U.S. participants. Three self-report measures were given electronically, all of which were previously validated and have strong psychometric support, 1) the Personality Systems Interactions Theory Leadership Styles Questionnaire (previously validated in Austria); 2) the Basic Psychological Needs and Frustration survey; and 3) The Work Tasks Motivation Scale for Teachers survey. All data were anonymous and all institutional review board procedures were followed. Results. Data have not yet been analyzed, however the analysis plan includes MANOVA and the following mediation model (SEM): Leadership styles predicting the motivation to engage in school development activities, with

BPN satisfaction and frustration examined as mediators. Significance. Study results offer important contributions to the understanding of principal leadership behaviors, teacher motivation, and school improvement planning. School leaders and those who train school leaders will benefit from a clearer understanding of how specific leadership behaviors can create a school improvement planning environment that supports or thwarts specific types of motivations in teachers.

What motivates clinical educators to teach? A systematic review and framework synthesis based on self-determination theory

Cesar Orsini, Norwich Medical School, University of East Anglia (UK) - Faculty of Dentistry, University of the Andes (Chile)

Rintaro Imafuku, Medical Education Development Centre, Gifu University (Japan).

Barbara Jennings

Rashmi Kusrkar, Amsterdam UMC Faculty of Medicine, Vrije Universiteit

Introduction: Clinical educators' optimal motivation is paramount to their performance and wellbeing as well as to learners. However, teaching in clinical settings is time-consuming, often uncompensated, and combines various obligations. Therefore, we aimed to identify factors influencing clinical educators' motivation to teach that supported retention and wellbeing. **Methods:** A search was conducted including five databases, relevant journals, and a snowball search. Empirical studies were included if they reported factors influencing clinical educators' motivation to teach (i.e., drives, goals, rewards) and if meeting specific quality criteria. Data were synthesised through a framework analysis based on self-determination theory. **Results:** A total of 29 studies (of 7,700) met the inclusion criteria. Studies reported that clinical educators placed greater value on autonomous rather than controlled reasons to teach. Autonomous motivation themes included enjoyment and desire to teach; interest in learners' development, mastery of subject matter; professional growth; a work climate supporting basic psychological needs; sense of purpose to the profession and community; and input on teaching format/content. Although less important, controlled motivation themes included social pressures/rewards (e.g., status, department pressure, feedback/recognition, connectedness/rapport) and material rewards (e.g., faculty affiliation, education credits, expressions of gratitude, partner recruitment, remuneration). Amotivation themes included time pressure, lack of recognition/compensation, high workload, unprepared learners, and lack of support and disconnection from the university programme. **Conclusion:** Clinical educators favoured enjoyment, professional development, and altruistic reasons to teach over social/material rewards. These factors have important implications, and are discussed, in developing ways to maximise autonomous reasons and managing amotivational factors to enhance satisfaction, retention, and faculty development of clinical educators.

How am I to develop the sense of freedom in spite of the restraint? A person-centered analysis of teachers' motivational regulatory styles for school-turnaround projects

Matteo Carmignola, Salzburg University of Education Stefan Zweig

Daniela Martinek, Salzburg University of Education Stefan Zweig

Franz Hofmann, University of Salzburg

While participating in school improvement processes and activities of professional development is likely linked to autonomous motivation, the setting of mandated educational change can be detrimental for teachers' motivational resources (Clement, 2014; Deci, 2009). Following a person-centered approach based on latent-profile-analyses, we investigated the sample for profiles of motivational regulatory styles in $n = 2,400$ primary and lower secondary school teachers participating in a national school-turnaround project. Preliminary results propose four distinct profiles: About 22% of the sample is represented in a high-autonomous profile, 19% in the profile 'demotivated', 12.2% combine autonomous and controlled regulatory styles, while the large majority (46.5 %) is mainly extrinsically motivated. By implementing hierarchical logistics regression, we will investigate which individual and school-based factors (e.g., teaching experience, principals' leadership ...) explain the likelihood of the profile allocation (Abòs et al., 2018; Schellenbach-Zell et al., 2010). The results of both analysis approaches will be discussed for implications for optimizing educational changes process from a SDT-perspective. Abòs, Á., Haerens, L., Sevil, J., Aelterman, N. & García-González, L. (2018). Teachers' motivation in relation to their psychological functioning and interpersonal style: A variable- and

person-centered approach. *Teaching and Teacher Education*, 74, 21–34.

<https://doi.org/10.1016/j.tate.2018.04.010>Clement, J. (2014). Managing mandated educational change. *School Leadership & Management*, 34(1), 39–51. <https://doi.org/10.1080/13632434.2013.813460>Deci, E. L. (2009). Large-scale school reform as viewed from the self-determination theory perspective. *Theory and Research in Education*, 7(2), 244–252. <https://doi.org/10.1177/1477878509104329>Schellenbach-Zell, J. & Gräsel, C. (2010). Teacher motivation for participating in school innovations-supporting factors. *Journal for educational research on-line*, 2(2), 34–54.

A learning community of beginning teachers: A systemic intervention based on self-determination theory to promote need satisfaction and autonomous motivation for teaching and mentoring

Haya Kaplan, Department of Pediatric emergency medicine, Saban Pediatric Medical Center, Soroka University Medical Center, Ben Gurion University of the Negev, Israel

Michal Kaplan, The Psychological Service Unit, Kaplan Medical Center, Israel

Haya Kaplan, Kaye Academic College of Education

The study is based on SDT and investigates the relationship between Israeli medical students' perceptions of learning climate (LC), and two motivational paths: a sense of need frustration and controlled motivation versus a sense of need satisfaction and autonomous motivation, and the influence of each path on students' well-being (positive affect, life satisfaction) and ill-being (depression, burnout, negative affect). The study participants were 142 medical students (57.9% female) in their first to sixth year of studying. The students completed an online survey. All scales had sufficient reliabilities. Structural-Equation Modeling revealed that perceived LC was positively associated with need satisfaction and autonomous motivation and negatively with need frustration. Need satisfaction was positively associated with autonomous motivation, which in turn positively predicted positive affect and negatively predicted burnout. Students' need frustration was positively associated with controlled motivation, which in turn positively predicted burnout. Some direct effects were also found. It was also found that need satisfaction/frustration and autonomous/controlled motivation fully mediated the association between perceived LC and various outcomes. These findings highlight the importance of supporting the psychological needs of medical students. Such support may encourage them to draw on their internal resources when coping with their future stressful role as physicians.

Individual Talk 3F Work & Organizations | SDT & Leadership

Peninsula 1-4

Interpersonal need support from leaders in the work domain: An intervention study

Vivien W. Forner, University of Sydney

Christopher Niemiec, Rochester University

This study provides in-depth experimental examination of interpersonal need support from leaders in the work domain. The interpersonal approach of a leader, the way they communicate and relate to their followers, is paramount to a need supportive climate and a central precursor to basic need satisfaction, motivation, and wellness in organizations (Deci et al., 1989; Slemp et al., 2018). We report the results of an intervention to cultivate interpersonal need supportive behaviors among leaders. Data were obtained for leaders in an experimental ($n = 65$ leaders and their 103 followers) or waitlist control condition ($n = 102$ leaders) at three time points: pre, post, and 1 year after the intervention. Participating in the intervention led to significant and enduring changes in leaders' interpersonal orientation towards autonomy supportive and away from control, that were still evident one year later. The effectiveness of the intervention did not depend on leaders' age, length of service, gender, or role type, as indicated by non-significant moderation effects. Intervention effects were moderated by context-specific leadership experience, whereby inexperienced leaders showed greater propensity for developing an autonomy supportive interpersonal approach relative to more experienced managers in that context. The qualitative results showed indications of early flow-on effects to followers. Forty-six percent of followers noticed their leader interacting with them differently over the intervention period and provided examples of behaviors and approaches aligned with interpersonal need support. There were no significant quantitative changes in followers' perceived autonomy support from their leader, basic psychological need satisfaction, job satisfaction or turnover intention during the nine-week intervention period. This research helps to uncover possible factors affecting the effectiveness of interventions and adds further evidence that it is possible to change leaders' interpersonal style via structured learning and development programs.

A real-life test of a motivational model of compensation based on self-determination theory: The relative motivational power of need-support, pay instrumentality as well as informative and controlling aspects of rewards

Jacques Forest, ESG UQAM

Florence Jauvin, UQAM

Ouellet Jessica

Anja Olafsen

Konstantinos Papachristopoulos

Marylène Gagné, Curtin University

In regard with pay in work organisations, self-determination theory states that it can have an impact if it influences psychological need satisfaction and frustration (Gagné & Forest, 2008, 2020). Researchers have tested different variables (i.e., bonuses, justice, meaning of money, etc.), including the functional meaning of rewards and its impact through informative and controlling rewards (Kuvaas et al., 2020; Thibault Landry et al., 2017, 2022). Using data with 2201 participants of an international high-tech company, we tested a motivational model of pay variables on psychological need satisfaction/frustration where we were also able, alongside the self-reported variables, to obtain the objective (i.e., company provided) base salary, annual bonuses, and stock options as well as objective supervisor-ratings of performance. Our results generally show that autonomy support from managers is the strongest predictor of psychological need satisfaction ($\beta = 0.47, p < .001$), followed by pay instrumentality ($\beta = 0.10, p < .001$), informative aspect of bonuses ($\beta = 0.09, p < .001$) and real-life base salary ($\beta = 0.08, p < .001$). As for need frustration, the strongest predictors are autonomy support ($\beta = -0.24, p < .001$), psychological control from managers ($\beta = 0.24, p < .001$), pay instrumentality ($\beta = -0.10, p < .001$) and real-life base salary ($\beta = -0.06, p < .001$). In return, psychological need satisfaction is positively related to individual proficiency and adaptivity/proactivity as well as organizational proficiency ($.27 \leq \beta \leq .32, p < .001$) and intention to stay while being negatively related to intention to quit ($\beta = -0.33, p < .001$); on its part, psychological need frustration is related in the opposite pattern. Implications for research and practice will be discussed in light of self-determination theory.

Reversing the lens: How employees' self-determined motivations invite leadership behaviors

Yaniv Kanat-Maymon, Reichman University

Abira Reizer, Ariel university

Maor Elimelech, Ariel university

The transformational-transactional theory is a widespread leader-centric theory that views work supervisors as power-wielding actors. Previous research has shown that transformational leadership (i.e., leading through identification) fosters employees' autonomous motivation, whereas transactional leadership (i.e., exchange-based leadership) installs more controlled motivation. In this work, we adopted a fellowship approach and examined, besides the traditional leadership approach, how employees' autonomous and controlled motivations may invite leadership behaviors over time. We argue that supervisors not only affect their employees' motivation, but also adjust their leadership behaviors in response to their employees' motivation. In other words, motivation is not just an outcome of leadership, but may as well be a precursor of leadership. We tested this reversing the lens approach in a longitudinal study among 201 employees from 64 teams (46% females) in various industry fields (64% technology). We conducted three waves of data collection, four months apart. Confirmatory factor analysis and longitudinal invariance analysis indicated that metric, intercept, and structural covariances were achieved. Given that employees were nested within teams, we used a Multilevel-SEM in Mplus to examine the bidirectional cross-lagged associations between leadership and motivation. In line with the traditional leadership approach, after controlling for auto-regression paths, we found that transformational leadership positively predicted changes in employees' autonomous motivation over time, while transactional leadership positively predicted changes in employees' controlled motivation over time. In accordance with the reversing the lens approach, we found that employees' autonomous motivation invited more identity-based leadership (i.e., transformational), whereas employees' controlled motivation summons more exchange-based leadership (i.e., transactional). These findings were evident at both the employee and team levels.

Effects of leadership behavior and basic needs satisfaction on the work motivation of scientific staff at German professorships

Uwe Wilkesmann, TU Dortmund University
Sabine Lauer, TU Dortmund University
Maximiliane Wilkesmann

In international comparison, professorships—the smallest (partially) autonomous organizational units at German universities—play a rather unique role in the training of young scientists. However, their inner organization and leadership have received little attention in higher education and organizational research. This study therefore fills a research gap at this university meso-level by investigating the influence of leadership behavior (transactional, transformational) as well as the three basic needs (autonomy, competence, relatedness) on the work motivation (amotivation, external, introjected, identified, integrated, intrinsic) of junior academic staff. The theoretical framework combines the Full Range Leadership Model (FRLM) with Self-Determination Theory (SDT), testing hypotheses using an online survey (n=1,450) conducted between March 2022 and May 2022 among academic staff in the fields of business administration, biology, mechanical engineering, and sociology in all German higher education institutions. In terms of basic needs satisfaction, the regression analyses show that a high perception of autonomy and competence is positively associated with more internalized forms of work motivation, while relatedness plays only a subordinate role. With regard to leadership, it is primarily transformational leadership (e.g., intellectual stimulation) that is positively associated with more strongly internalized forms of work motivation. Transactional leadership, on the other hand, has only a reducing effect on amotivation. Overall, the results suggest that not all dimensions of the FRLM influence individual work motivation; one explanation could be that they are simply not relevant. Another surprising result is the weak relationship between individual work motivation and relatedness. This could be due to the fact that the survey was conducted in the middle of the Covid-19 pandemic.

4:30 – 5:30 PM

Keynotes 3

Keynote 3A

Peninsula 1-4

What do we mean in SDT when we say that people are pro-active and resilient by nature (Part I & II)?

Bart Soenens & Maarten Vansteenkiste, Ghent University

The vast majority of previous studies in the field of SDT have shed light on the role of contextual factors that support individuals' basic needs, long-term motivation, and growth. Yet, human beings are not merely passive recipients waiting for contextual activation and support. From an organismic viewpoint, people have a propensity to agentically steer their own functioning, thereby uplifting their own development and well-being. In this keynote address, we discuss two recent lines of research that shed light on, respectively, the pro-active and resilient nature of human functioning. First, individuals can make growth-conducive choices, thereby selecting activities and relational partners or evoking contextual responses that allow them to get their basic needs for autonomy, competence, and relatedness met. Second, confronted with need-frustrating and distressing situations, individuals can display resilience. Whereas recent correlational, diary-based and experimental work on the notion of need crafting and agentic engagement serve as key examples of our pro-active nature, research on self-motivation and the way people cope with threats to their basic needs serve as illustrative examples of our resilient nature. We conclude this keynote by discussing the way how SDT scholars can embody and model such pro-activity themselves by disseminating SDT-based insights to different stake holders in society. The Motivation Barometer (www.motivationbarometer.com), a large-scale monitoring project conducted in Belgium during the COVID-19 crisis, serves as an example.

Keynote 3B

Peninsula 5-7

Self-determination and public messaging: Brief autonomy supportive communications are effective across life domains

Lisa Legault, Clarkson University

Public messages, slogans, social media posts, and advertisements are often meant to persuade and influence people. Thus, they tend to be directive. Autonomy-supportive communications, in contrast, tap into intrinsic goals and aim to facilitate reflective consideration of the self-congruent aspects of the message. In this talk, I use experimental

evidence from both between-groups and repeated measures designs to compare autonomy-focused and controlling messaging across a range of domains – including body positivity, protective health behavior, proenvironmental behavior, and antiracism. In the first series of experiments, I show that needconductive messaging about body acceptance promotes self-esteem, bodily agency, and positive body image, whereas pressuring people to feel body positive does not – and can sometimes feel more controlling than thinness idealization. To further illustrate the role of autonomy-supportive messaging in health outcomes, a large international experiment shows that an autonomy-supportive message conveying the importance of social distancing during COVID-19 reduces defiance relative to a controlling message. In the domain of environmental messaging, two experiments examine the importance of autonomy-focused slogans in proenvironmental learning and intentions to save electricity and water. Finally, a set of recent experiments show that antiracism messages based on intrinsic values are more effective than controlling and normative messages when motivating social justice behavior. Furthermore, by contrasting multiple types of antiracism messages, I show that individual differences in motivational orientation link to message preference – which indicates there may be value in mapping messages to individuals’ motivation. Taken together, these nine studies converge to suggest that even very brief messages can promote positive social behavior and wellbeing when they target personal agency, reflective choice, psychological needs, and intrinsic values. I discuss the prospective social benefits of extracting or “boiling down” need-supportive communications into brief slogans or media posts, in order to reach a wide audience.

Listening, understanding, and autonomy during life’s important conversations

Netta Weinstein, University of Reading & University of Oxford

Conversations, such as those between friends, colleagues, or teachers, at home with one’s family, and even in pubs, stores, or public places, can help people share important thoughts and feelings, find common ground, and connect at a deeper level. But the paths that conversations take, and their outcomes for all involved, may depend on how listeners act, as well as on what is said. Listening is more than the passive process of keeping quiet; It involves actively conveying one’s attention, understanding, and caring for the speaker or speakers. This may be especially important during personal and threatening disclosures, when speakers who share may feel (and be) vulnerable to judgment and rejection. In these cases, the openness, interest, and acceptance conveyed by high-quality listening may be a powerful interpersonal reaction. This talk integrates self-determination theory with the growing literature on high-quality interpersonal listening to explore these relational processes. It will explore the idea that high-quality listening is a specific and distinguishable autonomy-supportive strategy that satisfies basic psychological needs, reduces defensiveness, and promotes well-being and self-disclosure. I will present evidence from recent studies that manipulate high-quality listening in a number of ways with a consistent set of findings: that high-quality listening helps to satisfy the psychological needs of relatedness and autonomy. Among these, I present findings from an experimental study concerned with parent-adolescent communications, which manipulated parental listening when an actor-adolescent disclosed he had vaped (committed a transgression) or had been rejected for refusing to vape (and was feeling hurt). Adolescents who observed the parent engaging in high-quality listening anticipated their needs would be met in these conditions (when the adolescent disclosed both transgression and hurt), and that they would be more likely to disclosure to the high-quality listening parent). I also present findings from two experimental studies showing that discussing controversial topics such as one’s prejudice and a disagreement satisfied needs to the extent that partners provide high-quality listening. I will explore implications for workplace disagreements, close relationship, and conversations among strangers.

5:30 – 6:30 PM

Rapid Talks 2 & Workshops 2

Rapid Talks

Rapid Talk 2A

Education | Supporting Student Motivation

Longboat

Test anxiety fluctuations during secondary school assessments: The role of basic psychological needs over and above the number of tests

Stefanie De Jonge, Ghent University
Evelien Opdecam, Ghent University
Leen Haerens

Test anxiety poses a fundamental educational challenge as it is associated with lower academic performance, decreased self-efficacy and lower well-being. Grounded in the Self-Determination Theory, this study examines test anxiety fluctuations and how it relates to fluctuations in basic psychological need satisfaction and frustration. Three test anxiety scales and students' need-based experiences were administered to 253 11th and 12th grade secondary school students at three different times. Multilevel analyses revealed that students showed higher test anxiety in weeks in which their need for competence was more frustrated and when they were exposed to more tests. This association was robust across anxiety instruments and after considering important test anxiety covariates (e.g., gender and prior achievement). These findings imply that reducing competence frustration is important when designing anxiety-reducing interventions.

Foreign language policy and its impact on Pakistani students' motivation: exploring Mandarin initiative through self-determination theory lens

Adeeba Ahmad, University of Surrey

Background: Mandarin was introduced in the higher education institutions of Pakistan (in some universities made mandatory), after China Pakistan Economic Corridor (CPEC) agreement. As a result, Confucius Institute was built and Chinese teachers were teaching Pakistani students. CPEC and its related projects served as motivation for students to learn Mandarin. Goal of study: •Determine students' autonomy, competence and relatedness and explore how this affected their motivation (with regards to learning Mandarin).Method: Data was collected through semi-structured focus group discussions, which explored students' experiences of engaging with the foreign faculty and how far their needs of autonomy, competence and relatedness affected their motivation. Findings suggested that, whilst some students embraced the range of opportunities this change presented and maximised prospects of making their goals come true, for others the expectations of learning a new language from foreign faculty resulted in lack of motivation. Result: 1.Pakistani students learning Mandarin were motivated by the level of autonomy and relatedness. Following aspects were perceived as their goals:•Prospects of getting a better job and outside of Pakistan•Chances of securing business deals with Chinese •Interaction with foreigners and learning different culture•Enhanced opportunities for travel and mobility2.Pakistani students learning Mandarin experienced lack of relatedness. The main factors of lack of relatedness were:•Perceiving Mandarin policy as political move•No benefits for engineers•Lack of belonging, culture is so differentConclusion: In the light of Self Determination Theory and its expanding boundaries, the research highlights the importance of need satisfaction i.e. autonomy, competence and relatedness as indicators of student motivation to learn a foreign language e.g. Mandarin. It recommends that prior to implementing policy, all stakeholders should be taken on board.

Constructing knowledge on student motivations and aspirations in engineering education programs

Shaylin Williams, Mississippi State University

If a group of engineering deans were asked whether students at their institutions were successful and why, what information might they immediately use to gauge the students' success? If academic performance outcomes like GPA, course grades, or graduation rate race to their minds, their rationale aligns with the majority of researchers. My research seeks to shift the mindset framing engineering student success within the boundaries of academic performance measures. Measuring self-determination and motivation levels, and aspirations after graduation, one can more accurately assess whether engineering students are achieving holistic student success. By surveying graduating engineering seniors, I have gathered more in-depth information on students' experiences. The ongoing analyses of this survey data will offer valuable insight into ways to approach persistent issues in engineering education. In turn, one can better understand how the structures of engineering undergraduate programs either contribute to or detract from student success and motivation. This information can be used in practice for enhancing programmatic planning and design as well as potentially developing novel program components that contribute to students becoming more self-determined, motivated engineers. I hope that one day, engineering education leaders will cultivate and measure success based on a more comprehensive assessment of lived experiences.

Different learning environments, different autonomous motivation: Investigating basic psychological needs in three bachelor's programmes

Yuanyuan Zhu, Maastricht University

Diana Dolmans, Maastricht University

Eleonore Koehler

Rashmi Kusrkar, Amsterdam UMC Faculty of Medicine, Vrije Universiteit

Latifa Abidi

Hans Savelberg

It is a concern that bachelor programmes in the health professions education field hamper students' autonomous motivation (AM) and well-being. Self-Determination Theory posits that satisfaction of basic psychological needs (BPNs) facilitates AM and well-being. It is crucial to investigate how and why learning environments with different levels of satisfaction of BPNs are associated with AM and well-being. First-year bachelor's students from three programmes at Maastricht University (n=202) completed an electronic survey measuring their BPNs, AM, and well-being. A MANOVA was performed to explore the score differences of the variables across programmes. Structural equation modelling analysis tested the associations between the three variables. Deductive thematic analysis was conducted on data collected from 3 focus groups to understand which environmental elements are related to students' BPNs, AM, and well-being. Programmes C and B students witnessed higher autonomy and AM than A students, respectively. Autonomy was positively and directly associated with AM. All three BPNs had positive direct associations with well-being and contributed equally to well-being. Students' BPNs, AM, and well-being were impacted by characteristics of their programmes such as freedom in choosing courses, group dynamics, and tutor competence. Students felt lost when given too much autonomy without clear guidance. Their competence was frustrated when addressing difficult tasks without sufficient support. Students' feelings for three BPNs affect each other, AM, and well-being. Autonomy does not equal to complete freedom. Competence requires optimal level of challenges. Educators should provide structure and support when satisfying students' BPNs. They should pay equal attention to all three needs since the needs are interconnected and equally important for students' well-being. Motivation is susceptible to BPNs supportive learning environments. Educational programmes should focus on curating BPNs supportive elements rather than trying to attain lasting AM.

Rapid Talk 2B

Health and Activity | Sports

Merritt

Controlling coaching and psychological athlete harassment and abuse: towards a cross-fertilization between both fields of research

Elisa Lefever, Ghent University

Felien Laureys, Ghent University

Cleo Schyvinck

Tine Vertommen

Leen Haerens

A controlling coaching style is evident in the conditional use of rewards, and the presence of intimidation, excessive personal control, and negative conditional regard. The detrimental effects of a controlling style on athletes' anxiety, perfectionism and self-esteem have already been widely demonstrated. Similarly, literature on psychological athlete harassment and abuse from coaches is growing rapidly and shows detrimental results. Psychological athlete harassment and abuse refers to a pattern of deliberate, prolonged, and repeated non-contact deteriorated interactions within a power-differentiated relationship. Even though, the constructs of controlling coaching and psychological athlete harassment and abuse show great conceptual overlap (e.g., coaches trying to control athletes' spare time), both fields of research exist separately from each other. This study looked at the relation between controlling coaching and psychological athlete harassment and abuse, and how controlling coaching and psychological athlete harassment and abuse relate to athletes' outcomes (anxiety, perfectionism, and self-esteem). In total, 565 Belgian (former) gymnasts (91.2% female; 33.7% active; age = 21.70 ± 4.26) reported perceived coach's controlling style, coach's psychological athlete harassment and abuse, feelings of anxiety, perfectionism, and self-esteem. Controlling coaching positively correlated with psychological athlete harassment and abuse, and the highest correlations were found with intimidation.

Results also showed that more controlling coaching and psychological athlete harassment and abuse related to more anxiety and perfectionism in athletes. No relations with self-esteem were found. As psychological harassment and abuse may form a gateway to other forms of abuse (i.e., physical; sexual), adopting a controlling coaching style may do the same. Equipping coaches through evidence-based safeguarding education with suitable alternative coaching styles may help protect athletes from psychological harassment and abuse.

Meta-analysis of the sport motivation scale

Thais Benoit, University of California, Merced

Marc Lochbaum, Texas Tech University

Martin Hagger, University of California, Merced

Multiple studies have examined relations between the Sport Motivation Scale (SMS) constructs and outcomes related to sport performance and behavioral outcomes (e.g., goal orientations). However, results of numerous SMS studies showed that effect sizes between sport-related outcomes and SMS constructs in the sport literature are inconsistent in terms of direction and effect size. Further, there has been no attempt to examine the general pattern of relations between the SMS constructs and outcomes. We conducted a meta-analysis to estimate the size and variability of the effects among SMS constructs and sport-related outcomes and the effects of salient moderators on these effects. A search followed by screening against eligibility criteria identified 217 eligible studies for the analysis. Twenty-nine sport-related outcomes and four study characteristics were identified as candidate moderators. Extracted effect size data for relations among SMS constructs and sport-related outcomes were analyzed using a three-level meta-analysis corrected for sampling error. Moderator effects were tested using meta-regression analyses. A slate of bias-correction methods was applied to each effect to evaluate the potential for selective reporting bias. We found theoretically consistent patterns of averaged, bias-corrected correlations between SMS constructs and sets of sport-related outcomes. For example, we found positive non-zero correlations between autonomous motivation from the SMS and outcomes related to positive effects and socioenvironmental factors. Most of the averaged correlations among the SMS constructs and outcomes were associated with considerable heterogeneity. The SMS provides relatively consistent patterns of effects with behavioral, environmental, and affective sets of sport-related outcomes consistent with self-determination theory. Some moderator analyses helped explain the residual variance in the averaged correlations and may point to conditions in which self-determination theory effects are exacerbated or attenuated.

Using sport to motivate Pay-It-Forward co-production sequences: The role of SDT in building a theory of allochronic co-production

George Kominis, University of Glasgow

Adina Dudau, University of Glasgow

Co-productive models of public services are based on the premise that the empowerment of citizens to become active in the public service design and delivery can have multiple positive effects on individuals and local communities, allowing citizens to emerge as agents of change and social value creation therein. While such models have received significant attention in the literature, there is still considerable scope for research, for example around co-production motivators, as well as around co-production when citizens co-produce not for their own benefit, but for others (others-motivated co-production). Our paper considers the role and use of sport as a community building tool and showcases how sport can ignite intrinsic motivational processes leading to a self-sustained co-production cycle where today's service users co-produce the service for others in the future -we have called that 'allochronic co-production'). We provide an example of co-production structured around a collaborative initiative between a third-sector organisation and a local high school in a selected area of a UK city, in the context of which university sports are employed to support and facilitate co-production. We describe in detail the structure of this co-production initiative, which employs what is known in the literature as a 'pay-it-forward' model (PFM) to first initiate co-production and then sustain it in the long run. We then draw on Self-Determination Theory (SDT) to offer interpretations of the psychological mechanisms through which this happens and of the positive outcomes it achieves both for those delivering and for those receiving the co-produced service within the context of a recursive paying-it-forward cycle. The paper extends our knowledge on co-production and value co-creation in value co-creation ecosystems (Osborne et al. 2022), while also providing a

nuanced illustration of how SDT contributes to other-oriented motivation which can be employed in public services, community cohesion and other other-oriented activities.

Workshops & Interest Groups

Training SDT: Activities and tools to teach SDT concepts Matthew Richter, President, The Thiagi Group	Biscayne
Democratic and personalized curriculum development: Meaningfully involving students Dan Drmacich, Coordinator, Rochester Coalition for Public Education & Retired Principal of Rochester School Without Walls	Peninsula 1-4
Applying SDT to Healthcare: Scaling Solutions to Broaden Benefit Scott Rigby, CEO, Immersyve Paul Adachi, SVP, Immersyve	Peninsula 5-7
Relational Onboarding - Accelerating the Impact of Cross-Functional Teams Amit Raikar, Executive Coach, Accenture	Canaveral

Friday, June 2, 2023

8:30 – 9:45 AM	Individual Talks 4		
Individual Talk 4A	Theory & Methods Relational Motivation Theory		Peninsula 1-4
Using social media to satisfy social needs: Social interaction, perceived responsiveness, and relatedness need satisfaction on social media			
Michael Maniaci, Florida Atlantic University Angalee Wilson, Florida Atlantic University			
<p>Understanding the implications of social media use for well-being may require accounting for variability in how people use social media and how different types of use support or thwart basic psychological needs. From a Self-Determination Theory perspective, we might expect social media use to promote well-being primarily when it supports relatedness and other psychological needs. We propose that social media use is most likely to support the need for relatedness when it affords opportunities for social interaction perceived as high in responsiveness (e.g., demonstrating caring and understanding). An initial study of more than 100 Facebook users supported the reliability and validity of a brief measure of perceived responsiveness applied to social media networks. Participants who perceived their Facebook friends as generally more responsive tended to receive more responsive replies to positive event disclosures as rated both subjectively by the participant and objectively by independent coders. Participants with more responsive Facebook friends were more satisfied with their relationships with those friends and reported greater well-being. A second study examined experiences on each social media platform used for social interaction by n=250 undergraduate students, with each participant answering questions about up to 8 social media platforms (median=4). The tendency to use social media for social interaction varied substantially between participants and platforms. Participants who reported using social media primarily for social interaction tended to perceive their social media networks as more responsive, whereas perceived network responsiveness was not significantly associated with nonsocial use (e.g., passively browsing content). Participants who perceived their social network as more responsive experienced significantly higher psychological need satisfaction (for relatedness, autonomy, and competence) when using social media and reported greater well-being.</p>			

Measuring relatedness in the classroom: Differential effects of instructor and peer relatedness on academic outcomes in higher education

Emily Bonem, Purdue University
Heather Fedesco, American Association of Veterinary Medical Colleges
Angelika Zissimopoulos, Northwestern University

Previous research has demonstrated that satisfying the basic psychological needs of autonomy and competence has positive impacts on student motivation in higher education (summarized in Ryan & Deci, 2017). However, research examining the relationship between relatedness and motivation has been mixed, with many studies showing weak or non-significant results (e.g. Cheon et al., 2012; Levesque-Bristol et al., 2010). While some have suggested that relatedness may simply play a smaller role in fostering student motivation (Deci & Ryan, 2000), we propose that the measures used to evaluate relatedness in the classroom may be combining two distinct constructs, instructor relatedness and peer relatedness, leading to differing, and sometimes conflicting, effects. In this presentation, we will discuss three studies focusing on student perceptions of instructor and peer relatedness in college courses. The first study (N=877) was conducted at two small, liberal arts colleges and used quantitative measures derived from the Basic Needs Satisfaction Scale (Deci & Ryan, 2000; Gagné, 2003) to validate two new relatedness subscales and compare instructor and peer relatedness on student motivation, perceived learning, and course grades. The second study, also conducted at two small liberal arts colleges, used thematic analysis to explore student interview data (N=55) on strategies for enhancing connections with instructors and peers and how these strategies influence student motivation. In the final study, we use mixed methodology with a large student sample (N=2,011) from a large, research-focused university to further differentiate the effects of peer and instructor relatedness and examine the generalizability of our previous results in a different higher education environment. Taken together, the results from our three studies will demonstrate the importance of fostering relatedness in higher education, particularly between students and instructors, and suggest specific strategies that instructors might use to cultivate positive student-teacher relationships.

Simulating connection: A critical scoping review of relatedness manipulations in experimental paradigms

Marianna Bottiglieri, Liverpool John Moores University, Durham University
Emily Oliver, Newcastle University, Durham University
Martin Roderick, Durham University
Sohpie Phillips, Durham University

Self-determination theory stipulates the role of the psychosocial environment in supporting or undermining needs for autonomy, competence, and relatedness. Though there is convincing experimental evidence of the beneficial and deleterious effects of need support and thwarting respectively, evidence is stronger concerning competence and autonomy. This particularly applies to laboratory-based experimental contexts, where successfully manipulating relatedness can be challenging (e.g., Thomas et al., 2018). Perhaps somewhat due to this, the need for relatedness has arguably been overlooked (Sheldon & Prentice, 2019). The aim of this research was therefore to critically review available protocols for acute manipulation of relatedness, to identify effective, ineffective, and promising approaches. Drawing from Arksey and O'Malley's (2005) framework, a systematic search of five major databases supplemented with searches for unpublished work was completed. We identified 25 studies that measured experimental effects on relatedness (n=18) or belonging (n=5). Direct manipulations (n=7) predominantly used task instructions or recall tasks. Indirect manipulations (n=18) operated through more heterogeneous manipulations including social status, listening, and task difficulty. Of these, ostracism (n=5) and social exclusion (n=2) were most commonly employed. Though the majority of studies included both need supportive and thwarting conditions, need frustration was rarely assessed (n=3). Findings suggest that adapting protocols from non-SDT focused research may have merit for informing new approaches to relatedness manipulation in acute experimental designs. On the basis of their effectiveness, we recommend protocols including ostracism and social exclusion influencing relatedness. Strengthening our ability to manipulate relatedness in this setting, especially in terms of thwarting protocols, may enable new understandings of the importance and role of the concept to emerge.

Basic psychological need supports and their relations with motivation, well-being, and performance: A meta-analysis

Gavin Slemp, University of Melbourne

James Field, West Virginia University
Vivien Forner, University of Sydney
Richard Ryan, Australian Catholic University
Kelsey Lewis, University of Melbourne
Anja Van den Broeck, KU Leuven

Self-determination theory argues that interpersonal supports for autonomy, competence, and relatedness facilitate motivation, well-being, and performance across social contexts. In the present study we provide a comprehensive examination of this formulation. Our results, which are derived from a meta-analytic database consisting of 4,740 effect sizes from 890 independent samples ($N = 455,118$), indicate that supports for basic needs are strongly positively related with the satisfaction of the autonomy, competence, and relatedness needs, and strongly negatively related to their frustration. Interpersonal supports for basic needs were strongly positively related with subjective well-being and moderately positively related with performance. Moderation analyses showed general stability of effects across cultures. We also find that lateral need supports explained incremental variance in basic need satisfaction even after controlling for vertical sources of support. In addition, competence- and relatedness-supportive behaviors explained incremental variance in basic need satisfaction even after controlling for the more established effects of autonomy support. In aggregate, our results suggest that interventions designed to support optimal motivation via basic psychological needs should consider broader behaviors to nurture autonomy, competence, and relatedness, and different sources of behavioral supports to yield the most benefit.

Individual Talk 4B **Special Topics | New Directions**

Peninsula 5-7

Mindset- versus reason-based measurement of the self-determination theory motivation types

John Meyer, Western University (The University of Western Ontario)
Leonid Beletski, Western University (The University of Western Ontario)
Jose Espinoza, University of Winnipeg

Whether treated as a unidimensional or multidimensional construct, the tradition in self-determination theory (SDT) research has been to use reason-based measures of motivation. The degree of felt autonomy versus external control are inferred from these reasons. Meyer et al. (2022) recently demonstrated that such inferences are not always justified, but that it is possible to measure the 'mindsets' of experienced autonomy and external control directly without the need for inference. Moreover, they proposed that researchers might use a similar mindset approach as an alternative to reason-based measures of the specific SDT motivation types. Unlike reasons, which reflect a causal attribution for an activity, a mindset reflects the psychological state one experiences while engaged in that activity. The purpose of the present research was to develop and evaluate mindset measures of the SDT motivation types (amotivation; external, introjected, and identified regulation; and intrinsic motivation). In the process, we also investigated whether we could distinguish between approach- and avoidance-based versions of external and introjected regulation, and between integrated and identified regulation. Using data collected from employee ($n=500$) and student ($n=476$) samples, we found that a 9-factor model fit the data well. The approach and avoidance versions of external (social and material) and introjected regulation were clearly distinguishable, but integrated regulation was not. Correlations among the motivation subscales reflected the theoretical simplex-like structure. Using multiple regression and relative weights analyses we demonstrated that the mindset measures related to the direct measures of experienced autonomy and external control, as well as to relevant outcomes (e.g., need satisfaction, well-being, attitudes, performance), in accord with SDT predictions, augmented by meaningful differences between the approach and avoidance subscales. Comparisons with sample-relevant reason-based measures provided evidence for construct validity and incremental prediction.

Motivational finance

Stefano Di Domenico, University of Toronto Scarborough
Richard Ryan, Australian Catholic University
Emma Bradshaw, Australian Catholic University
Jasper Duineveld, Australian Catholic University

Financial knowledge and sound financial decision making are broadly recognized determinants of both personal and societal prosperity, but research has only begun to examine how distinct qualities of motivation may be associated with the way people manage their money. This presentation reviews findings from a new line of Self-Determination Theory (SDT) research focused on the measurement of financial motivations and the differential associations these motives have with financial behavior and wellness. Across multiple domains of financial activity, studies (total N = 3000) indicate that autonomous motivations are associated with a host of beneficial financial behaviors, attitudes, and outcomes. Conversely, controlled motivations and especially amotivations are associated with less financial knowledge and more financial distress. These findings support SDT as an applied framework within the financial services domain and will be discussed with respect to the influences that financial and monetary systems exert on people's values, goals, and behaviors.

Self determination theory and theories of public policy

Daniel Laitsch, Simon Fraser University

This paper explores policymaking using the lens of Self Determination Theory (SDT) by extending the work Moller, Ryan, & Deci (2006) to theories of policymaking. Specifically, it considers how SDT and its six mini-theories (Cognitive Evaluation Theory; Organismic Integration Theory; Causality Orientations Theory; Basic Psychological Needs Theory; Goal Contents Theory; Relationships Motivation Theory) can be applied to help us understand the motivation of individuals affected by policy, and their potential responses to policy designed to change their behaviours. The paper conceptually interrogates current theories of policymaking with SDT to look at the motivation of collections of individuals (i.e. groups) to respond to policy-driven change. Social policy is often conceptualized in extrinsic terms, that is, policy is used to compel behavioural change, while SDT can be conceptualized as in intrinsic terms as a theory of supportive change, a key shift in the way we think about policymaking. Goodhart's Theory and Campbell's Law are applied to look at how unintended consequences in social policy implementation driven by coercive policy regimes can be mitigated through an SDT theory of policy change. By understanding the interaction of policy and motivation using the lens of SDT, we can strengthen policy analysis, design, and implementation to better achieve desired outcomes. Moller, A. C., Ryan, R. M., & Deci, E. L. (2006). Self-Determination Theory and Public Policy: Improving the Quality of Consumer Decisions without Using Coercion. *Journal of Public Policy & Marketing*, 25(1), 104–116. <https://doi.org/10.1509/jppm.25.1.104>

Effects of caregiving motives and stress regulation on sleep health of family caregivers of adult patients with cancer

Youngmee Kim, University of Miami

Thomas Tsai, University of Miami

Amanda Ting

Nirvi Ajmera

Cancer is a stress to not only the patients but also their family caregivers. Stress response patterns to a discrete stressor have been significant indicators of a broad array of long-term health outcomes, including sleep. This study aimed to investigate the extent to which caregiving motives relate to acute stress responses, which in turn predict daily sleep health of family caregivers of adult patients with cancer. Spousal caregivers (N=109, 54.2 years old, 66.4% female) of newly diagnosed colorectal cancer patients (stage I–IV; 6.8 months post-diagnosis) participated in an experimental study where interpersonal and health-related stress was induced. Self-reported stress was assessed before stress onset, at the end of stress onset (stress reactivity), and a 12-minute after stress offset (stress recovery). Participants also completed questionnaire including caregiving motives once and daily sleep diaries for 14 days from which sleep onset latency (SOL), waking after sleep onset (WASO), and sleep efficiency (SE) were derived. Age and gender served as covariates. Caregivers reported high, moderate, and low levels of autonomous, introjected, and external caregiving motives, respectively. Caregivers also displayed significant changes in stress responses to the experimental stressor and reported poor daily SE (84%). Structural equation modeling revealed that greater introjected motives associated with less stress recovery ($\beta = -.678$, $p < .001$), which in turn associated with longer SOL but shorter WASO ($|\beta| \geq .291$, $p \leq .005$). Autonomous motives were marginally related to less stress reactivity ($\beta = -.376$, $p = .091$). Findings highlight the toll of introjected caregiving motives on caregivers' sleep health due in part to their inability for full stress recovery upon removal of the stressor. Investigating psychological and biobehavioral pathways linking caregiving motives to

stress responses and sleep health, including close relationship characteristics, and affective and neuroendocrine coregulatory patterns involving the patients, is warranted.

Individual Talk 4C **Development & Parenting | Supporting Growth in Preschoolers and**
Their Socialization Figures

Biscayne

Closing the physical and cognitive attainment gap: A home-based, gamified intervention for 4-5-year-old children

Katie Fitton Davies, Liverpool John Moores University

Samantha Clarke, Coventry University

James Rudd

Riccardo Martins

Michael Duncan

Stability skills (e.g., static/dynamic balance) are a precursor for other motor skill development (e.g., jumping, catching). However, young children consistently demonstrate low stability and motor skill ability. Furthermore, COVID-19 disrupted young children's educational trajectories. National lockdowns had children remain home; however, parents/caregivers are in a prime position to foster children's development, they only require a usable framework. Gamification, defined as the use of game design elements in non-video game contexts, is underpinned by Self-Determination Theory where elements such as strategy, collaboration, progression, and role-play promote autonomous motivation. To that end, the aim of this pilot study was to develop and trial a parent-led gamified intervention to help develop stability skills in 4-5-year-old children. One-hundred-and-eleven 4-5-year-old children participated from three schools. Two schools were allocated into the intervention group (n=66 children, 50% boys) and one to the control group (n=45 children, 55.55% boys). Stability, motor skills, perceived motor competence, and cognition were assessed at baseline (January 2022) and post-test (July 2022). Intervention children were given a booklet detailing the 12-week gamified stability skill intervention. Control children participated in their usual weekly activities. A two-way mixed ANOVA demonstrated a statistically significant time*group effect for stability ($F(1,93) = 15.44, p < .001, \text{partial } \eta^2 = .142$), motor skills ($F(1,95) = 9.26, p = .003, \text{partial } \eta^2 = .089$), and cognition ($F(1,97) = 14.85, p < .001, \text{partial } \eta^2 = .133$). The intervention group significantly outperformed the control group at post-test on stability (intervention $M = 5.23, SE = .26$, control $M = 3.87, SE = .34$) and on cognition (intervention group $M = 24.32, SE = .51$, control group $M = 22.54, SE = .66$). This study, underpinned by SDT, demonstrates the potential for closing the physical and attainment gap in young children and offers a promising, usable framework for parents.

Childbearing motivations and its implications on parental adjustment, parenting practices and child functioning: A 5-year longitudinal research

Reut Nachoum, Bar Ilan University

Anat Moed, Bar Ilan University

Nir Madjar

Yaniv Kanat-Maymon, Reichman University

Having a child is a significant life event with long-term implications in many realms. While many parents perceive raising children as their most gratifying mission, it is also perceived as one of the most stressful and challenging times in a family's life. Most of the literature on childbearing has focused on the amount of motivation or wantedness of the pregnancy and has suggested that low motivation or an unwanted pregnancy puts families at risk of maladjustment. However, from an SDT perspective, people can decide, plan, or want to have a child for a variety of reasons. For instance, wanting to have a child for the pleasure of it or to fulfill a personal life goal (i.e., autonomous motivation) may have other consequences than wanting to have a child to meet a partner's goal or social expectations (i.e., controlled motivation). Very little is known about how autonomous and controlled childbearing motivations shape future aspects of a family's life. In a series of longitudinal studies with heterosexual couples (n = 155), we aimed to shed light on the possible influences of prenatal childbearing motivations on parental adjustment, parenting styles, and child functioning. We found that autonomous prenatal childbearing motivations, compared to controlled motivations, negatively predicted postpartum depression and positively predicted parental competence at four months. Autonomous and controlled childbearing motivations also predicted autonomy-supportive and controlling parenting

styles, respectively, at 20 months, which, in turn, predicted the child's levels of behavior problems, intrinsic motivation, social adjustment, and emotion regulation at 4.5 years. Overall, these studies underscore the importance of childbearing motivations as early indicators of future parental adjustment, parenting styles, and child adjustment. Educators, healthcare providers, and clinicians who encounter parents in early family-planning stages can draw on these findings to help future parents adjust to their new or additional roles.

Basic psychological needs supporting wellbeing and involvement in preschool

Rita Melia, Atlantic Technological University Ireland

This PhD research was conducted in seven early years preschools, kindergartens, four in the west of Ireland, two Play based and two Montessori programmes and three in Boston Massachusetts, two Reggio inspired, and one Play based setting as part of a Fulbright scholarship to Harvard Graduate School of Education. The study explored the impact of the preschool educators' image of the child as a learner on her / his pedagogical approach and the subsequent impact on children's wellbeing and involvement levels (Laevers 2017). Methodology: Literature review which identified how young children learn and pedagogical approaches based on the three identified approaches, Play based, Montessori and Reggio inspired (Bruner 1996, Freire 1996, Mardell et al 2016, Rinaldi 2006, Ryan and Deci 2017). Educator and parent Interviews and questionnaires. Onsite observations in the seven preschool settings of children using: Reflect Respect Relate Observation Scales (State of South Australia, Department of Education and Children's Services, 2008). Findings: A conceptual framework was developed from the findings which links the educators' image of the child as a learner to the educator's pedagogical approach. Findings confirm that when young children's three basic psychological needs for Autonomy, Competence and Relatedness (Ryan & Deci 2017) are met in an autonomy supportive learning environment, regardless of the curricular approach, Play based, Montessori or Reggio inspired children have higher levels of wellbeing and involvement. Children are intrinsically motivated to learn and the development of 21st century skills, curiosity, creativity, critical thinking, communicating are supported. The findings of this study are significant for educators working in early years settings and for primary education of preschool teachers at a policy and research level. As Malaguzzi suggests; 'Your image of the child is where teaching begins' (Malaguzzi, cited in Edwards et al., 1998).

Mothers and close others' support of father involvement through need satisfaction

Tamarha Pierce, Université Laval

Seena Fortin, Université Laval

Francine de Montigny, Université du Québec en Outaouais

Deborah Da Costa, McGill University

Christine Gervais, Université du Québec en Outaouais

Diane Dubeau, Université du Québec en Outaouais

Father involvement benefits child development as well as maternal well-being. Several factors help predict father involvement, including fathers' parental self-efficacy and a supportive social environment, including a satisfying relationship with a respectful, collaborative and trusting coparent. Such relationships seem likely to support fathers' basic psychological needs. Yet no research has examined if social and coparental support are beneficial for paternal self-efficacy and involvement because they help satisfy or limit frustration of fathers' basic psychological needs. This is the aim of the present study. As part of a longitudinal study of social support over the transition to fatherhood, 246 fathers completed an online questionnaire when their child was 9 months. It included measures of perceived availability of social support, satisfaction with support received, dyadic adjustment, perceived quality of the coparental relationship, parental self-efficacy, father involvement and the Basic Psychological Need Satisfaction and Frustration Scale adapted to the role of father. Structural equation modeling confirms greater perceived availability of social support and quality of the coparental relationship both help explain greater need satisfaction ($R^2=.52$). Along with dyadic adjustment, these same factors also explain less need frustration ($R^2=.47$). Furthermore, only need satisfaction contributes to explaining father involvement, indirectly through parental self-efficacy ($R^2=.21$; indirect effect = .25). In sum, results suggest that the availability of social support and a supportive coparental relationship may encourage fathers to be involved as parents because they help satisfy fathers' basic psychological needs which in turn contributes to fathers' feeling more efficacious as parents. Although cross-sectional data limit causal inferences, this study

underscores how close others', particularly mothers' attentiveness to fathers' needs of autonomy, competence and relatedness may help support their engagement in fathering their young child.

Individual Talk 4D **Education** | Interventions in Education

Canaveral

Results from an SDT experiment in designing syllabus language

Simon Beaudry, University of Ottawa

Meredith Rocchi, University of Ottawa

Paola Merchán Tamayo, University of South Carolina

Jenepher Lennox Terrion, University of Ottawa

The course syllabus serves as an important first contact between professors and students in university courses and the language used in a syllabus can influence students' first impressions of the professor and expectations for the course. Existing research in Self-Determination Theory has shown that autonomy-supportive language leads to increased positive outcomes for students compared to controlling language. The objective of the present studies was to compare an autonomy-supportive with a controlling syllabus to see how students felt when reading the syllabus (Study 1), and how the syllabus related to their impressions of the professor, reported motivation, and expectations for the course (Study 2). The results of Study 1 supported that the students reported more positive feelings when viewing the autonomy-supportive syllabus and perceived the autonomy-supportive syllabus was more autonomous and the controlling one was more controlling. In Study 2, the results showed that students who viewed the autonomy-supportive syllabus reported more positive impressions of the professor (more need-supportive, better quality), were more likely to have positive expectations about the course, and more likely to have a self-determined motivation towards attending class compared to students who viewed the controlling syllabus. Overall, the results from both studies supported that there are benefits to using autonomy-supportive language in a syllabus with few side effects. Professors could benefit by making a good first impression upon students by integrating autonomy-supportive language into their syllabus.

Does sequence matter? IMPACT of redesigning sequential calculus course on students' learning outcomes

Wonki Lee, Purdue University

Chantal Levesque-Bristol, Purdue University

Emily Bonem, Purdue University

As colleges and universities transform their STEM courses through the adoption of more student-centered pedagogies, there is a growing need to understand the impact of these educational innovations on student outcomes. This study is built in the context of a university-wide faculty development and course-redesign project, IMPACT, guided by self-determination theory. IMPACT supports faculty in implementing student-centered pedagogical practices and creating inclusive learning environments. This study focuses on a sequence of two calculus courses (Plane Analytic Geometry and Calculus I and II, hereafter CALC1 and CALC2) transformed through the IMPACT program. To evaluate the effectiveness of the course redesigns, some sections of each course used the redesigned model while the remainder of the sections continued the standard, lecture-based teaching. Students taking these courses could self-select either the redesigned or standard, lecture-based version. As the two courses were in sequence, we examined four groups of students: 1) Group 1: students in the redesigned CALC1 but the standard CALC2, 2) Group 2: students who had the standard CALC1 but the redesigned CALC2, 3) Group 3: students who had both redesigned courses and 4) Group 4: students who had both standard courses. Researchers utilized propensity score matching to ensure that the groups were equivalent at baseline. We used ANOVA to see how students' different sequential participation in student-centered learning affected their learning outcomes in CALC 2. Results showed that students in Group 3, who took both redesigned courses, outperformed the other groups in CALC2. In contrast, Group 1, which turned to the lecture-based standard course after the redesigned one, had the worst performance, as well as the highest DFW rates. The implications of this study indicate that it is vital to consider the overall curriculum of a program when engaging in course transformation, especially for courses that build on each other and thus are often taken sequentially.

A meta-analysis of self-determination-theory-based interventions in the education context

Yurou Wang, University of Alabama

Hui Wang, University of Kansas
Shengnan Wang
Stefanie Wind
Christopher Gill

Motivation is key to students' academic performance and well-being (Ryan & Deci, 2020). However, most existing educational interventions target students' cognitive ability and/or test scores, with only a few studies focusing on students' motivation. Self-determination theory (SDT), as an organismic theory, provides a fundamental understanding of students' motivation and constructive ways to promote students' intrinsic motivation by satisfying students' three basic psychological needs (Wang & Wind, 2020). This meta-analysis included 51 SDT-based intervention studies (N = 14,285 participants) and adopted the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) Guidelines (Page et al., 2021) to provide a comprehensive profile of SDT-based intervention studies. The results showed that SDT-based interventions had large positive overall effects on promoting students' intrinsic motivation ($g = 0.95$; CIs [0.08, 1.82]), satisfying students' autonomy ($g = 1.77$; CIs [0.20, 3.33]), satisfying students' relatedness need ($g = 1.66$; CIs [-0.51, 3.83]), and satisfying students' competence ($g = 0.77$; CIs [-0.18, 1.72]). Specifically, teacher-oriented, student-oriented, parent-oriented, and mentor-mentee intervention approaches demonstrate different effects on students' motivation and basic needs satisfaction. Five moderators were introduced into the analysis: 1) geographic origin, 2) age groups, 3) racial/ethnic groups, 4) intervention methods, and 5) targeted academic subjects. The results pointed to numerous pillars of instructional practices that support student intrinsic motivation, autonomy, relatedness, and competence. Among these practices, providing teachers with professional development to support students' autonomy is the most common and effective. Our findings provide evidence for researchers and practitioners to understand how to conduct subject, age, cultural, and diversity-sensitive interventions in the future.

Digital and hybrid needs support in blended learning for student engagement

Thomas K.F. Chiu, Chinese University of Hong Kong

Blended learning integrates digital learning experience with traditional face-to-face classroom activities. It requires students to control over learning time, place, path, or pace in digital environments, and teachers to connect what the students did digitally in classroom environments. The means of fostering student engagement in the two environments are very different, and sustaining student engagement in digital learning is challenging, particularly in younger learners. Accordingly, student engagement has become an important topic of research on blended/digital learning, and is fostered by satisfying three innate needs – autonomy, competence and relatedness – identified in self-determination theory (SDT). SDT-based educational studies focus on teacher needs support in classrooms or online environments (e.g., teacher motivational behaviors). Their findings may not contribute to student needs satisfaction in blended learning. Therefore, this intervention study proposes two needs satisfaction strategies - digital support and hybrid support. Digital support refers to a set of digital learning environment designs; hybrid support refers to a set of teaching practices that connect student digital work with face-to-face activities. It investigates whether the two supports affect four types of student engagement: behavioural, cognitive, affective and agentic. One hundred and sixty-three secondary school students were assigned to a 2 (digital support: with vs without) x 2 (hybrid support: with vs without) condition. The findings were as follows: the digital and hybrid support better engage students in digital and blended learning by satisfying their needs, respectively. Possible explanations are the benefits of offering clear expectations, having good digital communication skills, encouraging student active contributions, and offering various resources. The findings contribute to SDT by adding a new perspective, namely digital and hybrid support, and thereby proposing a new framework for needs support in blended learning.

Individual Talk 4E **Health and Activity** | Becoming & Staying Physically Active Longboat

The relationship between social media, exercise motivation and exercise behaviour in physically active men

Chris Bell, Brunel University

Introduction and Objective: Fitness based social media has grown in popularity in recent years, however its effects on exercise motivation and exercise behaviour are underexplored and as yet, largely unknown. The present study sought to examine the relationship between fitness based social media and exercise behaviour and motivation in physically

active men, using Self Determination Theory as a guiding framework. Methods: The population sample consisted of 224 male (aged 19-50 Mean:32) exercisers who also use social media. Participants completed an online questionnaire including questions on social media use (e.g. how often do you engage with, or view fitness social media accounts?), motivation in exercise (BREQ-3), exercise frequency and exercise history (how long participants had been consistently exercising for). Results: Results showed that fitness social media use (e.g. sports, bodybuilding and exercise content) was significantly positively associated with internal and external motivations to exercise, with larger correlations seen with internal motivation. Fitness social media use was significantly positively associated with exercise frequency but not exercise history. Overall social media frequency was significantly negatively associated with exercise history. Multiple Linear regression analysis showed identified and integrated regulation, Facebook use, and engagement with friend's fitness social media predicted higher exercise frequency whilst identified and integrated regulation were also predictive of longer term exercise adherence but social media frequency was predictive of less long term exercise adherence. Conclusion: These findings provide novel insights into the relationship between fitness social media use and male exercise motivation and behaviour. They add evidence for the importance of internal motivations in long term exercise behaviour and adherence. In addition, this study shows evidence of short term but not long-term associations between fitness based social media and exercise behavior in men.

Motivating children to acquire motor competence through resistance -based movement experiences

Alison Murray, University of Roehampton

Kristy Howells, Canterbury Christ Church University

Pamela Murray, University of Worcester

Children love to move. Ways to progress motor competence, agency, and the interest to do so, remain a vital part of our educational practice as we try to encapsulate that enjoyment. This approach presents a scaffolded progression of resistance-based exercises. These are explored and practiced as a structured choice component is increased along the developmental journey. Pedagogical content knowledge integrates and progresses structured choice and provides students ways to engage in the challenges in ways selected as preferable by the participant. This was found to have significantly motivated children to participate in such activities beyond their PE setting. Motivation to participate during lunchtime, with peer invitation and support increased. A larger number of participants whose score increased (mean±s.e. = 195±8.37) than decreased (129±3.82) was measured across the five month study, although the majority of scores stayed the same (367±7.41). Importantly, children acquired the competence and confidence to know what to do as they were able to take the activities and adapt and create new challenges on their own beyond the curricular time. Awareness of how to use resources beyond the PE setting learning significantly increased ($z=-22.86$, $r=-0.29$, $p<0.001$). Ultimately, the educational resistance training progression spiral sets out a nonlinear progression for children to develop their autonomy as their own motor competence improves, in an ironically explicit linear way.

Motivations of older Veterans and dependents in a physical activity program

Candace Brown, University of North Carolina

Motivation to engage in physical activity (PA) is of research interest due to the United States' failure to achieve significant gains in the rates of individuals meeting national PA recommended guidelines. Veterans have physical deficiencies at a greater rate than the general population, and older veterans (> 65 years) are the least physically active of all veteran cohorts. Guided by the Self Determination Theory, the purpose of this mixed method pilot study was to ascertain the motivations of older veterans participating in an ongoing exercise program supervised and supported by the Department of Veterans Affairs. Participants (N = 63) self-reported their preferred exercises within the program and completed the Motives for Physical Activity Measure-Revised (MPAM-R), which assessed their exercise motivations in terms of interest/enjoyment, fitness, appearance, social factors, and competence. The most performed aerobic activity was walking, and the most popular anaerobic activity was yoga. Mean results of the MPAM-R indicated fitness as the highest rated motivation (M = 6.53, SD = 1.1), with a strong desire among participants for veterans to maintain health and well-being. The lowest rated statements were those related to social factors (M = 4.96, SD = 1.8), specifically, spending time with others. Fitness was statistically significant to interest/enjoyment, competence, and appearance ($p<.01$) but not to social motivation. However, interviews (n = 4) with participants of 10+ years revealed social factors to be a strong motivator for long-term participation in the exercise program.

Exploring participants' motivations produces valuable information that may broadly impact the development of future exercise programs.

Internalization and integration processes of the physical exercise's behavior by recreational resistance training practitioners in a social and sports club inside Brazil

Marcelo Callegari Zanetti, Universidade São Judas, São Paulo, Brazil

Helton Magalhães Dias, Universidade São Judas, São Paulo, Brazil

Iris Callado, Universidade São Judas, São Paulo, Brazil

Érico Chagas Caperuto, São Judas, São Paulo, Brazil

Marcos Alencar Abaide Balbinotti, Université du Québec à Trois-Rivières

Angela Nogueira Neves, Escola de Educação Física do Exército, Rio de Janeiro, Brazil

This research's objective was to verify the internalization and integration processes, in physical exercise's behavior, in recreational resistance training practitioners, embedded in a social and sports club in Brazil. Data was collected in a non-probabilistic sample, from 40 individuals (25 males and 15 females, aged between 22 and 63 years old, $x\bar{m} = 39.5$ years old), during two weeks, in May 2021, at a social sport club in São José do Rio Pardo, São Paulo, Brazil. As an instrument of research, a deep semi-structured interview was used, built on the perspective of Self-determination Theory. To analyze all data, NVivo Release 1.7.1 software was used, athwart of content analysis's assumptions. As the main result, it was found that, in general, practitioners sought resistance training for more extrinsic reasons, such as aesthetics and/or health, recognizing that, they were not too keen on this type of practice, sometimes even feeling incapable of performing some exercises, but in the overtime, practitioners ended up getting used to the training, mainly by supported competence, encouraged by instructors, when being corrected and with the inclusion of easier exercises in their training. Also encouraged by autonomy increase, by giving practitioners the opportunity to give their opinion and choose among diverse training programs and exercises. In addition, can also be considered impacting factors good social relations, through a welcoming environment, with a view to create a sense of belonging, strengthened by positive and sincere instructors' feedbacks and training peers. The internalization and integration processes to a behavior, with the frame to adopt and maintain resistance training practice, can then be concluded to be facilitated when the need of autonomy from practitioners, competence and social relationship are supported, as by paying attention mainly to the level of conditioning and to physical aptitude, to exercise preferences, and to individual characteristics.

Individual Talk 4F Work & Organizations | Branding/Marketing/ Consumerism

Merritt

SDT in cognitive branding

Sandeep Dayal, Cerenti Marketing Group, LLC.

Our talk would be completely industry experience oriented -- nothing academic at all. In my company, Cerenti, we have been applying principles of SDT to designing brands. We define cognitive brands as those with Brand Vibes, Brand Sense and Brand Resolve. The latter, brand resolve, is based on concepts of autonomy, identity/skill, and relationships. We posit that resolve (SDT) is the key to getting consumers of the fence of indecision and into actually buying brands. Our presentation will be case study based using examples of real world brand and not anything like an academic paper. The concepts are also described in a chapter in my recent book called "Branding Between the Ears" by McGraw Hill. More info on me at <http://sandeepdayal.com> and my company <http://cerenti.com>. If interested email me at sandeep.dayal@cerenti.com to set up a call.

Supporting entrepreneurs through acquisition - Focusing on basic psychological needs to improve outcomes

Lucinda McFadden, University of Wollongong

Over \$3 trillion was spent on merger and acquisition (M&A) transactions in 2020 (Bain & Company 2020), yet the vast majority of these transactions fail (Cartwright & McCarthy 2005; Harding & Rouse 2007). Research indicates that the high failure rates of M&A is not attributable to strategic and financial factors, on which the majority of research focuses, but human factors (Datta et al. 1992; King et al. 2004; Butler, Perryman & Ranft 2012). It makes sense that the process of acquiring knowledge requires the careful management of the people who hold that knowledge. However, the

perspectives of important stakeholders who hold targeted knowledge – acquired employees – are highly underrepresented in the literature, and thus are not well understood (Weber & Tarba 2010; Haspeslagh & Jemison 1991). Using a constructivist grounded-theory methodology, with intensive interviews as a data-collection method this study focuses on the acquisition experiences of an important sub-group of acquired employees: founder/entrepreneurs. Their acquisition takes them from being an owner, with full autonomy over the operations of their company, to an employee of another company overnight. The perspectives of founder/entrepreneurs are important to understand, as they hold a great deal of knowledge that the acquirer is targeting, they own key relationships and they are highly influential in motivating the wider acquired team, who continue to look to them for leadership, even post-acquisition. The study showed that founder/entrepreneurs faced four key challenges in their acquisition experience that significantly affect this group’s motivation, wellbeing and performance levels. The developed model showed that an increased focus on basic psychological need support for founder/entrepreneurs can impact positively on engagement and improve acquisition outcomes. This research provides valuable insights for those at acquiring firms who are responsible for supporting all acquired employees, including founder/entrepreneurs, through the acquisition process.

Initial tests of a “new” candidate need: The contribution of purpose to well-being, work attitudes, and motivation beyond the three basic psychological needs

Jose Espinoza, The University of Winnipeg
 John Meyer, The University of Western Ontario

In the present research, we propose that humans have an innate and fundamental need for purpose, defined as a pervasive drive for a sense of meaningful direction and the experience of progress toward associated objectives. However, due to concerns with the proliferation of need constructs reducing their parsimonious explanatory power, Ryan and Deci (2017) argued that any candidate need must have a unique effect on well-being beyond the needs for autonomy, competence, and relatedness. Therefore, we conducted three studies to develop a measure of the need for purpose (the Satisfaction and Frustration of Purpose Scales; SFPS) and to provide initial tests of incremental prediction beyond the established SDT needs. In Study 1, data from American and Canadian adults (N = 237) were used to develop two 4-item scales comprising the SPFS. In Study 2 (N = 399), responses from a nationally representative sample of American adults were analyzed using hierarchical linear regression and relative weight analysis (Johnson & LeBreton, 2004). Results indicated that satisfaction and frustration of the need for purpose consistently accounted for significant variance in indices of well-being (e.g., affect, life satisfaction, depression) beyond satisfaction and frustration of the needs for autonomy, competence, and relatedness. In Study 3 (N = 484), similar analyses were conducted with data from employed American and Canadian adults responding to satisfaction and frustration of their needs at work. Satisfaction and frustration of the need for purpose accounted for unique variance in well-being indices, work attitudes (e.g., job satisfaction, engagement, commitment), and identified regulation and intrinsic motivation. These studies replicate well-established findings on the importance of autonomy, competence, and relatedness to well-being, work attitudes, and motivation but also suggest that the need for purpose may be worthy of future study as a candidate need in light of its independent role in these experiences.

10:00 – 11:00 AM	Keynotes 4	
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Keynote 4A		Peninsula 1-4
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What happens when your child has a highly autonomy-supportive teacher?

Johnmarshall Reeve, Australian Catholic University

Contemporary SDT underestimates the benefits of autonomy-supportive teaching. I explain why. In sharing our recent findings, I outline what happens when your child is lucky enough to have a professionally-trained, highly autonomy-supportive teacher. Your child will experience high need satisfaction and low need frustration to catalyze a wide range of important educational and personal benefits (e.g., engagement, inner compass). Beyond that, your child’s classroom culture will not be like the classroom next door (i.e., hierarchical, defensive, conflictual). Instead, it will be interpersonally supportive and caring. In addition, the teacher her/himself will benefit deeply (e.g., teaching efficacy,

job satisfaction). SDT research has come a long way in understanding the nature and benefits of autonomy-supportive teaching, so this talk provides a 2023 conceptualization of what highly autonomy-supportive teaching looks like and how its expertise develops.

What about positive emotions within self-determination theory? Highlighting the role of positive emotions in flourishing and introducing the concept of emotion crafting

Jolene Van der Kaap-Deeder, Norwegian University of Science and Technology

Emotion regulation (ER) – the processes individuals use to determine which emotions they have, when they have them, and how they experience or express them (Gross, 2014) – is one of the key determinants of well-being (Aldao et al., 2010; McRae, 2016). Most of the extant research has focused on how people *reactively* engage in regulatory processes in response to specific emotional events, thereby focusing mostly on *negative emotions*. However, individuals not only respond to (anticipated) emotion-loaded stimuli but can also actively and purposely initiate and direct their emotional experiences. Recently, Martins-Klein et al. (2020) applied the dual mechanisms of control theoretical framework to the domain of ER, thereby stating that ER can occur either prior (proactive ER) or after (reactive ER) the onset of an emotional stimulus. Similarly, Self-Determination Theory (SDT; Deci & Ryan, 2000) maintains that individuals have the innate need to be the authors of their own lives—the ones who proactively and autonomously shape their functioning and life circumstances. Despite these theoretical considerations and the vast literature on emotion regulation, little is known about the proactive regulation of positive emotions. In this talk, I will highlight the importance of positive emotions and the role of agency in the domain of emotion regulation by introducing the concept of emotion crafting. *Emotion crafting* indicates the degree to which individuals are aware of positive emotion-inducing contexts (awareness) and proactively act upon this awareness (action) to increase their positive emotions. Recent research will be presented on the validation of the Emotion Crafting Scale and on how emotion crafting relates to the basic psychological needs, SDT's account of emotion regulation, parenting, and individuals' flourishing.

Keynote 4B

Peninsula 5-7

Antecedents of need supportive and need thwarting interpersonal styles: A systematic review and meta-analysis

Nikos Ntoumanis, University of Southern Denmark

The history of studying interpersonal styles of communication in the SDT literature is rich, but it has focused primarily on the consequences of such styles. Comparatively, less is known about the various antecedents that can influence the degree to which individuals are willing to adopt need supportive communication. In my presentation, I will present the results of a systematic review and meta-analysis that aimed to systematically synthesize the various antecedents of the need supportive and need thwarting interpersonal styles of communication described in the SDT literature. The review included 90 eligible studies with available data for effect size estimation. The majority of the studies were survey-based and from the fields of education (n=35), parenting (n = 29), and sport (n = 16). We analyzed these studies using multi-level meta-analysis. We first grouped antecedent factors into categories, extending an initial classification system by Matosic, Ntoumanis, and Quested (2016). In terms of sociocontextual factors, the various specific antecedents were clustered under the general factors of External Pressure and Social Connection and/or Support. In terms of perceptions of others' motivation and behavior, we clustered all specific antecedents under the general factors of Positive Perceptions of Others and Negative Perceptions of Others. In terms of personal factors, we identified various specific factors which we grouped into the general factors of Adaptive and Maladaptive Motivational Factors, Beliefs About the Interpersonal Styles, Other Beliefs (Positive or Negative), Internal Pressures, Positive Social or Emotional Functioning, and Negative Personality Factors. A total of 81 studies (722 effect sizes) included data for the relations between general factors and overall need support. Adaptive motivational factors, others' positive beliefs, positive perceptions of others, positive social or emotional functioning, and social connection/support had positive and statistically significant associations with overall need support. Maladaptive motivational factors, negative perceptions of others, and negative social or emotional functioning had negative statistically significant effect sizes with overall need support. For the associations between general factors and overall need thwarting (51 studies, 81 effect sizes), external pressure, maladaptive motivational factors, negative perceptions of others, and negative social

or emotional functioning had positive associations with overall need thwarting. Negative effect sizes with overall need thwarting were found for adaptive motivational factors, others' positive beliefs, and positive social or emotional functioning. Identifying the antecedents of need support and thwarting can help researchers to better understand why some individuals are more receptive than others in terms of need support training.

Psychological needs at the core of national well-being: The why, how, and what of doing SDT research on national and political level

Frank Martela, Aalto University

The key role of basic psychological needs in explaining individual well-being is well established. But how useful are they in explaining the well-being of nations? Research examining and explaining national differences in subjective wellbeing has proliferated in the last decade, providing important insights into how factors like the quality of democratic institutions, gender inequality, welfare benefits, trust between people, and freedom explain why people in some countries thrive and in other countries languish. International organizations like OECD and even UN increasingly recommend that all nations should measure subjective wellbeing and utilize it in policy evaluations. Many governments across the world have taken heed, having started initiatives to measure well-being more comprehensively. Unfortunately, most national and cross-national efforts to explain national well-being have thus far not included measures for psychological needs. Psychological needs could prove to be key mediating variables explaining why various institutional factors affect subjective indicators of well-being. A recent study with data from 27 European countries showed, for example, that the needs for autonomy, competence, and relatedness substantially and in many cases fully mediated the effects of socio-economic position on well-being. However, to establish the role of psychological needs on national level, we need more empirical research – and for that, we need to convince those conducting international surveys to include indicators of psychological needs in their studies. The present talk will review the state of the art as regards how Self Determination Theory and especially the psychological needs for autonomy, competence, and relatedness have been utilized on cross-national and policy level research. We will go through the existing research and activity on the topic, such as how the Motivation Barometer provided up to date data on people's motivations to adhere to various restrictions during the COVID-19 pandemic in Belgium. The talk will also take a look at how subjective well-being, eudaimonic wellbeing, and psychological functioning have been defined, providing an integrative typology of key elements of well-being, where the key role of psychological needs is highlighted as core components of more functional and eudaimonic dimensions of well-being. Furthermore, I will set up a research agenda on what needs to happen next if we want to more fully establish SDT and psychological needs on national and international agenda.

11:15 – 12:45 PM	Symposia 3	
Symposium 3A Theory & Methods Advances in Goal Pursuit Research: Autonomy Experiences Across the Lifecycle of Goals		Biscayne
<p>GENERAL OVERVIEW</p> <p>This symposium will present recent advances in goal pursuit research from an SDT perspective. A total of four presentations will highlight different avenues in which SDT-based goal pursuit research can evolve, highlighting autonomy experiences at different stages of the goal lifecycle. Anne Holding will introduce the "Lifecycle Model of Goal Striving", which proposes that autonomous versus controlled motivation is crucial throughout the lifecycle of goals, from goal setting to goal disengagement. Moti Benita will discuss the role of autonomy experiences through goal striving by emphasizing emotion regulation processes, focusing on the concept of integrative emotion regulation. Marina Milyavskaya will discuss time-bound trajectories of goal internalization. She will present evidence on how goal motivation (autonomous vs. controlled) changes over time, and the correlates of these changes in goal motivation. Amanda Moore will take a step forward in understanding the goals lifecycle and present evidence on the predictive role of personality factors (Big 5 traits) in motivation for and progress towards "matching" personal goals. Collectively, the evidence presented in this symposium indicates that SDT-based research should extend beyond simply separating autonomous from controlled goal-setting and should take into account autonomy experiences as they unfold over time.</p>		

The role of motivation in the lifecycle of personal goals

Anne Holding, New York University

Personal goals are central to the attainment of well-being because they organize people's lives and help them to realize visions for their future. However, not every goal is accomplished, and not every accomplished goal translates into greater well-being. This talk introduces the "Lifecycle Model of Goal Striving" and provides a critical review of the self-determination theory research on personal goal striving. The central argument is that across the lifecycle of personal goals—from the early stage of goal setting to the possibility of goal disengagement—issues of autonomous versus controlled motivation are pivotal. This talk will review published as well as new data to suggest that during goal engagement autonomous motivation results in enhanced goal progress and well-being, and protects goals from being mired in conflict about disengaging (action crisis) or being prematurely abandoned. However, once individuals decide to disengage from overly difficult or unattainable goals, autonomous motivation for letting go is key to predicting which goals are more easily relinquished and shields goals from conflicts about being retained (inaction crisis). Moreover, those who disengage for autonomous reasons tend to experience greater well-being as a result of relinquishing the unattainable goal. Autonomous motivation also plays a key role in promoting goal reengagement and the emergence of new goals. Meanwhile, controlled motivation plays a negative role across the goal's lifecycle: promoting action crisis, psychological distress, poor physical health, dysregulated hormone functioning during goal pursuit and hindering the release of unattainable goals during goal disengagement. Theoretical and applied implications of this research are discussed, as well as the future directions of goal motivation research.

Emotion regulation during goal pursuit: The critical role of integrative emotion regulation

Moti Benita (Chair), Ben Gurion University

Goal pursuit can be a grueling process, replete with obstacles. These obstacles often elicit negative emotions, causing people to disengage from their goals. In order to persist in their goals despite negative emotions, people need to employ effective emotion regulation strategies. The present research explored this possibility using self-determination theory's (SDT) emotion regulation model. In SDT, adaptive emotion regulation is termed integrative emotion regulation (IER), defined as volitional interest-taking in emotions. It is often contrasted with the maladaptive strategy of suppressive emotion regulation (SER), refers to efforts to hide or ignore emotions. Three studies examined the effects of IER and SER during goal pursuit. Study 1 (n = 255) and Study 2 (n = 240) are four-wave short-term longitudinal studies. In Study 1, IER predicted goals progress through effort while SER negatively predicted goals progress through depressed mood. In study 2, IER mediated the positive relation between autonomous goals and goal progress and well-being, whereas SER mediated the negative relation between controlled goals and these variables. Study 3 (n=158) replicates the results of Study 2 through a daily diary study. Using the same dataset as Study 3, Study 4 compared the effects of IER on daily goal progress and effort with that of reappraisal, considered an adaptive way to regulate emotions that involves people reinterpreting emotional events to minimize their impact. The results showed that reappraisal but not IER predicted goal progress and effort at the within-participant (in each day) level. However, IER but not reappraisal predicted the same outcomes at the between-participants (trait) level. We conclude that IER supports goal pursuit, while SER undermines it. Furthermore, the results suggest IER appears to be most beneficial when used consistently, as a trait-like variable, compared to other adaptive ways to regulate emotions.

Internalizing new goals: Predictors and correlates of motivational trajectories over time

Marina Milyavskaya, Carleton University

According to SDT, new behaviours are often adopted for external reasons but become internalized over time, as motivation becomes relatively more autonomous and less controlled. This process of internalization, while frequently discussed, has not been examined over time with brand new goals. How long does it take for a new goal to become internalized? Does everyone internalize the goal at the same pace? Or do some people instead develop increased controlled motivation for the goal over time? Can features of the goals themselves (initial motivation for setting the goal, support from others), or the process of goal pursuit (how much progress is being made, how easy or difficult goal pursuit is) predict the trajectories of motivation? We examine these questions in three different samples with

different new goals. Two hundred and twenty-two individuals who have begun a vegetarian or vegan diet in the previous month were surveyed every month for 6 months. Participants (N= 66) in a 6-week healthy workplace program committed to changing 5 behaviours (sleep, healthy eating, exercise, stretching, hydration), and were followed weekly. And 300 people who set a new behavior change goal at the onset of the COVID-19 pandemic lockdowns were followed monthly for 6 months. Across these samples, we investigate the trajectories of autonomous and controlled motivation and their correlates, including perceived progress, self-efficacy, and support from others. Results shed light on the process of internalization of new goals, as well as the predictors and correlates of this process.

Integrating personality theories and self-determination theory: The role of personality in autonomous goal pursuit and volitional personality change

Amanda Moore, McGill University

The present talk will review recent research that integrates personality theories and Self-Determination theory to explore the influence of personality on autonomous goal pursuit and volitional personality change. This talk will first discuss emerging evidence that suggests that one's standing on certain Big 5 traits is predictive of motivation for and subsequent progress on "matching" personal goals. Using multi-wave prospective longitudinal designs, we find that when goal pursuit is concordant with personality, such as when more extraverted individuals are pursuing socially-oriented goals and highly conscientious individual are pursuing achievement-related goals, these individuals are more likely to experience autonomous motivation and make more progress on their goals. The second portion of this talk will explore whether individuals are able to intentionally change aspects of personality through the pursuit of personal goals. Using a longitudinal goal-setting paradigm, we explore the role of autonomous motivation in volitional personality change using samples of university students and community adults. Overall, results suggest that individuals are able to make progress on volitional personality change goals and that this tends to be a relatively autonomous endeavor. The implications and future directions of these lines of research are discussed.

Symposium 3B **Theory & Methods | Innovative Methodologies in SDT Research:**
New Perspectives for Working with Qualitative Data

Longboat

GENERAL OVERVIEW

The amount of empirical research inspired by the self-determination theory (SDT) tradition has grown exponentially over the past 30 years. To date, much of that research has been quantitative in nature. Recent years, however, have seen a growth in the number of SDT-informed studies that utilize qualitative approaches: a recent search in Science Direct combining the search terms "self-determination theory" and "qualitative study" shows that the number of such publications grew from N = 7 in 2012 to N = 68 in 2022. Yet, for the SDT researcher, an inherent challenge in the use of qualitative sources of data has been the application of SDT's theoretical framework to interpret idiographic (in contrast to nomothetic) data in methodologically rigorous ways. In the present symposium, we present two innovative approaches to working with text-based qualitative data that open up new possibilities for the SDT community. After an initial presentation by symposium Chairperson Martin Lynch, which will provide an overview of the problem and set the stage for the session, Nicholas Palumbo will present a step-by-step approach for working with data in the form of brief essays written by participants, with the aim of developing an SDT-informed coding system for such data. Then, Zhaopu Xu will present a method he developed for working with written transcripts, in this case, of psychotherapy sessions between Carl Rogers and one of his clients, using Linguistic Inquiry Word Count and natural language processing tools. Taken together, these presentations will provide SDT researchers working with text-based, qualitative data a set of methodologically rigorous tools for identifying SDT-relevant themes in idiographic data sources.

Next steps in the development of SDT: The importance and challenges of using qualitative methods

Martin Lynch (Chair), University of Rochester

Using self-determination theory's (SDT) strong claims about basic psychological needs as an example, in this presentation I argue that the next steps in testing and expanding the boundaries of SDT will involve the use of qualitative research methods. Specifically, SDT argues that the basic needs are universal, a claim which typically has

been tested nomothetically, using quantitative methods: researchers use validated scales to test whether need satisfaction is associated with increases in well-being and internal motivation or whether need deprivation is associated with decrements to those outcomes, in various cultures around the world. By contrast, a qualitative approach allows participants to describe, in their own words and in their own language, the experiences that are essential for well-being in their culture, that is, what, for them, are basic needs. Alternatively, participants can tell us (again, in their own words and language) what the experience of one of SDT's recognized needs is like for them, in their culture. Results of such studies can provide at least three important outcomes, any of which stands to increase the ecological validity of SDT in other cultures: (a) identification of possible new candidate needs, (b) confirmation of SDT's current list of canonical needs, and (c) rich (and potentially novel) description of the needs by local experts (see Lynch, forthcoming; Lynch et al., 2020; Lynch et al., 2018; Lynch & Salikhova, 2017). However, a challenge frequently encountered by the researcher who is grounded in the SDT tradition has to do with interpreting data that are idiographic in nature in ways that are methodologically both consistent and rigorous. On this note, I segue to the topics of my co-presenters in this symposium, both of whom provide innovative and rigorous ways to tackle these issues.

Assessing positive resources for coping during the age of COVID-19: The development of an SDT coding system Nicolas Palumbo, University of Rochester

The data from the present study are derived from a larger self-report, questionnaire study exploring the well-being impact of solitude experiences resulting from social distancing protocols during the COVID-19 pandemic. Qualitative data were captured during participants' engagement in positive, semi-structured writing activities. These activities were designed to help participants cope with the stresses they might incur when forced to limit their usual patterns of socialization. Modeled on the approach of Copeland et al. (2017), the data were examined in a three-step process: (1) thematic analysis, (2) literature review, and (3) mapping the emerging subthemes onto the structure of self-determination theory's (SDT) basic psychological needs mini-theory (BPNT): Autonomy, Competence, and Relatedness (Ryan & Deci, 2017). The thematic analysis was performed by coding all (N = 18) semi-structured writing activities. The review of the literature helped develop definitions of negative and positive attitudes toward solitude and affective experiences associated with solitude. Connecting the thematic categories that emerged allowed for the adaption, refinement, and shaping of BPNT such that it would appropriately fit the data and adhere to the format of a coding system. As a final level of analysis, a theoretically-driven molecular coding system based on BPNT was developed. Based on the recommendations of Cairns (1979, pp. 200-202), given that these data were from a limited timeframe and did not capture experience across a variety of settings, a molecular approach was adopted to provide a detailed analysis of the limited data set. At the level of each semi-structured writing activity, utterances were defined as self-contained thought units, often taking the form of individual words or simple sentences. This presentation seeks to discuss the development of an SDT-based coding system, the application of the coding system, preliminary findings, and implications for future research.

The language styles of organismic integration and basic psychological needs: A natural language processing (NLP) application in SDT research Zhaopu Xu, University of Rochester

The talking cure is a common way to understand psychotherapy. As such, language plays an essential role in the psychotherapy process. Linguistic inquiry and word count (LIWC) is the gold standard in text analysis software for studying the psychological meanings of written and spoken language (Boyd & Schwartz, 2020). The present study developed a custom LIWC dictionary informed by the organismic valuing process (OVP) concept from person-centered approaches (PCA) and self-determination theory's (SDT) mini theories of organismic integration theory (OIT) and basic psychological needs theory (BPNT) (Rogers, 1959; Ryan & Deci, 2017). Applying several natural language processing (NLP) tools and techniques considerably increases the efficiency of an OVP-informed dictionary and achieves an overall good internal consistency. Among these NLP techniques, the word-to-vector technique is key to increasing dictionary development efficiency as it automatizes the labor-intensive step of reviewing preliminary dictionary words (Mikolov et al., 2013; Boyd, 2019). This study also applied the newly developed OVP-informed dictionary to conduct an exploratory investigation of linguistic manifestations of change over time in the clinical case

of Mrs. Oak, which Carl Rogers deemed a successful case. Cluster analysis of the LIWC outputs of the complete transcripts of that case (obtained by the present author) yielded six language styles: authentic, OVP, analytic, autonomous regulation, power difference, and reflective. These language styles highlight key processes of psychotherapy change linguistically. The results of this study illustrate the technical comparability of applying NLP tools in LIWC dictionary development, the clinical utility of the newly developed OVP- and SDT-informed LIWC dictionary, and a novel approach to studying OIT and BPNT using data derived from text-based sources such as transcripts. Limitations and future directions are discussed.

How could the self-determination theory be used in public policy? A qualitative study of public servants' views during a behavioral and systems insight training

Nelli Hankonen, Tampere University

Behavioral science approaches in public policy have been increasingly used globally in the last decade. Governments have established 'behavioral insights units' or behavioral science groups to support the use of behavioral science theories and methods to improve governance. However, there is little research into the reception of various capacity building interventions aimed at public servants in this area. We developed training for public servants, to help them better use behavioral and systems insights. One key theoretical approach taught in the training was the self-determination theory (SDT), with also practical exercises helping the participants apply the principles in e.g. crisis communication. The aim of this study is to evaluate the feasibility and acceptability of this training and in particular, participants' responses and perceptions regarding SDT. In a feasibility study (n=120), the training was offered in two groups online, in five sessions (à 90 minutes), over five weeks. The training consisted of short lectures, pair discussions, small group discussions and exercises. Participants responded to a baseline questionnaire, two short questionnaires on each session, and a post-intervention questionnaire. A subsample (n=33) participants were interviewed in depth. Qualitative data were content analyzed. Accounts regarding the SDT were mostly positive. Participants noted various potential applications in different policy sectors, e.g. the usefulness of need supportive motivational styles, including designing communications directed at citizens. Participants viewed the SDT useful also in their own lives', some noting that the SDT helped understand their own motivation in their daily activities. In conclusion, SDT was well understood and positively received among public servants in different policy sectors. Future research should investigate the various ways theoretical insights from behavioral science influence public policy in its different sectors, as well as optimal ways to improve public servants' understanding and skills.

Symposium 3C Education | Creating a Motivation School: Translating SDT into Practice Peninsula 1-4

GENERAL OVERVIEW

In recent years, Singapore's education system has received international recognition due to our students continued and sustained high performance in internationally benchmarked tests of student achievement. Despite the stellar achievements, there are concerns that our students may be too focused on academic grades, and not enjoying their learning. To promote joy of learning and student engagement, we need to focus on teachers who are at the frontline of our education system and the environment that they are in. Teachers matter and they can create classroom climate that facilitates student growth and engagement, or one that thwarts student motivation and enjoyment. This symposium presents a big scale study in Singapore that adopts self-determination theory in creating a motivating school. This symposium will provide some insights and practical strategies for teachers, school leaders and policy makers to enhance student motivation in the classroom. Four speakers will share their empirical research and experience in this area. The first presenter will share on factors that influence teachers' motivating styles in the classroom, the second presenter will share the findings of an intervention programme in enhancing autonomy-supportive teaching from a quantitative perspective. The third presenter will share the teachers' perspective on the implementation of adoption of autonomy-supportive teaching from a qualitative study perspective. The final presentation adopts an intraindividual approach to identify students' engagement and disengagement profiles using a latent profile analysis and examine its relationships with psychological need satisfaction and frustration, perception of teachers' motivating style, motivation, and tension.

Factors influencing teachers' motivating style in the classroom

Woon Chia Liu (Chair), Nanyang Technological University

Many studies have examined the relationships between teachers' motivating styles and student outcomes. Likewise, a substantial body of work established that school leadership plays a huge role in structuring a positive school climate and affecting teacher motivation, and that positive school climates are associated with improvements in staff performance, morale, and student achievement. Nonetheless, much less is known about the factors that facilitate teachers' motivating style, and how that might impact any intervention on student motivation. This study sought to examine above- (leadership styles, school climate, professional pressure), within- (need satisfaction / frustration, motivation to teach, causality orientation, intrinsic / extrinsic instructional goals, teaching efficacy) and below-factors (student motivation, student engagement, prosocial behavior) influencing teachers' motivating styles. 872 teachers (40% male, 60% female) from 20 schools in Singapore completed a questionnaire. Stepwise regression analyses and path analyses were conducted to examine factors that predicted teachers' motivating styles. For the factor-below, if teachers perceived that their students were autonomously motivated, they were more likely to be autonomy-supportive, and less likely to be controlling. In contrast, students' prosocial behaviors positively predicted autonomy-supportive style and antisocial behavior positively predicted controlling style. For the factor-within, teachers' teaching efficacy and their autonomous causality orientation were the most significant predictors of autonomy-supportive style, followed by intrinsic goals and extrinsic goals. For the factor-above, if the school climate was positive, teachers were more likely to be autonomy-supportive and less likely to be controlling. Pressure from authority seemed to be positively related to controlling style more than autonomy-supportive style. Transformational leadership positively predicted need satisfaction; contingent reward, surprisingly, also predicted need satisfaction.

Effects of autonomy-supportive intervention programme on students' engagement

Chee Keng John Wang, Nanyang Technological University

The study presents the effects of an autonomy-supportive intervention program (ASIP) designed to help teachers in becoming more autonomy supportive. This study tested the causal hypothesis that when teachers adopt a more autonomy-supportive motivating style, their students can benefit in a multitude of educationally important ways. The research questions are: 1) Can teachers learn to develop more autonomy-supportive and less controlling motivating styles towards their students? and 2) What are the benefits of autonomy-supportive motivating style on students' engagement and motivation? A total of 114 secondary Math/Science teachers and 6063 students from 17 schools took part in the study. 55 teachers were assigned to a semester-long intervention group and 55 teachers were assigned to the no-intervention control group. Teachers and students completed questionnaire at the start and end of the intervention. The results showed that students' who perceived their teachers to be autonomy-support reaped greater learning benefits than students who perceived their teachers to be less controlling. The results found 4 subgroups of teachers in the intervention group: 1) teachers who just adopted autonomy-supportive teaching, 2) teachers who became less controlling, 3) teachers who became more autonomy-supportive, and 4) teachers who were autonomy-supportive before intervention and continue to be more autonomy-supportive. Students who were taught by teachers from Group 4 increased their engagement at post-intervention (behavioural, emotional, agentic, and cognitive). In contrast, teachers who just learned to be more autonomy-supportive and less controlling (Group 1) significantly increased students' cognitive engagement and maintained students' agentic engagement. Students did not benefit from teachers who only practiced being less controlling (Group 2). This study showed that teachers can learn to develop more autonomy-supportive motivating style, and this will in turn enhance students' engagement in the classroom.

A qualitative study on teachers' perceptions of autonomy support in the classroom

Betsy Ng, Nanyang Technological University

Autonomy support is an instructional effort, delivered by teachers, which involves an understanding interpersonal tone that supports students' psychological needs (Reeve, 2016). Teachers are then determinant in creating learning climates that support students' inherent propensities for growth. While autonomy support has received considerable attention for its role in fostering positive student outcomes, little is known about teachers' perceptions of autonomy support. This research, informed by the tenets of the Self-Determination Theory, employed semi-structured interviews and thematic analysis, to examine the experiences (and perceptions) of ten science and math teachers from Singapore

secondary schools, in terms of their provision of autonomy support to students during the autonomy-supportive intervention period. This presentation shares initial findings that teachers mainly practised vitalising inner motivational resources and student perspective-taking in the classroom. Moreover, the findings also suggest that teachers practised vitalising inner motivational resources and acknowledging negative affect in more diverse ways than others. In addition to the six established autonomy-supportive acts, the teachers also shared their understanding of providing autonomy support in their own ways, such as the use of encouraging words, provision of safe space to ask questions, and balancing autonomy support with other factors (e.g., classroom structure, time management). Despite the limitations of this research, the findings provide concrete examples on the ways teachers try to be autonomy supportive. These aid teacher educators in designing autonomy support intervention training workshops, and the concrete examples provide new teachers a clearer picture on the practice of autonomy support in the classroom.

A latent profile analysis of student engagement and disengagement in the classroom

Ying Hwa Kee, Nanyang Technological University

Students' engagement in the classroom is related to student motivation and essential to promote positive learning and outcomes in academic. Previous studies have examined changes in motivation anticipate changes in motivation. This study adopts an intraindividual approach to identify students' engagement and disengagement profiles using a latent profile analyses (LPA) and examine its relationships with psychological need satisfaction and frustration, perception of teachers' motivating style, motivation, and tension. A total of 3063 secondary school students aged 13 to 18 years from 17 schools took part in the survey. Using LPA, four distinct profiles were identified: very highly disengaged, moderately high engagement, moderately high disengagement, and very highly engaged. The results of a series of multivariate analysis of variance (MANOVA) revealed that the very highly disengaged students reported high need frustration and low need satisfaction, they tend to perceive that their teachers are not autonomy-supportive and high in controlling in their teaching. The students reported low autonomous motivation and high controlled motivation. They also reported highest amount of tension. On the other end, very highly engaged students reported high need satisfaction and low need frustration and they are more likely to perceive their teachers as autonomy-supportive in their teaching. These students reported highest autonomous motivation and lowest tension. This study shows that how students perceived their teachers' motivating style is related to their motivation and engagement in the classroom.

Symposium 3D **Health and Activity** | Towards a Culture of Eudaimonia in Medical Education and Practice

Canaveral

GENERAL OVERVIEW

This symposium focuses on medical learner and physician wellness. Grounded in SDT, various studies and empirical findings are presented. The first line of work centers on self-compassion, lifelong learning orientation, and the role of basic psychological needs in promoting professional well-being outcomes. The second set of studies focuses on the learning climate in medical education and how instructor autonomy support influences learners' resilience, well-being, and clinical empathy. The third line of work focuses on individual *and* environment. It explores the root causes of medical learner stress, maladaptive coping, and impostor phenomenon, and how SDT can guide interventions that promote learners' mindfulness and eudaimonia. The fourth presentation focuses on practical outcomes of an SDT-based intervention in post graduate medical education. Implications and future directions for teaching and wellness in medical education will be discussed.

Cultivating physician self-compassion, lifelong learning, and well-being

Oksana Babenko, University of Alberta

While rewarding, medical training and practice are inherently stressful. Both require internal resources to respond adaptively to therapeutic setbacks, clinical uncertainties, and close calls. In various domains, self-compassion and lifelong learning orientation have been shown to help individuals maintain a balanced perspective, protect them from negative automatic responses, and enhance their wellbeing. However, their role in supporting physician motivation and well-being is less understood. Approach: Guided by SDT, we examined the relationships of self-compassion and lifelong learning orientation with various professional wellbeing outcomes (job satisfaction, engagement, exhaustion),

and whether fulfillment of basic psychological needs (autonomy, competence, and relatedness) would facilitate self-compassion and support lifelong learning orientation in medical students and practicing physicians. Outcomes: Our results indicated that (a) self-compassionate and lifelong learning-oriented medical students and physicians experienced greater work engagement and less work exhaustion (emotionally, physically, and cognitively) due to professional challenges; and (b) satisfaction of their competence and relatedness needs served as buffers for self-compassion, with distinct pathways to lifelong learning orientation. Findings highlight the importance of self-compassion and lifelong learning orientation among physicians, and how supporting their basic psychological needs can facilitate these healthy qualities. Future research and implications for medical training and practice will be discussed.

How teacher autonomy-support impacts medical learner resilience, well-being, and empathy

Greg Malin, University of Saskatchewan

Medical school is highly stressful for medical students. Teachers, interfacing with the learning environment, can support or hinder learner motivation and well-being, and boost or obstruct their integration of knowledge, skills, and attitudes. The purpose of this work was to explore the role that autonomy-supportive teaching has in 1) supporting medical learners' resilience and psychological well-being; and 2) cultivating their clinical empathy. A better understanding of these relationships will help medical programs to train better, healthier physicians. Approach: We conducted two studies at separate time intervals involving students at a Canadian medical school. We first investigated the relationship between the learning climate, students' need satisfaction/frustration in medical school, and their resilience and psychological well-being. We then set out to identify student profiles of self-determination (based on self-awareness, perceived choice, and perceived competence in learning), and how each profile differed in their perceptions of the learning climate, need satisfaction/frustration, and clinical empathy. Outcomes: In the first study, instructor autonomy support positively related to learner well-being. Autonomy and relatedness satisfaction directly affected well-being, while competence satisfaction did so indirectly, through a direct effect on resilience. In the second study, we identified two clusters of learners – "high" and "low" in self-determination. Instructor autonomy support predicted higher need satisfaction and lower need frustration for both groups. Need satisfaction and frustration then predicted higher clinical empathy; however, only among the "high" group. Results demonstrate the value of creating autonomy supportive learning environments for medical learners' mental health. Findings also shed new light on factors such as self-awareness, perceived choice, and perceived competence, that medical educators can focus on, to cultivate learner empathy and help learners optimize the quality of their patient care.

Medical student stress, coping, impostorism, and mindfulness: Shifting the focus of wellness curricula to basic psychological needs

Adam Neufeld (Chair), University of Calgary

There is a strong culture of perfectionism in medicine, which creates both external and internal pressures that threaten learner well-being. Unfortunately, approaches to wellness have focused mainly on the individual and not the learning environment and how learners interact with it. Wellness interventions have thus been largely ineffective, and medical learner distress continues to be a serious problem. New approaches that emphasize humanism and that account for the symbiosis between individual and environment are therefore needed. Approach: We conducted two studies grounded in SDT: the first at a single Canadian medical school, and the second across three Canadian medical schools. We first investigated (a) the degree that medical students' perceived stress would be explained by their mindfulness and resilience versus hindrance of basic psychological needs in medical school. We then explored (b) how students' need satisfaction and frustration in medical school influenced their mindfulness and ability to cope adaptively with stress. In the second study, we explored (c) how different general causality orientations (impersonal, control, autonomy), types of motivation towards going to medical school (controlled vs. autonomous), and levels of need satisfaction in medical school, each related to "impostor phenomenon" (IP) among medical students. Outcomes: First, basic psychological needs, more than mindfulness and resilience, predicted medical students' perceived stress. Second, need satisfaction mediated the relationship between students' mindfulness and adaptive coping, and need frustration mediated that between their mindfulness and maladaptive coping. Finally, medical students whose general causality orientation was more impersonal, whose motivation towards going to medical school was more controlled,

and whose basic psychological needs were less satisfied in their medical program, had more severe IP symptoms. Findings highlight promising avenues for wellness interventions in medical education that extend from SDT.

The role of autonomy-supportive leadership in resident physician well-being

Gregory Guldner, HCA Healthcare Graduate Medical Education, & University of California Riverside

Graduate Medical Education (GME) occurs in high stress environments that contribute to workplace burnout, depression, and distress. Historically, teaching hospitals have adopted social-event planning and skills building (e.g., resiliency classes) to mitigate these negative outcomes with little success. We sought to determine if interventions designed to change the work and learning environment to better align with SDT principles would result in important outcomes. Prior to investing in interventions, we sought to determine the relationships between autonomy-supportive leadership (ASL), meaningful work, psychological capital (PsyCap) and, other SDT-linked variables with burnout, depression, and engagement among resident physicians in a multi-specialty, multi-institutional, sample. Methods: We performed computerized 3-wave cross-sectional surveys over three separate years for a total of 9 waves. Surveys varied by year but included validated measures of ASL, meaningful work, social support, irrational beliefs, mindset, and impostor phenomenon. Outcomes included workplace burnout, engagement, and depression. Structural equation modeling was used to determine the relationships between variables. Results: Across all 9 waves, there were 2327 total responses. All waves demonstrated significant, moderately large, associations between ASL, meaningful work, and PsyCap and burnout, engagement, and depression. Social support inversely predicted depression, impostor phenomenon and irrational beliefs predicted burnout and depression, and mindset was unrelated to our outcome variables. Discussion and conclusion: Improving resident physician well-being likely requires work and learning environment changes. SDT provides a framework for determining what changes are likely to be successful. Our studies demonstrate that among resident physicians ASL, meaningful work, PsyCap, and social support consistently associate in predicted ways with well-being. Together, these studies provide strong support for future intervention efforts designed to manipulate SDT-linked variables.

Symposium 3E **Work & Organizations** | Behavioral Scientists in the Wild: Empowering Industry to Follow Science and Serve the Masses Peninsula 5-7

GENERAL OVERVIEW

One of the greatest challenges for behavioral scientists working in industry is to translate the science in a way that is accessible and actionable for cross functional partners. In a time when there is increasing availability of popular science books, podcasts, and social media posts, enthusiastic colleagues can become enamored with the latest take on motivation and see these sources as the “silver bullet” to behavior change . Some of the most common concepts employed include nudges, incentives, social influence, and tiny habits. Part of the appeal offered by these strategies is their promise as a quick fix to motivate change. But change is often much more complex and these strategies can have long lasting detrimental effects on people’s health and well-being. Behavioral scientists have the opportunity to positively influence the way industry operates by bringing the wealth of knowledge from science and practice into partnerships with creative, innovative teams that leverage human-led and technology-led interventions that enhance engagement in daily life. Part of the appeal of self-determination theory is its broad applicability to solving a wide range of real-world challenges within areas such as health, well-being, and climate change. This panel is a dialogue between two SDT scholars, Heather Patrick and Jennifer La Guardia, who chose career paths outside of academia and lead work within industry to translate SDT concepts and research into products, services, and systems for which human motivation and sustained behavior change are critical. We will address a range of topics including transitioning into the technology sector, challenges with preserving scientific integrity while making the science actionable, and navigating the promise and pitfalls of the popularization of behavioral science. The format will be conversational, with plenty of opportunities for audience participation.

Innovating member experience: Cultivating motivation through human- and technology-led interventions

Jennifer La Guardia (Co-Chair), VP Care Innovation @ Brightline, Inc.

Opportunities to positively influence the way industry operates by bringing science into practice

Heather Patrick (Co-Chair), Senior Behavioral Scientist @ Apple

Multidimensional health as a component of vitality measurement: Findings from a national U.S. survey

Sandra Diaz-Castillo, Cigna Group

We've witnessed a seismic shift in how we think about wellbeing and the role of social determinants of health. Wellbeing goes beyond physical and mental health to everything that impacts our ability to pursue life with health, strength, and energy – our vitality. The concept of vitality has been studied for over two decades and found to have numerous positive consequences, including better physical and mental health and better work engagement, and performance (Lavrusheva, 2020). Subjective vitality (Ryan & Frederick, 1997) stands out as a measure of health, as a psychological resource that is readily available to everyone without discrimination and allows us to better understand wellbeing as it truly exist: composed of multiple, interdependent and dynamic dimensions. As we move towards an integrated healthcare approach having comprehensive, multi-dimensional measures of wellbeing are critical to monitor the prevailing health trends and identifying areas of opportunity. Expanding the measurement of vitality to the dimensions of health can provide a holistic and integrated view of people's wellbeing as well as avenues for intervention. Building upon the extensive foundation of academic research on vitality, Cigna developed the Evernorth Vitality Index™ (EVI). This measure is anchored in the Self-Determination Theory and Subjective Vitality Scale. For each dimension we created, assessed, and refined a set of statements framed through the lenses of basic needs satisfaction. It captures an individuals' impressions of their own agency across the dimensions of health, including physical, emotional, intellectual, and environmental. It should be viewed as a dynamic indicator of whole person health that can fluctuate as satisfaction with basic needs fluctuate. In May 2022, Cigna conducted an online survey with 10,000 U.S. adults. We'll discuss the differences across demographics, health status and lifestyle, and share how EVI has enhanced the measurement of vitality.

Martyn Standage (Discussant), University of Bath Department for Health

12:45 – 2:30 PM	Poster Session 3 See Poster Session Abstract Document	Atrium
2:30 – 3:45 PM	Individual Talks 5	
Individual Talk 5A	Theory & Methods Development and Validation Questionnaires	Peninsula 1-4
Psychometric testing and international validation of Behavioral Regulations in Exercise Karin Weman (Presented by Andreas Stenling), Halmstad University Anne Vogelsang, Ruhr Universitet Bochum David Sánchez Oliva Marta Marques Jorge Encantado		
<p>Organismic integration theory distinguishes between controlled and autonomous reasons why people exercise. Introjected regulation (i.e., doing something for self-worth motives) is conceptualized as a controlled type of motivation, but positive associations of autonomous regulations are reported, associated with positive and to negative outcomes. Recent research (Howard et al., 2017) postulated that introjected regulation is situated in the middle of the continuum of self-determination, holding both positive and negative aspects. To clarify the role of introjected regulation on outcomes, a more precise analysis of introjected types, splitting it into an avoidance- and approach-oriented motivation is needed. Therefore, , the widely used Behavioral Regulation in Exercise Questionnaire (BREQ)-instruments have been revised to include items reflecting these two facets of introjected regulation. The aim of this study was to examine the psychometric properties of the English, German, Swedish, Portuguese, and Canadian versions of the BREQ-4. Participants (n=2346) were 404 English, 451 German, 722 Swedish, 178 Portuguese, and 590 Canadian, aged between 10 to 75 years old (M = 29.18; SD = 11.00). The scale is composed of 28 items grouped into 7 factors: intrinsic motivation, integrated regulation, identified regulation, introjected approach regulation, introjected avoidance regulation, external regulation, and amotivation. The structure of the instrument was analyzed through Confirmatory Factorial Analysis (CFA) and supported the factor validity and reliability of BREQ-4 across the overall sample and each linguistic sample. For all countries, the first-order 7-factors structure showed adequate fit indexes</p>		

and significant factor loadings, as well as Omega coefficients greater than .70. Subsequent analyses supported the configural, weak, strong, and strict invariance of this measure. The BREQ-4 could prove useful to researchers interested in assessing facets of introjected regulation to acquire a more complete understanding of exercise motivation.

Validation of the new virtuous motivation scale

Steven Bourgeois, University of Dallas

Matthew Post, University of Dallas

Eric Boberg, Ransom Everglades School

Extrinsically motivating strategies have a place in K–12 education, including in the character formation of the child; but if we wish to cultivate meaningful and lasting motivation for virtuous conduct in young people, we should leverage the insights of SDT. Drawing on the Neo-Aristotelian framework adopted by the Jubilee Centre for Character and Virtues and previous SDT research on self-regulation and prosocial behavior, we seek to determine the antecedents of children's moral behaviors and how cultural factors, including parenting and schooling, foster or thwart the internalization of virtue. For a second round of validation of a new instrument called the virtuous motivation scale, we distributed surveys to over 1,000 students in grades 3-12 across states and school models. The 44-item survey assesses intellectual, moral, civic, and performance virtues along a continuum of motivation that includes a-motivation, external, introjected, identified, and virtuous. We define virtuous motivation as when children endorse a task not just out of personal enjoyment, but because they feel it is right. Additional study variables include gender, race, grade level, and incentivized environment. Preliminary results showed a significant positive relationship between a-motivation and grade level and a negative association between virtuous motivation and grade level. Thus, quality motivation decreased as students progressed through grades. We are particularly interested in the inflection point in the 8th grade where quality motivation dropped most dramatically. We found a moderate negative correlation between virtuous motivation and a-motivation and strong positive association between virtuous motivation and identified regulation, the closest construct in the scale to intrinsic motivation. Structural equation modeling will be used to analyze the direct and indirect effects of all the variables in the serial multiple mediator model on motivational orientation. We propose deploying the instrument as a pre- and post-test model to evaluate the effectiveness of character education programs.

Causality orientation in emotional labor

Andrea Fischbach, German Police University

This paper describes the conceptualization and development of the "Emotional Labor Causality Orientation Scale" (ELCOS-8). This measure is based on the General Causality Orientation Scale (GCOS-8; Deci & Ryan, 1985) and adapted to emotional labor work role requirements in the police context. Based on self-determination theory and work role orientation theory, the scale measures five emotional labor work role orientations, three general orientations—autonomy, control, impersonal—and two specific orientations—emotional labor role breadth and dehumanization—as the source of initiation and regulation of emotional labor demands. In a cross-sectional study of a working sample within German police, I demonstrate preliminary findings on the reliability and construct validity of the scale. I discuss how the wide range of policies, practices, and procedures, having an impact on the emotional labor climate police officers are likely to experience, affect emotional labor work role orientations. Such an emotional labor climate consists of HR practices, service design practices, work role design practices, and the foci of leadership on helping and ensuring that employee response to targets in emotionally demanding situations is in keeping with target and employee needs. Future research can examine how a climate for emotional labor contributes to the general and job-specific causality orientation of service workers and thus promotes serve workers' role authenticity.

Cross-cultural validation of the basic psychological needs satisfaction scale with youth in Colombia

Paulina Velez, Texas Tech University

Sara L Dodd, Texas Tech University

Melanie Quick, Texas Tech University

Introduction: This study evaluated the psychometric performance of the Basic Psychological Need Satisfaction Scale (BPNSS; Gagné, 2003) with a sample of adolescents in Colombia; we explored its suitability in a youth leadership program adapted for the Colombian context. The BPNSS is a 21-item scale assessing three basic psychological needs theorized to comprise self-determination (SDT): Autonomy (7 items), competence (6) items, and relatedness (8 items). The BPNSS has been used to understand SDT in a variety of contexts such as health, academics, and the workplace (Silva, Marques, & Teixeira, 2014; Wang, Gao, & Panaccio, 2020; Wang, Tian, & Huebner; 2019). Methods: Data were collected from middle and high school students (N=1189; 58% male) aged 9 to 17 from a large city in Colombia. The BPNSS was translated and adapted before data collection following the principles of good practice for the translation and cultural adaptation process for measures (Wild et al., 2005). Confirmatory factor analysis (CFA) was employed to examine the scale's factor structure. For all analyses, the fixed factor method of scaling and identification was used. Results: The first CFA evaluated the theoretical three-factor model of the BPNSS, in which the latent constructs for autonomy, competence, and relatedness represent three related but distinguishable needs. This model did not fit the data adequately ($\chi^2(186)=3160.7$, $p < .001$; RMSEA=0.12; CFI=0.69, and TLI=0.64). A bifactor model was then tested in which each indicator loaded onto its respective subscale and onto a more general higher-order construct labeled "need satisfaction." This model fitted the data substantially better ($\chi^2(162)=702.75$, $p < .001$; RMSEA=0.05; CFI=0.94, and TLI=0.93). Discussion: Methodological, theoretical, and practical implications of analyzing the BPNSS as a bifactor model are discussed. In particular, the scale's usefulness in the context of adolescent development from cross-cultural perspectives is discussed.

Individual Talk 5B SDT & Well-being | Basic Needs & Proactivity

Peninsula 5-7

Optimizing motivation, occupational health, and work performance through proactive recovery strategies: A dual-pathway model

Miika Kujanpää, University of South-Eastern Norway

Anja H. Olafsen, University of South-Eastern Norway

Stressful and demanding work is a risk factor for occupational health problems unless successful recovery from work during off-job time, defined as a process of regaining the energy and replenishing personal resources at off-job time that were lost during the working day, can take place. A research stream has shown the positive role of four key recovery experiences (i.e., detachment from work, relaxation, control, mastery) for employee occupational health and performance. However, employees' proactive strategies for enhancing their own recovery during off-job time have so far been only scarcely examined in the literature. In this article, we present a Dual-Pathway Model of Proactive Recovery Strategies (DPM-PRS). The model is theoretically based on recovery experiences research, Integrative Needs Model of Crafting and Self-Determination Theory and delineates how employees can self-manage their off-job time to enhance their occupational health and work performance through proactive recovery strategies. Approach-focused strategies are posited to enhance control and mastery experiences, and, in turn, increase autonomous off-job and work motivation. Avoidance-focused strategies are posited to enhance detachment and relaxation experiences, and, in turn, diminish controlled off-job and work motivation. Based on the theoretical model, we introduce an intervention focusing on approach- and avoidance-focused proactive recovery strategies. Integrating research on recovery, motivation, and crafting in the off-job domain, the DPM-PRS broadens existing literature to explain the proactive nature of recovery attainment and its implications, the partially unclear distinction of active versus passive recovery, and qualitatively distinct motivational processes related to approach- and avoidance-focused proactive recovery strategies.

Happy to learn: the role of optimism in developing autonomous motivation and engagement in learning. An intervention program

Rinat Cohen, Achva academic college

Yaniv Kanat Maymon, Raichman university

Ilana Bari

Studies show that students' motivation plays an important role in shaping their engagement, performance and grades, and wellbeing. Therefore, the continuous decline in students' motivation over the school years and within a school year, worries scholars, educators, and policy-makers. In an attempt to understand the antecedent that may enhance

students' performance, scholars pointed to optimistic thinking and positive future expectations as important predictive factors for improved wellbeing, better academic performance, and better adjustment. Consistent with this, studies based on SDT show that individuals whose basic needs are satisfied, which involves positive thinking about the self, develop higher motivation and greater engagement in their academic lives. Considering this, here, we investigated whether an intervention program aimed at increasing the students' optimism, would be associated with an increased sense of needs-satisfaction, which would in turn predict an increase in the autonomous motivation of the students and their engagement in learning. 187 students in 5th and 6th grades participated in a six-month intervention program (2 academic hours per week) during school time aimed at increasing optimistic thinking. Two weeks before the start of the intervention, the motivation, needs satisfaction, engagement, and optimism of students were measured by questionnaire. Three months after the end of the intervention, students were asked to fill out the questionnaires again. Growth-curve MLM analyses revealed that three months after the intervention program ended, students reported increased optimism, and increased needs satisfaction, which in turn associated with increased autonomous motivation and engagement. These findings imply that optimistic thinking acts as a source of energy and resilience for the students, which contributes to an increased sense of needs satisfaction and the development of higher autonomous motivation and greater engagement in learning, even in a challenging environment such as school.

Does satisfaction of the basic psychological needs help you spend your free time effectively: A longitudinal, intervention study?

Michael Szulawski, The Maria Grzegorzewska University

Magdalena Poraj-Weder, The Maria Grzegorzewska University

Dorota Jasielska, The Maria Grzegorzewska University

IntroductionThe way people use their free time may bring many benefits at psychological and physical level (Iwasaki i in., 2006; Pressman i in., 2009). However, people do not always use their spare time in the satisfactory way, and as a consequence do not rest and regain their strength effectively (Tonietto i in., 2021). The aim of this study was to examine how people plan their free time and what determines the level of satisfaction with the activities taken. We assumed that planning free time, satisfaction of basic psychological needs will predict positive emotions and spare time satisfaction (Barkoukis i in., 2010, Ryan, Deci, 2017). We also predicted that there will be differences in free time satisfaction among people choosing various forms of activities.**Methods and Results** The study was conducted in longitudinal design (6 measures with deferred measure) with intervention and control groups. The intervention group was planning their activities in free time for the following weeks which control group was not doing. The level of basic psychological needs satisfaction and frustration, positive and negative emotions and the level of spare time satisfaction were measured. Moreover, the activities planned were divided into entertainment, relaxation, development and health. The results showed that planning free time (intervention) and satisfaction of basic psychological needs (in contrary to their frustration) were positively related with spare time satisfaction. These relations were partially mediated by the level of positive and negative emotions. Additionally, there were differences in spare time satisfaction among participants who preferred particular forms of activities chosen in free time.

What does history reveal to us? Basic psychological needs of a 17th century teacher of music

Aigi Heero (Merylyn Meristo), Tallinn University

Merylyn Meristo, Tallinn University

The aim of this study is to explore the life of David Gallus (1603-1659), a German music teacher, during the time he worked at Tallinn Gymnasium in the mid-17th century. Using the lens of Self-Determination Theory (SDT) to investigate Gallus's autobiographical notes, i.e., "Anotationes," for ways in which his basic psychological needs for autonomy, competence and relatedness were or were not met, this analysis capitalizes on the universality of the theoretical lens to bridge experiences then with experiences now. Findings highlight that though Gallus celebrated aspects of his need for competence being met (e.g. being proud of teaching complicated songs to his students), his needs for relatedness and autonomy more commonly went unmet. His notes show his constant dissatisfaction with working conditions. Gallus experienced autocratic school management, typical of that period (I was not permitted to enter with the professors, but had to wait and listen outside) that undermined autonomy. In addition, teaching positions were extremely hierarchized, and hierarchy at work, in turn, disfavored both autonomy and relatedness.

Promises regarding increases of his salary were made, but they were never kept. Furthermore, he expected and hoped for more interaction with his colleagues but to his disappointment, their relationships remained complicated and distant. At the same time, Gallus's family was impacted by plague and death, causing strains in these relationships as well. These findings reveal the challenging conditions faced by this music teacher and offer insight into the cultural norms of the Gymnasium in Tallinn as they intersected with broader contextual events of that time. Using SDT to explore autobiographical narratives offers a powerful lens to interrogate the ways in which a person experiences the complexities of his socio-emotional, cultural and historical context.

Individual Talk 5C

Special Topics | Reflections on SDT: Strengths & Room for

Longboat

Improvement

Phenomenological and ontological autonomy: Integrating self-determination, self-control, and authenticity

Tessa van der Willigen, Georgetown University

Kostadin Kushlev, Georgetown University

SDT rightly emphasizes that people need to feel autonomous. But if we believe in the existence of invisible manipulation and brainwashing, we must allow that people can be non-autonomous even if they feel autonomous. This paper imports concepts from philosophy and economics to build a model of ontological autonomy that complement SDT's phenomenological construct, and in so doing builds bridges between SDT and the literatures on self-control and authenticity. The resulting model allows us to ask more nuanced questions about external circumstances: Rather than asking only whether circumstances are conducive to a sense of autonomy, we can ask also whether they are conducive to genuine autonomy and thus help people pursue their conception of the good life. By way of illustration, the paper applies the model to tech, where it builds on Calvo, Peters, Vold, & Ryan (2020) to capture a wider range of ways in which tech influences autonomy.

A critical appraisal of the self-determination theory

Rigaud Joseph, California States University San Bernardino

Nadia Germain, Louisiana State University Shreveport

Since its inception in the early 1970s, Self-Determination Theory (SDT) has grown by leaps and bounds, becoming a major framework in psychology and gaining greater visibility across other disciplines. However, despite being the focus of a legion of publications from well-known scholars and researchers worldwide, this mega-theory arguably still harbors room for improvement. In fact, the existing literature has largely ignored the theoretical quality of the SDT by means of objectivity. This paper seeks to address this gap in the literature by proposing to determine the theoretical merits and limitations of the SDT, using Joseph and Macgowan's (2019) Theory Evaluation Scale (TES). As its name implies, the TES is an epistemological tool for analyzing the quality of theories through nine criteria: coherence, conceptual clarity, philosophical assumptions, historical evolution, testability, accuracy, boundaries, usefulness for practice, and human agency. Empirically vetted for validity (including, face, content, convergent, and discriminant) and reliability, the TES has shown applicability across many professions, particularly social work, nursing, education, psychology, behavioral health, communication, information systems, sociology, business, political science, and criminal justice. A review of the literature on SDT will be conducted—using digital libraries and academic databases such as Academic Search Premier, Google Scholar, Education Resources Information Center (ERIC), Journal Storage (JSTOR), and PsycINFO—to identify peer-reviewed publications on SDT. Additionally, a special consideration will be paid to SDT-related materials published by the renowned Center for Self-Determination Theory. The search will include only peer-referred articles published in the English language, regardless of the time. The articles included in the review will allow the evaluator to better appraise the quality of the SDT under the TES. Results are expected to hold major implications for the SDT, as previous research has not evaluated the strengths and weaknesses of this framework. This paper therefore extends the literature on SDT.

Adaptation vs internalisation: An empirical analysis in BRICS

Tadashi Hirai, University of Cambridge

This presentation verifies the conceptual disparity on the reliability of subjective assessments between the Capabilities Approach (CA) in development studies and the Self-Determination Theory (SDT) in psychology, by analysing samples from wealthy and poor areas of the most prosperous cities in each of BRIC's nations. The reliability of subjective assessments relates to the interpretation of internalisation and adaptation which varies widely between disciplines. CA regards both as questionable in view of justice, because adaptation and internalisation alike do not reflect the distributive conditions of external goods. In contrast, SDT clearly distinguishes internalisation from adaptation by the level of the psychological needs it specifies and views only the latter as problematic for a flourishing life. It assumes that internalisation cannot be made without satisfying external goods while adaptation can be made without them. This assumption (i.e. internalisation cannot be made in deprivation), however, needs to be tested, because the lack of external goods seems not guaranteed to be detected through the lens of psychological needs. This investigation is all the more important, given that SDT has had no empirical study targeting those who are in externally deprived conditions. To test the assumption, this presentation analyses samples from wealthy and poor areas of the most prosperous cities in each of BRIC's nations (1,400 samples in total). If deprived people do not satisfy the psychological needs, the distinction between internalisation and adaptation proves to be valid; otherwise, internalisation and adaptation turns out to be indistinguishable, and the distributive conditions of external goods need to be examined by means of objective assessments, apart from the level of psychological need satisfaction, for a flourishing life. While a possible contribution of SDT to CA has been examined for operationalisation, a possible contribution of CA to SDT has yet to be investigated particularly in terms of justice.

Individual Talk 5D **Education | Supporting Needs of Students with Disabilities** Biscayne
Visual communication analysis: Applying SDT elicits accelerated communication, boosting self-esteem, and decreasing anxiety for autistic people and those with other special needs
Dalia Shkedy, Alternative Teaching Strategy Center (CEO)
Jonathan Shkedy, Alternative Teaching Strategy Center (CFO)

Visual Communication Analysis (VCA) is a peer-reviewed, data-based, innovative strategy for children on the autism spectrum and for children with various other neurodevelopmental and medical diagnoses. People with non-verbal autism are considered some of the most difficult people to teach because of their inability to communicate and the (sometimes extremely) negative maladaptive behaviors that arise from this issue. This large section of the autistic population has been neglected in research due to their specific needs and required accommodations that are not readily addressed, remedied, or even measurable with traditional methods. VCA utilizes multi-dimensional non-linear ways of learning and interacting with the child, most notably with the application of SDT. Participants will become familiar with and will view video footage on how the tenets of SDT are applied in VCA. VCA gives children choices in their learning to develop intrinsic motivation, reinforced through presumed competence & specifically designed for each child. In peer-reviewed publications, VCA has shown vast success in special education and ESL classrooms, in a center-based environment, and with children as young as sixteen months old. While the most popular form & perceived gold standard for the treatment of ASD is Applied Behavioral Analysis (ABA), the daily use of ABA over periods of years goes against the tenets of SDT. Research has found many of the SDT-predicted negative effects of task-contingent rewards, such as compliance, low self-esteem, anxiety, depression, learned helplessness, prompt dependence, self-injurious behaviors, etc. occur in patients who have treated with ABA over long periods. This presentation is in memory of Gary Shkedy.
<https://www.tandfonline.com/doi/full/10.1080/23311908.2021.1875549>
<https://www.tandfonline.com/doi/full/10.1080/23311908.2020.1803581>
<https://ccsenet.org/journal/index.php/jedp/article/view/0/47086>
<https://www.tandfonline.com/doi/full/10.1080/23311908.2019.1641258>
<https://link.springer.com/article/10.1007/s41252-021-00201-1>

Using goal-setting conferences to develop self-determination among students with disabilities
Jenny Bisha, STRIVE Prep
Aaron Miller, STRIVE Prep
Lisa Heatherly

The promotion of self-determination skills is a crucial component of education and shows improved outcomes for students, with and without disabilities (Wehmeyer & Shogren, 2016). Although the promotion of self-determination has positive effects for all students, intervention studies show a particularly important in-school effect for students with Individualized Education Programs (IEPs). These positive effects include increased involvement in educational planning (e.g., Seong, Wehmeyer, Palmer, & Little, 2015), greater academic achievement (e.g., Zheng, Gaumer Erickson, Kingston, & Noonan, 2014), and greater access to the general education curriculum (e.g., Hagiwara, Shogren, & Leko, 2017). One plausible avenue to promote self-determination among students with disabilities - particularly in areas such as goal-setting and choice-making - is a student-centered approach to IEP development and implementation (Seong, Wehmeyer, Palmer, & Little, 2015). The authors applied this body of evidence to develop and implement 1:1 student goal-setting conferences for a cohort of middle school students with disabilities. In this teacher-led session, the STRIVE Prep team, with funding support from the Bill & Melinda Gates Foundation, shares how they harnessed the power of one enthusiastic teacher to improve outcomes and elevate the voices of students with disabilities. Applying continuous improvement in education practices (Bryk et al., 2015) in the classroom revealed self-determination growth for all students who participate in student-led goal-setting conferences. The pilot for this change idea increased self-determination and academic achievement for students with disabilities, leading to a spreading and scaling effort to expand conferences from a few small classes to an entire middle and high school.

Fostering the goal pursuit of university students with disabilities

Pascale Dubois, McGill University

Élodie C. Audet, McGill University

Shelby L. Levine

Anne C. Holding, New York University

James Avery

Richard Koestner, McGill University

Postsecondary students with disabilities face challenges while pursuing their goals. Although disability services are encouraged to support their goal pursuit, its actualization remains poorly researched. We examined this process through the lens of SDT. We conducted a semester-long study (three time-points) with 234 university students with disabilities focusing on the antecedents of goal progress and well-being. First, the role of autonomy striving dispositional styles, need satisfaction, and goal action crisis was examined. The structural equation model evidenced that assisted autonomy was associated with higher need satisfaction and less severe goal action crises in the middle of the semester. Indirect positive effects were also evidenced on goal progress and positive affect at the end of the semester. Second, we examined two types of goal support, autonomous and directive support, from family and peers. Hierarchical multiple regression analyses and mediation analyses were performed. While higher levels of directive support from peers were significantly related to greater goal progress, higher levels of autonomy support from family members were significantly related to subjective well-being. Results also suggest that these associations are mediated by higher levels of psychological need satisfaction. These results have important implications regarding the academic success and well-being of university students with disabilities. Indeed, it appears that striving to satisfy their autonomy need through collaborative approaches supports their well-being and academic goal progress. Moreover, close others may provide meaningful encouragement to help these students thrive during their academic goal pursuit.

Translating self-determination theory to classroom practice to support students with disabilities

Wendy Cavendish, University of Miami

Kristin Kibler, University of Miami

Kaitlyn Casanas, University of Miami

Massia Bailey, University of Miami

Research has identified the importance for youth with disabilities to develop self-determination (SD) to facilitate improved postsecondary outcomes. In phase 1 of this project, our goal was to center youth voices related to their identification of SD supportive school environments. In phase 2, we identified exemplars of teacher practice that support the development of SD domains (autonomy, relatedness, and competence) for students with disabilities. In phase 1, we examined the perceptions (via interviews) of 44 high school students with learning disabilities of

opportunities to practice SD in their school contexts. We analyzed the interview transcripts using the constant comparison method of qualitative coding. Students' identified instances of teachers' demonstration of caring and also of knowing to who to ask for help when needed as supporting feelings of relatedness. They identified choices in course selection, class assignments, and assessments as supporting autonomy. Students noted the importance of opportunities to demonstrate mastery of learning in a variety of ways as supporting competence. In phase 2, we identified exemplars of SD supportive teacher practices. The teacher exemplars include (1) descriptive teaching, a direct instruction methodology that helps non-verbal students with autism use augmentative and alternative communication devices to build relationships with others, increase feelings of autonomy, and demonstrate competence in social, academic, and relational situations. The 2nd exemplar of teacher practice included a life skills and employment project (smoothie business) for high school students with intellectual disabilities that created a learning space built upon choice, decision-making, and collaboration that supported student autonomy, relatedness and competence. Our findings contribute to the SDT conceptual framework as applied to students with disabilities in school settings and highlights key practices by teachers that support opportunities for students to develop SD in school contexts.

Individual Talk 5E **Education | SDT in Higher Education**
Graduate students' psychological needs in an online doctoral program
Giang-Nguyen Nguyen, University of West Florida

Canaveral

Many institutions are trying to improve their online programs; particularly, they look at the support that students were provided. With graduate education, interaction between faculty and students were examined (Pollard & Kumar, 2021). According to Li et al. (2018), mentoring is essential for graduate students in higher education but it is difficult and requires specific techniques. In that context, this research study examines graduate students' psychological needs in an online doctoral program to provide them with better support. The following aspects were examined: (1) doctoral students' experiences in an online program, (2) how doctoral students' needs are fulfilled by their support systems (if any), and (3) if additional support is needed by these doctoral students. This is a mixed-methods study. The Basic Psychological Need Satisfaction Scales (BPNSS) were administered to graduate students enrolled in the online doctoral program; these participants were in different stages in the program. The quantitative data were collected and analyzed based on guidelines provided by the survey developers. Additionally, qualitative data through follow-up interviews (or written responses) were collected to see how the two data sources aligned.

Raising the bar: Hispanic/Latin* high-school students' experiences in an early college program
Pilar Forero Taylor, Florida Atlantic University

The Hispanic/Latin* population in the United States is rapidly growing. Hispanic/Latin* students' participation in and completion of college has drastically decreased post-pandemic (COVID-19: Stay Informed, 2021). Predictions for the US population point towards a 32% increase in the United States' Hispanic/Latin* population by 2025, yet 75% of that population does NOT complete an undergraduate degree (Destin et. al, 2018; NCES, 2020). Strong competency beliefs and positive interactions with individuals on the campus and in personal relationships are imperative for Hispanic/Latin* students' commitment to attain a college degree (Chemers et al., 2001; Espinoza-Parra & Collins, 2018; Habley & McClanahan, 2004; Solberg Nes, et.al., 2009; Tinto, 2017). Developmental changes in adolescents can negatively affect their motivation, even if they concurrently possess a high desire to gain the knowledge needed to be successful (Steinberg, 2014; Yeager, Lee, & Dahl, 2017). The purpose of this systematic literature review is to provide insight on how best to study the concept of Hispanic/Latin* student degree attainment by answering: "How does participation in a dual-enrollment/early-college curriculum impact undergraduate degree attainment?" Self-Determination Theory (SDT) offers an explanation detailing how the satisfaction of three basic, psychological needs of competence, autonomy, and relatedness results in a student's intrinsic motivation (Deci & Ryan, 2000). SDT is a motivational theory used to examine how students' needs and interests drive their motivation to achieve. Through the lens of SDT, it is possible to examine the social environments that create challenges and opportunities for academic achievement. The importance of self-efficacy and motivation along with insight into high achieving students' adjustment experiences to the university can be described through understanding of the central tenets of SDT.

Black women in higher education: A qualitative study on their motivation to persist

Anne Edwards, Purdue University

Black women have been among the fastest growing population in the higher education space and have shown consistent high percentage of completion. Motivation research would suggest that their motivation has been based on internal factors. The focus of this qualitative study was to understand the motivation to persist from the lens of the lived educational experiences of Black women. Using self-determination theory and a Black feminist lens the study centered the experiences of Black undergraduate women and other Black women as they explored the messages they received and how those external messages shaped their motivation to persist. The methodology provides participants to construct and reflect on their experiences. The study yielded the creation of a nine-episode podcast series that allowed participants to explore their experiences.

Facilitating wellbeing in higher education: A multi-layered approach to facilitating wellbeing education through learning design and educational practice

Lara Mossman, University of Melbourne

Rachel Colla, University of Melbourne

Over the past two decades, a growing interest in wellbeing education has been primarily driven by the need to mitigate youth mental health challenges. During this time, a substantial body of evidence for the impact of wellbeing education on students has been conducted in primary through tertiary settings. However, much of this work focuses on teaching about wellbeing activities (e.g., mindfulness, strengths, and gratitude interventions). Such activities can imply that the student is responsible for fostering their wellbeing. However, less is known about how we are 'educating the educators' to facilitate wellbeing through their curriculum and educational practices. That is, how can educators enable wellbeing to emerge through "how" they teach, irrespective of "what" academic content is being provided? Seeking to address this gap, we outline a wellbeing learning design framework trialed in a large Australian University. The implementation of the framework is explored using an ethnographic approach in two postgraduate programs for teachers learning theories and practices to facilitate student wellbeing. The central tenets of this framework are outlined, including the underpinning pedagogical and learning environment design principles. The significance of self-determination theory (SDT) to this framework is discussed, highlighting the crucial contribution SDT makes to informing factors that facilitate enabling educational environments (Ryan & Deci, 2020). This work is significant to the future direction of education research because enabling environments are central to UNESCO's declaration that flourishing is the core aim of education (de Ruyter et al., 2020). Emerging trends from implementing this approach are identified, and key learnings are shared to support the replication of this framework in other educational settings.

Individual Talk 5F Health and Activity | SDT in Physical Education

Merritt

The need for competence in children's sports

Kathrin Kohake, University of Muenster, Germany

This presentation aims to discuss the theoretical and empirical significance of competence for motivational processes in children's physical activity and sports. Based on White's concept of effectance motivation, Self-Determination Theory specifies the basic need for competence, which can be satisfied by experiencing one's abilities and feeling effective in interactions within the environment. We investigated the perceived support and satisfaction of competence as well as the types of motivation of children in samples from different sports contexts in Germany. The contexts differ in their varying focus on competition, performance, and control (Physical Education vs. extracurricular sports, recreational sports vs. elite sports). Previously developed questionnaires with 4-point Likert scales were used to measure support and satisfaction of competence as well as types of motivation. N = 613 children aged 8 to 13 years participated in the study. Overall, high motivational qualities are evident in all settings. However, T-tests for independent samples show significant differences in four of five types of motivation: Children in extracurricular sports report systematically higher autonomous types of motivation than children in PE. According to Cohen, the effect sizes are in the low to medium range. Controlled types of motivation also show significant differences with small effects.

Furthermore, high positive values for perceived support of competence emerge for all settings, with even higher values for sports coaches than for teachers (large effect: $d = 0.75$). Surprisingly, perceived satisfaction of competence is significantly higher in PE than in extracurricular sports. The comparisons of elite and recreational sports show a similar pattern with higher autonomous motivation and perceived support of competence for children in elite sports. The validity of the scales as well as other methodological difficulties, like for example selection effects, will be discussed.

QualiTePE –What role do need supportive behaviors play in a cross cultural consensus study on quality in PE teaching in Europe?

Wiebke Langer, University of Hamburg

Teaching quality has a clear impact on student success and positive effects on the motivational-affective development of students. Accordingly, determining characteristics of good PE teaching and systematically analyzing their importance for successful learning has thus far-reaching significance for PE. One aim of the Erasmus+-funded QualiTePE project is to reach a common understanding of high-quality PE teaching and to develop the so-called QualiTePE framework concept. This framework can promote European standardization and enables evaluations of the quality and verifiable improvements. A three-round Delphi study involving a group of 322 European experts was carried out to articulate shared expert opinions on the main research question: what are the most effective characteristics of teaching quality in PE? In three rounds of data-gathering, participants with different levels of expertise on the quality of teaching in PE were asked to assess specific dimensions by rating and ranking 28 sub-dimensions via online questionnaires. In this presentation, resulting dimensions are analyzed regarding their inherent need-supportive behaviors according to basic needs theory. Preliminary results show high agreements for the support of relatedness, e.g., within the scope of the sub-dimension "Teacher's Empathy" as well as "Promotion of a Positive Learning Climate". The support of autonomy is of particular importance in the consistently highly rated sub-dimension "Selection of Content Relevant to Students' Lives". Despite the empirically demonstrated importance of the need for competence, the support of competence is less consistently evident in dimension ratings across countries. However, it can be found in the sub-dimension "Appropriate Selection of Challenging Content" and "Well-Structured Organization" whereas the sub-dimension "Scaffolding" was excluded after the first Delphi round. Further findings and the final ranked list of sub-dimensions of teaching quality will be discussed.

Understanding teachers' (de)motivating styles and subareas: the role of motivation to teach, teachers' mindset and teacher self-efficacy

Katrien De Cocker, Ghent University

Leen Haerens, Ghent University

Arne Bouten, Ghent University

Background: The recent fine-grained circumplex model of (de)motivating teaching distinguishes the four broad teaching style (i.e., autonomy support, structure, control, and chaos) into two subareas each. To increase our understanding of potential antecedents of these eight subareas, the role of motivation to teach (i.e., autonomous and controlled motivation), teachers' mindset (i.e., growth and fixed mindset), and teacher efficacy (i.e., self-efficacy for instruction, student engagement, and classroom management) was examined. Methods: In this cross-sectional study, secondary school physical education (PE) teachers ($n=129$; 39.5% female; teaching experience: 13.8 ± 10.5 years; 46.5% master degree) completed validated self-reported questionnaires. Based on the vignette-based Situation-in-School-PE-Questionnaire, the participative, attuning, guiding, clarifying, demanding, domineering, awaiting, and abandoning subareas were assessed. Results: Autonomous motivation to teach was positively related to all motivating subareas ($.20 \leq r \leq .36$) and negatively to awaiting ($r = -.21$) and abandoning ($r = -.18$). Controlled motivation to teach was related to more domineering ($r = -.22$), awaiting ($r = -.22$), and abandoning ($r = -.30$) behaviours. A growth and fixed mindset of the teacher showed no significant associations with any of the (de)motivating subareas. The three teacher efficacy subscales were positively ($.22 \leq r \leq .48$) associated with most of the motivating subareas (except for participative and self-efficacy for classroom management) and negatively ($.20 \leq r \leq .45$) with abandoning. Teachers with higher self-efficacy for classroom management also reported less awaiting behaviours ($r = -.18$). Conclusion: Present results may be helpful in continuous professional development initiatives. PE teachers' autonomous motivation

to teach and teacher efficacy seem to play a double role with positive associations with all motivating subareas and negative associations with the chaotic subareas. Controlled motivation to teach was mainly associative of both chaotic subareas and one controlling (i.e., domineering) subarea. Teachers' mindset seemed unrelated to the (de)motivating subareas.

Learning or taking a break in physical education: Impact on need satisfaction, need frustration and academic performance

Inghar Mehus, Norwegian University of Science and Technology (NTNU)

Marte Ottosen, Norwegian University of Science and Technology (NTNU)

Mari Helene Reinaas Lysheim, Norwegian University of Science and Technology (NTNU)

Lars Woll, Nord University

Svein Olav Ulstad, Nord University

Previous research has shown a positive relationship between need satisfaction and academic performance (Earl et al., 2019). Some students experience physical education (PE) as a break from more academic subjects (Lyngstad et al., 2020; Smith & Parr, 2007), which can be viewed as beneficial in terms of providing cathartic benefits to mental health (Røset et al., 2020), and is hypothesized to display a positive relationship with need satisfaction. However, not focusing on learning goals in PE raises the question of possible negative consequences for academic performance. In this study we develop a scale for measuring student experiences of PE as learning- and break subject and investigate the impact on need satisfaction and academic performance in PE. Methods: An electronic questionnaire was administered to students in junior- and senior high school (N=469, 58.2% girls). Psychological needs were measured with the Basic Psychological Needs Satisfaction Frustration Scale (BPNSFS; Chen et al., 2015). Seven questions were included to measure PE as learning- and break subject. Academic performance was measured in terms of the last grade students received in PE. Results: A confirmatory factor analysis (CFA) of PE as learning- and break subject was included in a structural equation model, with basic needs serving as intermediate variables and academic achievement as endogenous variable. The model yielded acceptable fit-indices (χ^2 [df=60, N=469]=189.17 (p<.001), CFI=.96, TLI=.94, RMSEA=.07 [0.06-0,08], and SRMR=.04). Conclusions: The CFA supported a two-factor model of the scale measuring PE as learning- and break subject. Experiencing PE as a break have positive impact on need satisfaction and reduces need frustration. Experiencing PE as learning has little impact on need satisfaction and increases need frustration. In general experiencing PE as a break from other academic subjects is beneficial in terms of increasing need satisfaction, decreasing need frustration, and ultimately lead to higher academic performance.

4:00 – 5:00 PM

Keynotes 5

Keynote 5A

Peninsula 1-4

How and why does algorithmic management influence gig-worker motivation?

Marylène Gagne, Curtin University

Algorithmic management is doing many tasks managers used to do. It is ubiquitous on gig-work platforms but it is also rapidly infiltrating traditional organizations. We conducted a survey (N>600) to examine how different algorithmic management functions (monitoring, task and schedule assignment, performance management, and compensation) and their characteristics (transparency, appropriateness, contingency on performance, nudging) influences gig-workers psychological needs, work motivation, and their work outcomes (burnout, turnover intentions, affective commitment). Results indicate that algorithmic management does not, in and of itself, influence gig-workers' motivational experiences greatly, but that how it is used does. Recommendations for the design and usage of algorithmic management are derived from these results.

Learning to fail but not failing to learn: Emotion regulation and learning from academic failures

Guy Roth, Ben-Gurion University

Failures are inevitable in learning processes and may even facilitate learning. Various theoretical approaches emphasize the beneficial role of reflection and self-explanation triggered by failure. However, there are individual

differences in learners' tendency to learn from their failures. A large body of research on learners' reactions to failure has found various negative emotions are likely to present obstacles to learning. Simply stated, a painful experience of failure may result in disengagement and avoidance. Although negative emotions are likely to appear in responses to failure, research has not explored specific emotion regulation styles as predictors of the tendency to learn following failure. The present research project is anchored in self-determination theory's (SDT) conception of adaptive and maladaptive emotion regulation, differentiating among three general types of regulation: integrative (autonomous) emotion regulation (IER) focuses on emotions as carrying information that is brought to awareness; suppressive (controlled) emotion regulation (SER) focuses on diminishing emotions through avoidance, suppression, or enforced expression; amotivated emotion regulation leaves emotions uncontrolled or dysregulated. We hypothesized that the tendency to avoid negative feelings (SER) may limit the ability to explore and learn from failures because they elicit negative emotions people consistently try to avoid. We also hypothesized that the tendency to take an interest in one's own negative emotions (IER) may be related to the tendency to explore and learn from failures despite the negative emotions they elicit. Finally, we hypothesized that dysregulation may limit the ability to learn from failures because it interferes with goal-directed behavior. To test these claims, we conducted four studies, three among college students and one among adolescents (total N = 1200) in a longitudinal design. I will discuss our findings and their implications and make suggestions for future research among strangers.

Keynote 5B

Peninsula 5-7

Freely determined: A SDT perspective

Kennon Sheldon, University of Missouri

I will discuss my 2022 book "Freely determined: What the new psychology of the self tells us about how to live" (Basic Books). The book relies heavily on SDT, but also contains some novel propositions from an SDT perspective. I'll argue that people are always free to exercise their choice capacity, despite encumbrances in both the internal and external environments; these encumbrances can make it more difficult to exercise free will wisely.

A review of the SDT's studies about the antecedents of parental psychological control

Sebastiano Costa, University of Campania

"Within the theoretical framework of the Self-determination theory, parental psychological control has been widely recognized as a need-thwarting behaviour with abundant studies that have shown the deleterious effects that this practice could have in the life cycle. At the same time, there is a growing number of studies that are exploring the antecedents of parental psychological control that could help to explain the reasons behind the use of this strategy. However, the fragmentation of these studies does not allow us to grasp the overall contribution of research on this emerging theme. Furthermore, SDT can offer itself as a theoretical framework within which synthesizing and integrating, in a reasoned manner, the contributions of the antecedents of psychological control. For this reason, the purpose of this presentation is to synthesize the findings from previous studies that have used SDT as the theoretical framework to study the antecedents of parental psychological control providing help to extend and organize the knowledge on this topic reversing the perspective from children to parents. In line with the traditional categorization of the antecedents of parenting, the contents of these studies are organized into three broad categories: parental characteristics (or pressure from within); child characteristics (pressure from below); family social environment characteristics (pressure from above). Results of this synthesis have shown that a wealth number of antecedents have been explored in the SDT literature for each category and underline the need to continue this line of study to facilitate the definition of future prevention projects for parents based on the principles of SDT."

5:00 – 6:00 PM

Rapid Talks 3

Rapid Talk 3A

Theory & Methods | Autonomy-Support: Refreshing Insights

Biscayne

Motivating job characteristics: The role of work design in fulfilling basic psychological needs in production

Elin Edén, Chalmers University of Technology

Purpose – Job characteristics have been suggested to impact motivation and need satisfaction, though research within this area is still limited (Deci, Olafsen & Ryan, 2017). Work design in manufacturing is characterized by standardized and repetitive tasks, which may have a negative influence on need satisfaction. Thus, the purpose of this study is to investigate the relationship between work design and the fulfilment of basic psychological needs at work in a production context. **Methodology** - A survey was distributed to production personnel (n=604) at four manufacturing companies in Northern Europe, whereof 80.8% worked on an assembly line and 19.2% worked in a job shop. Participants answered questions from the Work Design Questionnaire (WDQ; 31 items) and the Need Satisfaction at Work Scale (NSa-WS; 13 items). **Findings** - Preliminary results using multiple linear regression show that, as expected, task variety, decision-making autonomy, and work methods autonomy were positively correlated to autonomy need satisfaction, but unexpectedly work scheduling autonomy did not correlate. As hypothesized, skill variety and problem solving were positively correlated to competence need satisfaction, while contrary to hypothesis, job complexity was instead negatively correlated. Both initiated and received interdependence were expected to be positively correlated to relatedness need satisfaction, but only initiated interdependence turned out significant. **Contribution** - This study contributes to self-determination theory by linking work design characteristics, as operationalized by WDQ, to need satisfaction at work. It adds to previous research of how workplace context affects need satisfaction and motivation. The production context of the study also adds insights into a work setting where there has been limited previous research within self-determination theory. For practice, the study highlights which work design elements to address to better fulfil employees' basic psychological needs.

Does what you say and how you say it matter? The role of controlling prosody

Berdien Vrijders, Ghent University
Maarten Vansteenkiste, Ghent University
Netta Weinstein, University of Reading
Bart Soenens, Ghent University
Joachim Waterschoot, Ghent University
Silke Paulmann

According to Self-Determination Theory (SDT), speakers can motivate listeners in more controlling or more autonomy-supportive ways, thereby, respectively, thwarting and nurturing listeners' basic need for autonomy or volition. To do so, speakers may use different communication styles, such that both what speakers say when directing their interlocutors and how they express these contents, may have unique effects on listeners. While research so far has indeed shown the differential effects of controlling (e.g., 'should'; 'have to') and informational (e.g., 'could'; 'may') contents, the tone of voice speakers use has received little prior attention. Therefore, the current research investigated the way speakers themselves perceive controlling and autonomy-supportive messages, thereby zooming in on the unique and interactive effects of content and prosody. The findings of multilevel analyses in Study 1 (N = 61; M age = 31.51) showed that sentences, spoken by actors with an increased voice quality, as well as sentences containing more controlling content (i.e., commands vs. statements) were perceived as significantly more pressuring and less supportive of choice than autonomy-supportive sentences. Moreover, a significant interaction effect was found between content and prosody, indicating that controlling contents were rated as even more pressuring when spoken with a higher voice quality. A follow-up study (Study 2) will be performed, in which parents (N = 142) will be asked to indicate how their toddler would respond to controlling and autonomy-supportive messages. As such, we will investigate the potential association between parent characteristics and parental perceptions of communicated control and autonomy-support.

General and identity-specific parental autonomy support as nutrients for late adolescents' identity development

Branko Vermote, Ghent University
Bart Soenens, Ghent University
Maarten Vansteenkiste, Ghent University
Wim Beyers, Ghent University

The formation of a coherent, clear, and self-endorsed identity constitutes a critical challenge of adolescence. For identity development to be successful, it is important for late adolescents to sense having an Authentic Inner Compass

(AIC). This experience of being in touch with one's most fundamental interests, preferences, and values serves as a guidepost for well-explored and authentic identity choices, and as a source of resilience against identity-based rumination. As primary socialization figures, parents can nurture or thwart late adolescents' sense of having an AIC and their subsequent identity development. The present 3-wave longitudinal study (N = 382 12th grade students; Mage = 16.91, SD = .57, 73.6% female) examined the role of the perceived parental basic autonomy support (BAS, T1) and two identity-specific autonomy-supportive practices, namely authentic inner compass facilitation (RAICF, T1) and inner value demonstration (IVD, T1), in the prediction of late adolescents' sense of AIC (T2), ruminative exploration (T3), and identification with commitment (T3). In all analyses, we controlled for initial levels of the dependent variables at T1. First, separate structural models for each predictor and dependent variable were estimated. Results showed that late adolescents' sense of AIC was predicted positively by BAS and marginally positively ($p = .09$) by IVD. RAICF was associated with less ruminative exploration over time. When entering all predictors simultaneously, BAS and IVD uniquely predicted an increase in having a sense of AIC. Finally, a model with indirect effects was estimated, showing that BAS is only marginally indirectly related (through a sense of AIC) to less ruminative exploration and more identification with commitment. Similarly, the indirect effect of IVD on ruminative exploration was only marginally significant ($p < .05$; $p < .09$). In sum, the present study highlights the importance of both general and identity-specific parental practices in fostering late adolescents' identity development.

Autonomy-supportive decision-making in maternity care during prenatal consultations: A qualitative interaction analysis

Joyce Kors, Amsterdam UMC

Anne de la Croix, Amsterdam UMC

Linda Martin

Petra Bakker

Saskia Peerdeman

Rashmi Kusurkar, Amsterdam UMC Faculty of Medicine, Vrije Universiteit

Background Autonomy supportive consultation (ASC) can facilitate more autonomous forms of decision-making. The way professionals use mechanisms of ASC in prenatal consultations is unknown. An understanding of professionals' interactions in practice could help to see what is needed to optimize ASC during prenatal consultations. Our study's aim was to gain insight into the mechanisms of ASC that professionals use during decision-making in prenatal consultations. **Methods** We observed and audiotaped 20 prenatal consultations in daily practice by 20 different professionals. We conducted a descriptive, qualitative analysis of professional-patient interactions, based on the concepts and analytic procedures of Conversation Analysis. **Results** We found eight mechanisms of ASC in prenatal decision-making, which were classified into three overarching themes: a) 'Lightheartedness', b) 'Orientation to agreement' and c) 'Offering information and options'. Professionals keep the interaction lighthearted by using (1) minimizing language and (2) humor. They aim for joint agreement and understanding by frequently using (3) the word 'yes', (4) vague words and (5) interruptions. During the offering of information and options, the interaction style changed: professionals (6) reduced their interaction with the patient and (7) gave detailed and standardized information while they (8) kept offering options. **Discussion** Comparing our results with concepts and models on ASC revealed some remarkable aspects. In line with the literature, professionals gave priority to fulfil the patient's need for 'relatedness'. However, they used other mechanisms. Our results indicate that professionals facilitate their patients' need for 'competence' almost exclusively by providing detailed information and the need for 'autonomy' by offering options. The results of our study suggests that professionals could pay more attention to mechanisms described in concepts and models on ASC to meet patients' needs for 'competence' and 'autonomy' specifically during decision-making.

Exploring the definition and measurement of general personal self-determination: A scoping review

Helen Andrews, La Trobe University

Darren Hedley, La Trobe University

Simon Bury

Self-determination is associated with being a causal agent in one's life. However, research rigour in self-determination studies has been poor. There are multiple definitions of self-determination, little measurement consistency, and a focus on youth and education. The current measurement instruments may not operationalise the subjective perceptions (specifically subjective perceptions of self-efficacy, self-reliance, social inclusion, choice, and causality) necessary to become self-determined. This review had two broad objectives: (1) to synthesise a definition of general personal self-determination based on the literature; and (2) to identify whether the current instruments are aligned with this definition. Following scoping review guidelines by JBI Evidence Synthesis, we conducted an unrestricted search of PsycInfo, Medline, ERIC, and Scopus databases for sources which: a) defined general personal self-determination or its component parts; b) if study-based, used a psychometric measure of self-determination to produce an outcome variable; and c) were available in English. First, in the last four years there has been more research (2017-2021; 23 sources found) than in the preceding 30 years (1985-2016; 17 sources found), indicating increased interest in self-determination. Second, we found only one quantitative study with self-determination as an outcome. Third, we found that research has concentrated on self-determination as mediator/moderator of other factors, such as school outcomes, rather than self-determination as an outcome. Fourth, most of the recent research on self-determination (since 2017) uses the action-based definition from Causal Agency Theory, and research into subjective perceptions (also linked with action-control beliefs) has been lacking. We conclude that there is a need to create a comprehensive measure of general personal self-determination which encompasses the subjective perceptions associated with self-determination.

Rapid Talk 3B

Special Topics | Underexplored topics in SDT

Canaveral

Understanding the relationship between autonomous functioning and racial attitudes: The roles of empathy, humility, and perspective-taking

Paige Palmer, Clarkson University

Morgan Reynolds, Clarkson University

Lisa Legault, Clarkson University

Autonomy is foundational to egalitarianism and fair-mindedness. This study examines how autonomous functioning links to various interracial outcomes, including symbolic racism, outgroup warmth and admiration, antiracist attitudes and behavior, and awareness of one's own racial biases. Specifically, we investigated the mediating roles of empathy, capacity for perspective taking, and humility (i.e., the belief that oneself is fallible and not superior to others) in explaining the link between autonomy and each outcome. Empathy and humility are both prosocial virtues with attenuating effects on prejudice. Yet, their unique roles in different forms of prejudice and egalitarianism are not known. We predicted that autonomy would relate positively to all pro-outgroup outcomes and negatively to all anti-outgroup outcomes. In addition, we expected empathy to mediate affective forms of prejudice and humility to mediate cognitive correlates of prejudice. Results of two cross-sectional studies (N=738) showed that empathy and humility indeed play divergent mediating roles. When the intergroup outcome was other-focused in nature (e.g., outgroup warmth, antiracist intentions), empathy alone mediated the effect of autonomy. In contrast, when the outcome was self-focused (i.e., awareness of own bias), only humility mediated the effect of autonomy. Perspective-taking did not play a unique mediating role in any of the tested models. Results shed light on the different ways autonomy links with egalitarian beliefs and behaviors.

Adolescents' emotional responses to needs-(mis)aligned communication about climate change

Jenna Spitzer, Utrecht University

Stathis Grapsis, Utrecht University

Astrid Poorthuis, Utrecht University

Sander Thomaes, Utrecht University

How can we understand and optimally tend to the emotional wellbeing of young people when communicating about climate change? Based on Self-Determination Theory (SDT), we conducted two experiments with samples of ethnically diverse U.S. adolescents to examine their emotional responses to needs-aligned, needs-misaligned, and needs-neutral (control) communication about climate change. Adolescents who read needs-aligned communication reported less

anxiety compared to adolescents who read needs-misaligned (Study 1) and needs-neutral (Study 2) communication about climate change. In addition, adolescents who read needs-misaligned communication reported more positive emotions (i.e., enjoyment, pride) compared to adolescents who read needs-neutral communication (Study 2). These findings suggest that (1) needs-aligned communication can buffer adolescents from experiencing anxiety (Studies 1 and 2), and (2) needs-misaligned communication can incline adolescents to disengage emotionally in response to information about climate change (Study 2). Consistent with SDT, these findings illustrate that communication styles that are more (and less) attuned to adolescents' basic psychological needs for competence, autonomy, and relatedness can influence adolescents' emotional responses as they learn about climate change.

Relationship between mastery motivation, temperament, and executive function in young children with and without global developmental delay

Pei-Jung Wang, Asia University

Chien-Lin Lin, China Medical University Hospital

Mastery motivation stimulates children's independent attempts to persistently master tasks that are at least moderately challenging for him or her, and it has been identified as the key factor for developing resilience. The concept of mastery motivation is similar to intrinsic motivation, as proposed by the Self-Determination theory. The Self-Determination theory (SDT) proposes that people have three basic needs, relatedness, competence, and autonomy; therefore to the extent that a situation potentially meets one or more of these needs, children's motivation could shift from amotivation to intrinsic motivation. Some child-related factors to children's relatedness, competence and autonomy proposed to influence the level of mastery motivation based on SDT. The common indicators of motivation is task-directed persistence. Thus, two purposes of study in children with and without delays were: 1) to examine the relationship between temperament and mastery motivation; 2) to examine the relationship between executive function and mastery motivation. This study design was mental age-matched case-control study. We recruited each 26 children with global delays aged 2 to 5 years from hospital, and 26 typically-developing children with mental age matched from kindergarten. The participants were invited to our laboratory in order to conduct child developmental tests, and their mother were asked to fill in questionnaires, including the revised Dimension of Mastery Questionnaire to obtain motivation, Behavior Rating Inventory of Executive Function to measure executive function, and Child Behavioral Assessment to measure temperament. Correlations were used to examine association. ($P < .05$, two-tailed). We found that all three dimensions of child temperament (effortful control, extraversion, negative affect) associated with overall mastery motivation in children with and without delays. One child EF components (working memory) was found to be positively associated with persistence at doing cognitive tasks in children with and without delays. Therefore, these findings might be helpful for parents and early interventionists to take relevant factors influencing mastery motivation as reference to design the child program during early intervention service or educational settings in order to facilitate child participation in daily activities.

The role of childhood trauma in young adults' emotion regulation, psychological needs, and psychological functioning

Asma Rashid, Università degli Studi della Campania "Luigi Vanvitelli

Sebastiano Costa, Università degli Studi della Campania "Luigi Vanvitelli

Jolene Van der Kaap-Deeder, Norwegian University of Science and Technology

Numerous studies have shown the detrimental effects of childhood trauma for individuals' psychological functioning. However, less is known about the role of emotion regulation and the basic psychological needs in these relations. This research aimed to investigate the associations between childhood trauma and individuals' well-being and ill-being while examining emotion regulation and basic psychological needs as mechanisms throughout two studies. Study 1 employed a cross-sectional design among 242 adults aged 18 to 30 ($M = 22.64$; $SD = .461$, 70.7% female) to examine relations between childhood trauma, emotion regulation, need satisfaction, need frustration, well-being, and ill-being. Results showed that childhood trauma related indirectly to (1) higher levels of dissociation through more dysregulation, suppression, and need frustration, (2) less life satisfaction through decreased need satisfaction and more emotion dysregulation, and (3) a less positive attitude towards seeking psychological help through less integration. Study 2 is currently ongoing and employs a preregistered experimental design with two between-person conditions. Specifically, after filling out a questionnaire on childhood trauma, participants ($N = 200$; aged 18-30) will

be randomly assigned to either a social exclusion or control condition thereby using the Cyberball paradigm. Subsequently, state questionnaires on emotion regulation, psychological needs, well-being, and ill-being will be filled out. Data collection of this study will be finalized December 2022 and results will be presented at the conference. These two studies shed light on the associations of childhood trauma from a Self-Determination Theory perspective, with Study 1 emphasizing the importance of both emotion regulation and basic psychological needs. Keywords: Childhood Trauma, Emotion Regulation, Basic Psychological Needs, Social Exclusion, Well-Being, and Ill-Being.

Motivation in children with ADHD: Relations with parenting style and academic performance

Rachel Lerner, Clark University

Wendy Grolnick, Clark University

Children with attention-deficit/hyperactivity disorder (ADHD) often experience academic underachievement. To understand why children with ADHD have academic difficulties, it is important to explore the role of motivation. It is also crucial to determine how parenting strategies relate to motivation in children with ADHD. According to Self-Determination Theory (SDT), an autonomy supportive rather than controlling parenting style is most facilitative of children's motivation. Yet, ADHD interventions recommend that parents provide contingent rewards to motivate their children, which SDT posits is a controlling strategy that undermines intrinsic motivation. This study utilizes SDT to investigate the relations among parenting style, children's motivation, and children's academic engagement and achievement. Participants were 184 children (96 ADHD, 88 control), aged 9 to 14, and their parents. Parents completed online questionnaires on their children's symptomatology, homework performance, and grades. Children completed online questionnaires on their parents' parenting styles and their own motivation and engagement. Children with ADHD had lower identified and intrinsic motivation than children without ADHD. A structural equation model showed that parental autonomy support was related to greater autonomous motivation for both groups. There were positive relations between autonomous motivation and both engagement and homework performance for all children, but relations were stronger for those with ADHD. Autonomous motivation was also positively related to grades for children with ADHD. Thus, when parents were more autonomy supportive, all children had greater autonomous motivation, and in turn, all children had greater engagement and homework performance. Only those with ADHD had higher grades. Findings highlight the importance of autonomy supportive, rather than controlling, parenting for the academic motivation and achievement of all children, especially those with ADHD. It is crucial that interventions support parents in providing autonomy support.

Rapid Talk 3C

Education | (De)motivating teaching style

Peninsula 1-4

Teacher autonomy support and structure: equals, opposites, or mutually supportive?

Xiarong Zhang, George Mason University

Alex Patzak, George Mason University

Teacher autonomy support and structure are crucial for students' learning (Stroet et al., 2013). Research describes autonomy support and structure as independent but mutually supportive (e.g., Jang et al., 2010), equals (Domen et al., 2020), and even opposites (e.g., Vansteenkiste et al., 2012). These contradicting findings leave teachers guessing how to balance autonomy and structure in the classroom, a research gap this systematic review aims to bridge. To identify relevant studies, the databases ERIC and PsycINFO were searched for the keywords: autonom*, self-determination, self determination, structure, competence, need support*, and need_support*. Included studies are empirical, peer-reviewed journal articles that have reported the relation between teacher autonomy support and structure. Reference lists of selected studies were further examined to identify additional empirical studies, yielding a final list of 34 studies. Across studies, findings on how teacher autonomy support and structure are related are mixed. Most studies (29/34) reported positive correlations between teacher autonomy support and structure, r : [.24 to .83] (e.g., Mendoza et al., 2022). Four out of the 34 studies found a negative correlation between those two constructs, r : [-.11 to -.43] (e.g., Domen et al., 2020). Two studies did not find a statistically significant relationship between those constructs (Kurdi et al., 2018; Stornes et al., 2008). All studies reporting negative correlations examined teacher rather than student reported need support, aligning with previous research findings that teachers perceive need support differently than students (Reeve, 2009). We also observed an overlap of questionnaire items measuring autonomy

support and structure. This is in line with Domen et al.'s (2020) factor analysis results describing teacher autonomy support and structure as one factor. Our findings emphasize how different perspectives about the two constructs are integrated into their operationalizations which jeopardizes generalizations of findings across studies.

What keeps the flame burning? A qualitative study on tutor motivation to guide students in an Interprofessional Training Unit

Saskia Carin Margot Oosterbaan-Lodder, OLVG Hospital

Laura Kortekaas, Zaans Medisch Centrum

Fedde Scheele, OLVG Hospital

Rashmi Kusurkar, Amsterdam UMC Faculty of Medicine, Vrije Universiteit

What keeps the flame burning? A qualitative study on tutor motivation to guide students in an Interprofessional Training Unit Background and purpose It remains challenging to implement and sustain Interprofessional Training Units (ITUs) for equipping health professional students with competencies that are essential for providing collaborative patient-centered care. In this qualitative study, we aimed to identify types of motivation of IPE tutors, the factors that influence their motivation and how these factors can be used to facilitate implementation and sustenance of ITUs. Methods We interviewed twelve midwifery and nursing tutors of an ITU on a maternity ward regarding their motivation for their role as tutors. Content analysis was performed on the data. Results IPE tutors had various types of motivation for guiding interprofessional groups of healthcare students. Key factors influencing their motivation included appreciation for their role, perceived effectiveness of their guidance, learning from others, and a balance between their roles as health care professional (HCP) and tutor. Discussion and conclusion HCPs serving as IPE tutors can be moved from controlled to autonomous motivation through enhancement of their feelings of autonomy, competence and relatedness, by providing tutors with operational support and professional development opportunities. Being a tutor also seems to foster the HCPs' professional identity. Further research is required to determine how tutors' professional, interprofessional and tutor identities influence IPE outcomes for all stakeholders.

The effect of peer acceptance, peer friendship, and support for autonomy on students' need for relatedness with classmates

Sara Germani, Sapienza, University of Rome

Fabio Alivernini, Sapienza, University of Rome

Andrea Chirico, Sapienza, University of Rome

Tommaso Palombi, Sapienza, University of Rome

Giorgio Asquini, Sapienza, University of Rome

Fabio Lucidi, Sapienza, University of Rome

According to Self-Determination Theory (SDT), one of the major sources of emotional well-being is relatedness with significant others. For students, especially during adolescence, their classmates are the major "significant others", as at school they spend most of their time with them, experiencing a wide range of peer relationship. Classmates' social relationships can be defined in terms of the level of acceptance in the class group and the number of friends. So far, few studies have investigated the satisfaction of the need for relatedness and its antecedents with specific references to the group of classmates. The present study has two main objectives. The first is to establish a measurement model for the satisfaction and frustration of the need for relatedness with classmates. The second is to examine the relationships between peer acceptance, peer friendship, support for autonomy provided by the classmates and students' need for relatedness in the class context. The study was based on a sample of 316 lower-secondary school students and adopted a two-wave design. Results empirically support the hypothesized measurement model of the need for relatedness with classmates which posited two distinct but related factors (satisfaction and frustration). First analyses show that Autonomy support appears to be associated with both satisfaction and frustration, while peer acceptance with need frustration. The longitudinal study is still ongoing, and it will allow to investigate the long-term relationships of peer acceptance, peer friendship, and support for autonomy with students' need for relatedness.

Supporting medical students' autonomous motivation when learning online: A randomized controlled trial of life goal framing

Adam Gavarkovs, University of Toronto

Jeff Crukley, University of Toronto

Erin Miller

Rashmi Kusrkar, Amsterdam UMC Faculty of Medicine, Vrije Universiteit

Kulamakan Kulasegaram

Ryan Brydges

Background: The life goals that medical students pursue through their career (e.g., helping others) are amongst the most important and self-defining goals that they possess. Training activities could be designed to emphasize how they can prepare students to attain their life goals via skillful clinical practice. Such a design may enhance students' autonomous motivation to learn the presented concepts and skills. Methods: Medical students (n = 128) were sent an online module on 'The Physiology of Weight Loss'. Students were randomized to receive a version of the module with an introductory slide prompting them to link the presented concepts with their life goals, or a version without this slide. Autonomous motivation, controlled motivation, and perceived competence for learning were assessed after the introductory section of the module. The module was programmed to collect data on students' engagement with embedded experiments, questions, and hyperlinks. Students were also sent a notebook to take notes in, which were subsequently analyzed for the presence of different learning strategies. Students' knowledge retention was assessed one week following their completion of the module. Results: The prompt appeared to have an effect on autonomous motivation, moderated by perceived competence for learning. At high levels of perceived competence, the intervention had a positive effect (mean difference = -0.63, 83% HDI = -1.24 – -0.03), whereas at low levels it had a negative effect (mean difference = 0.61, 83% HDI = (0.06 – 1.21). Intervention group students clicked on more hyperlinks (mean difference = 0.90, 83% HDI = 0.02 – 1.60). There were no group differences for other strategies or knowledge retention. Discussion: Our results demonstrate that a single slide can have a significant impact on medical students' autonomous motivation and engagement, although students' perceived competence for learning should be considered when trying to link activities to students' most self-defining goals.

How do profiles of teachers' autonomy-supportive, structuring, and controlling style relate to student motivation?

Sebastian Fierro-Suero, Universidad de Huelva

Nele Van Doren, Ghent University

Katrien De Cocker, Ghent University

Leen Haerens, Ghent University

Building on the Self-Determination Theory, this study investigated the degree to which PE teachers combine different need-supportive and need-thwarting styles. In a sample of high school students (n = 673), this study examined how teachers combine autonomy-supportive and structuring styles (i.e., need-supportive) with a controlling style. Based on k-means cluster analyses, six different profiles were identified: "Outspoken Need-Supportive", "High Need-Supportive and Controlling", "Relatively Moderate Need-Supportive", "Relatively High Structuring", "Low Need-Supportive and Controlling", and "Relatively Controlling". Students in the "Outspoken Need-Supportive" group displayed the highest levels of autonomous motivation and the lowest levels of controlled motivation. Instead, students in the "Relatively Controlling" group displayed an opposite pattern. The other profiles fell in between. Results further showed that students in the "High Need-Supportive and Controlling" group displayed higher external regulation and amotivation, in comparison to the "Outspoken Need-Supportive" group. So, even when the teacher is additionally perceived as autonomy-supportive and structuring, the detrimental effect of a perceived controlling style is evident. Interestingly, the profile "High Need-Supportive and Controlling" and the profile "Low Need-Supportive and Controlling" yielded respectively the highest and lowest introjected regulation. In conclusion, according to the students, PE teachers rely on different combinations of need-supportive and need-thwarting styles to different degrees. When students perceive their PE teachers as highly autonomy-supportive and structuring and lowly controlling, this generates the most optimal motivational outcomes.

Rapid Talk 3D

Work & Organizations | Leadership and SDT

Peninsula 5-7

Support or challenge? Autonomy support in the coaching relationship

Tia Moin, University of Reading
Netta Weinstein, University of Reading

Coaching is a billion dollar industry whose pace of growth has outgrown the pace of evidence-based research to support its practice. Coaching is defined as a “a Socratic based dialogue between a facilitator (coach) and a participant (client) where the majority of interventions used by the facilitator are open questions which are aimed at stimulating the self-awareness and personal responsibility of the participant” (Passmore & Fillery-Travis, 2011). Meta-analyses on coaching effectiveness support that coaching can enhance people’s motivation, performance and wellbeing. While we know coaching can have impact, we know less about exactly how coaching works. Building understanding of how coaching works can help scholars develop and optimise coaching approaches to address specific causes and challenges. For example, there is potential to develop coaching as a tool for global issues such as social justice and the climate emergency. As with therapy, the coaching relationship is significantly related to coaching outcomes and success. Yet, more needs to be understood about the coaching relationship. An understudied, important aspect of the coaching relationship is the interaction between the Coach and their coaching client. Leveraging psychological meta-theory, Self Determination Theory, this study seeks to identify and examine how a coach’s behaviour supports or thwarts a coaching client’s autonomous motivation and basic psychological need satisfaction, across various stages of a coaching process (e.g. supporting, challenging). The relationship with proximal (within-session) affective (e.g. need satisfaction, psychological capital, self-awareness, meaning) outcomes will be examined. A downstream effect on distal (post-session) outcomes such as goal commitment, goal internalisation and goal attainment will also be explored. This study employs a semi-longitudinal design measuring outcomes across a series of three coaching sessions. Multi-level modelling will allow us to identify how much of the variance of outcomes can be attributed to the coach, the coaching client or the coaching session. To avoid single-source bias, perceptions of autonomy and need-supportive behaviours will be sought from both the coach and coaching client, as well as perceptions of the client’s commitment and motivation towards the coaching relationship. The study is in progress with data collection and analysis pending.

Promoting employees’ psychological health: Motivational power of financial compensation programs compared with need-supportive behaviors of managers

Florence Jauvin, Université du Québec à Montréal
Jacques Forest, Université du Québec à Montréal
Anja H. Olafsen, University of South-Eastern Norway
Marylène Gagné, Curtin University

While employers must compensate their employees for their work, notably with a base pay, compensation programs may include a variety of financial and non-financial incentives. An ongoing debate in the organizational literature focuses on the motivational power of money: while some argue that financial rewards are always beneficial when well-used (Kim et al., 2022), others put forward the idea that negative outcomes are underestimated (Cerasoli et al., 2014). The latter camp would highlight that instead of prioritising financial rewards that target one’s controlled motivation, organizations should nurture employees’ autonomous motivation by creating a climate – using managerial need support – that promotes their development and well-being (Slemp et al., 2018). Our goal is to test a theoretical model examining the effects of financial incentives and managerial need support on employees’ psychological health. We surveyed 2200 employees of a Canadian organization on their perceptions of compensation programs, their motivation, their perceptions of managerial style, and their psychological health (engagement and burnout). The organization provided us with objective data for each participant, including their base pay and bonuses. Structural equation modelling was conducted to test this integrative model of the effect of pay practices on different motivational variables identified by self-determination theory. Autonomous motivation, managerial need support and base pay not only appear to promote engagement, but also prevent burnout. While burnout appears to be positively predicted by bonuses and controlled motivation, engagement is negatively predicted by controlled motivation. The effects of managerial need support and base pay are mediated by autonomous motivation. Our results contribute to knowledge advancement by linking objective data of base pay and bonuses with a model encompassing qualities of motivation and work engagement. This will allow to better determine when, with whom and how the monetary aspects of a job are positive and/or negative.

Sustainable workforce, or optimal human functioning? Why not both: Envisioning an SDT-based sustainable HR management framework

Caroline Galipeau, ESG-UQAM

Joëlle Carpentier, ESG-UQAM

While experts are working on environmental sustainability, researchers argue that more attention also needs to be paid to the social and human dimension of sustainability (Kainzbauer et al., 2021). Although the literature on sustainable human resource management (SHRM) has begun to grow (Anlesinya & Susomrith, 2020), it has done so mostly without the crucial input of psychology theories such as SDT. A systematic literature review conducted according to PRISMA (Page et al., 2021) indicates that SHRM shares a common goal with self-determination theory (SDT): attaining long-term optimal human functioning. Indeed, SHRM and SDT both aim for a sustainable workforce that is well adjusted, healthy, developing and thriving both in their professional and personal life, and as a contributing member of their community, now and in the future (Kossek et al., 2014; Mariappanadar, 2003; Ryan & Deci, 2017). The review demonstrates correspondence between SHRM and SDT strategies and practices across the culture, leadership, job design, involvement, development, HR policies and compensation dimensions (e.g. autonomy support via greater flexibility in task execution, structure via clear development paths, and leader involvement via genuine care for employee well-being). They also appear to share three main determinants; SHRM scholars arguing for organizational support, leader initiating structure, and leader consideration (Bush, 2020), and SDT scholars promoting autonomy support, structure, and leader involvement (Parfyonova et al., 2019; Ryan & Deci, 2017). Based on this systematic review, deliberate alignment and cooperation between the two fields would yield mutual benefits. The field of psychology, through SDT, can bring a deeper understanding of the mechanisms underlying SHRM recommendations' effectiveness, assist in guiding their elaboration, and measure their outcomes. Concurrently, SHRM literature offers an array of strategies and practices to operationalize SDT's proposition, found to be lacking in applied instructions (Gruman & Budworth, 2022).

Positive feedback as autonomy-supportive behaviour

Lisa Sansom, LVS Consulting / Royal Roads University

My early research indicates that feedback in the workplace is largely operationalized in the business literature as a corrective intervention intended to fix gaps in performance. There seems to be little research about feedback that is designed to encourage positive behaviour that increases or sustains high performance and there seems to be even less empirical research about the impact of that positive feedback on the relationship (relatedness) between the feedback recipient (typically the employee) and the feedback provider (typically the manager or supervisor). Yet the way managers convey autonomy support is important and impactful (e.g., Cooperrider & Whitney, 2005). It then follows that positive feedback, encouraging employees in an autonomy-supportive way, could be even more impactful than negative feedback (Fishbach, Eyal, & Finkelstein, 2010) on both task performance and relational quality. Existing research and theories indicate that positive feedback, effectively delivered, could result in greater positive emotions (Fredrickson, 2004) for both the feedback recipient and feedback provider. This may then result in greater attention to task performance, creating greater learning and performance outcomes (Jones, Woods, & Guillaume, 2015), sustained behavioural changes in that task performance (Fishbach, Eyal, & Finkelstein, 2010), greater trust with the feedback provider (Lewicki, Tomlinson, & Gillespie, 2006), greater feedback acceptance (Anseel & Lievens, 2009), and increased feedback seeking behaviour (Anseel & Lievens, 2009). Together, these effects contribute to an upward spiral of increased performance and relationship quality (Stephens, Heaphy, & Dutton, 2011). This can lead to increased employee engagement (Fishbach, Eyal, & Finkelstein, 2010) and self-efficacy (Bandura, 2012) through self-determination mechanisms, including relationship, autonomy, and competence (Deci & Ryan, 2012).

Whom can I serve most? Linking servant leadership with psychological capital improves autonomous motivation

Matthias F.C. Hudecek, University of Regensburg

Klara C. Grünwald, University of Regensburg

Peter Fischer, University of Regensburg

Eva Lermer, University of Applied Sciences Augsburg

Specific goals of the study Research has shown that servant leadership (SL) reinforces work engagement through basic need satisfaction (BNS, van Dierendonk et al., 2014). One study from the educational context suggests BNS predicts higher levels of psychological capital (PsyCap, Carmona-Halty et al., 2019). However, research on the association between PsyCap and employee motivation from a self-determination theory perspective is scarce but might be relevant though. We therefore investigated whether SL is not only associated with BNS but also with PsyCap to predict different motivation types according to self-determination theory. Methods We conducted two online studies with employees from various organizations (n1=620, n2=686). All participants rated their work-related BNS (W-BNS: van den Broeck et al., 2010), their PsyCap (PCQ: Luthans et al., 2007) and their motivation (MWMS: Gagné et al., 2015). SL was captured from employees' perspective (SLS: Verdorfer & Peus, 2014). Both samples were analyzed using serial mediation analyses (Hayes, 2018) with bootstrapped confidence intervals for indirect effects. Brief summary of the results and conclusions We found a positive effect of SL on BNS, but not on PsyCap. Also, positive effects of BNS on autonomous motivation were replicated. In addition, the positive effects of SL on introjected motivation (study 2), identified and intrinsic motivation (both studies) were serially mediated by BNS and PsyCap. Our study suggests that SL is an antecedent of BNS and further indirectly influences PsyCap. In addition, BNS and PsyCap should be considered simultaneously with regard to autonomous regulation and introjected motivation in the organizational context. Thus, the results stress the conclusion of van den Broeck et al. (2021) that a differentiated perspective on the different motivation types is important. As both samples were based on cross-sectional data, the results of the present study should be replicated in the future using longitudinal or experimental data.

Saturday, June 3, 2023

9:00 – 10:30 AM

Symposia 4

Symposium 4A Theory & Methods | Conducting Psychological Need- & Autonomy-Supportive Experimental Studies: Challenges & Solutions

Canaveral

GENERAL OVERVIEW

Over the years, an increasing number of experimental studies have been conducted to examine the efficacy of psychological need- and autonomy-supportive interventions. Some of these studies have tested the theoretical postulations of the Self-Determination Theory providing important contributions to the theory. Other intervention studies, one the other hand, have utilized need-supportive strategies to improve participant engagement or program adherence. This work has been conducted around the world, and it has provided us with a better understanding of the challenges when conducting Self-Determination Theory -centered experimental studies. Thus, the purpose of this symposium is to review common challenges facing Self-Determination Theory centered experimental studies and to provide practical solutions to overcome these challenges. First, we will discuss about the lessons learned from five years of need-support centered obesity treatment program in improving Hispanic adolescents' body composition and self-determined exercise motivation. In this presentation, the authors will be discussing a) the motivational profiles of typical study participants, b) challenges in measuring need-supportive instruction, and c) the role of self-determined motivation in mediating intervention efficacy. The second symposium presentation will focus on online teacher training interventions improving physical education teachers' need-supportive instructional practices. The presentation will discuss many advantages of online interventions and talk about challenges when training teachers to instruct in the need-supportive ways. Finally, the third presentation will elaborate on the issues in measuring need-supportive teaching in real-life instructional environments. Specifically, this presentation will discuss the need for the valid and reliable objective measures to assess instructional behaviors in the area of education, coaching, and public health. In addition, the newly developed Need-Supportive and -Thwarting Instructional observation scale will be introduced. This symposium is hoping to provide practical solutions to guide future efforts of researchers interested in Self-Determination Theory centered experimental studies.

Sami Yli-Piipari (Chair & Discussant), University of Georgia

Conducting self-determination theory -centered interventions: Lessons learned

Mika Manninen, City University of Dublin

Our research has demonstrated that SDT-centered instruction can lead to improved participant performance and enjoyment. However, years of conducting experimental studies in this area, we have identified several challenges that future researchers should consider to improve the quality of the instructional interventions grounded in the SDT. The first challenge is the importance of having a meaningful control group. Our studies have shown that the sizes of the effects are larger when the control group is need-thwarting, as opposed to "as-usual" (e.g. typical physical education climate in a given culture). Due to the small-to-moderate effect sizes of instructional interventions, the selection of a control group is a key factor influencing statistically significant, and practically meaningful findings. Additionally, it is important to carefully define control conditions, as the instructional climate tend vary a lot, not only culture to culture, but lesson to lesson. Another key challenge is measurement treatment fidelity, or the degree to which the treatment is conducted as intended. Our research has shown that instructor adherence to the intended instructional style (e.g., need-supportive instruction) is crucial relating directly to study outcomes. Specifically, objective and valid measurement of the degree of need-support in instruction is essential. Finally, due to the dynamic and interactive nature of instruction, it can be difficult to categorize different psychological needs accurately. For example, autonomy-supportive instructional strategies may elicit subsequent competence-satisfying responses in participants, which can have theoretical implications and blur the integrity of the study results. Furthermore, there is often a lack of detail and transparency in how the used need-supportive strategies are documented. We suggest that future studies should report diligently the need-supportive strategies used and how the strategies are mapped into the basic needs they are hypothesized to support.

Common challenges, and practical solutions for need-supportive teacher training: insights from a tailored online intervention

Arne Bouten, Ghent University

Multiple interventions have shown that teachers can improve their need-supportive style. These interventions are typically in-person workshops that include various combinations of informative sessions, examples of good and bad practices, group discussions, and micro teaching sessions. While the wide range of instructional strategies used in teacher training interventions may be beneficial, it also makes it challenging to determine which strategies are most effective. Ideally, interventions with multiple instructional strategies would include three or more treatment conditions for comparison. However, many need-supportive interventions only have two conditions (intervention and control), likely due to the difficulty of recruiting sufficient teachers. Additionally, these workshops often provide generic information instead of tailored interventions, which research suggests are more effective in promoting behavioral change. To address these challenges, we have developed an online tool that provides teachers with personalized feedback on their motivating style. With online interventions, researchers can also review user data to identify the most effective aspects of the training. While online interventions have many advantages, such as flexibility in terms of timing and location, there are also some trade-offs to consider. For example, online interventions may require more self-discipline from teachers, as they do not have the structure and support of in-person training. And this could reduce treatment fidelity. Additionally, collaborative reflection, which is often highly appreciated by teachers, might be more challenging to facilitate online. Other challenges that may arise during need-supportive training are acquiring and analyzing (multi-level) data from multiple actors (e.g., teachers, students, raters), acquiring informed consent (especially from parents), coding classroom videos, etc. These challenges likely impact both online and in-person trainings. During the symposium, we will present common challenges in conducting (online) need-supportive interventions and offer some practical solutions based on our own experiences and the work of other researchers.

Measuring need- and autonomy-supportive instruction

YoungJu Hwang, University of Georgia

An increasing amount of Self-Determination Theory -centered experimental studies have been conducted to impact participant outcomes. In these studies, typically, autonomy- or need-supportive instruction is manipulated to achieve required participant outcomes. Central to the success of an intervention is to ensure that instruction is delivered as it

was intended (i.e., treatment fidelity). Due to the dynamic and interactional nature of instruction and learning, it is challenging to measure need-supportive instruction objectively and validly. First, instructors display various teaching behaviors to deliver content effectively and to interact with students to help them meet learning objectives. These teaching behaviors may include, explaining concepts, demonstrating skills, asking and answering questions, and providing feedback. Second, it is very typical that each lesson can have several stages, which all can vary in the degree of need-support. Finally, instructional delivery oftentimes does not elicit responses solely on only one of the three psychological needs but several. For instance, usage of one instructional delivery often impacts multiple needs. To capture the dynamic nature of instruction and overcome the aforementioned challenges, we developed a need-supportive and -thwarting instruction observation scale (NSTI). This scale consists of nine central instructional need-supportive and -thwarting instructional strategies derived from the previously published literature and observation scales. NSTI is a 7-point bipolar response scale (-3, -2, -1, 0, 1, 2, 3) with a sliding coding system, which allows raters to move from the default value of 0 to each direction depending on whether need-supportive or -thwarting instructional strategy can be identified. This measurement tool allows us to quantify how need-supportive the entire teaching situation actually was. The development of NSTI could potentially help us to measure instructional situations more validly and reliably and guide our efforts to educate instructors to teach need-supportive ways.

Symposium 4B **Special Topics** | Contingent Self-worth: Towards an In-depth Investigation of Its Consequences and Roots Peninsula 1-4

GENERAL OVERVIEW

Contingent self-worth exist when one's self-worth depends upon one's achievements and approval of others. Furthermore, it is also possible that individuals not only let their self-worth depend upon their own achievements, but also on the achievements of others. This phenomenon is called other-invested contingent self-worth. The Self-Determination Theory argues that contingent self-worth stems from experiences of need frustration, which has led to an insecure sense of self. Therefore, people high on contingent self-worth engage in a continuous struggle to prove themselves, resulting in maladaptive outcomes such as controlled motivation, the pursuit of extrinsic goals, etc. While these costs on the personal level already received some attention, the interpersonal outcomes of contingent self-worth received much less attention. Therefore, as a first aim of this symposium, we shed light on a broad range of interpersonal outcomes, such as the use of a controlling (e.g., conditional regard) and structuring interaction style towards others, and its explanatory mechanisms (e.g., shame coping) and consequences for others (e.g., acquired coping strategies). Moreover, while it is clear that there are costs associated with contingent self-worth, little is known about the antecedents that fuel this fragile self-worth. Therefore, as a second aim, this symposium tries to better understand how contingent self-worth emerges, by considering the interpersonal environment in which a person resides as a key determinant.

Maarten Vansteenkiste (Chair & Discussant)

The connection between parental conditional regard and self-worth: Self-determination and broaden and build processes

Nicola Schutte, University of New England

Parental conditional regard involves parents giving or withholding affection or approval, depending on how well the children meet parents' expectations (Assor et al., 2018). From the standpoint of Self-Determination Theory (Ryan, & Deci, 2000), parental conditional regard is best conceptualised as children's, not parents' perception of parental regard. Parents might believe that their regard is unconditional; however, children who perceive that parental love depends on their showing certain behaviors experience conditional regard. The perceived parental expectations can focus on children's behaviors in a variety of domains, including academic, athletic, and social. Children who perceive their parents' affection or approval as conditional may experience lower self-worth as assessed by self-esteem. Theoretical connections offering insight into the antecedents and consequences of this link come from processes of both Self-Determination Theory and Broaden and Build Theory. Empirical evidence across studies related to introjected regulation, affect, and relationship quality partially support these proposed theoretical connections. Self-Determination Theory (Ryan & Deci, 2017) and the Broaden and Build Theory (Fredrickson, 2013) offer platforms that may offer avenues for attenuating possible harmful effects of perceived parental conditional regard. Experimental

research shows the effectiveness of some efforts to harness the impact of intrinsic motivation on affect and the impact of altering affect on competencies (Stanley & Schutte, 2023). Building on these theoretical platforms and past research holds promise in developing approaches to fostering children's sense of self-worth.

What happens when coaches let their self-worth depend upon athletes' performances: An examination of the predictors and outcomes of athlete-invested contingent self-worth

Sofie Morbée, Ghent University

Given that sports coaches invest considerable time and energy in their athletes, it seems logical that they attach their self-worth to the successes and failures of their athletes. Grounded in Self-Determination Theory, the present study aimed to examine the pitfalls associated with Athlete-Invested Contingent Self-worth (AICS) and the factors feeding into this dynamic. The findings of a cross-sectional (Study 1; N = 740, Mage = 34.37 years) and an experimental vignette-based study among youth sport coaches (Study 2; N = 318, Mage = 38.94 years) indicated that AICS related positively to a controlling and negatively to a structuring coaching style. A performance-oriented club climate related positively to AICS across both studies, with Study 2 further demonstrating that contingent self-worth is rooted in need frustration that is provoked by a performance-oriented climate. No evidence for the moderating role of AICS was found. The discussion focuses on the pitfalls of contingent self-worth among coaches for their athletes' development. Keywords: Self-Determination Theory, Sports Coaches, Coaching Style, Vignette Design, Pressure, Athlete Performance

Parents' shame coping explains the link between their child-invested contingent self-esteem and conditional regard

Teresa Steffgen, Philipps University Marburg

Parental academic conditional negative regard (CNR) is a need-frustrating parenting style in which parents withdraw their appreciation when their child fails in school (Roth et al., 2009). Parent's child-invested contingent self-esteem (CSE) is a key precursor of CNR (Otterpohl et al., 2020). Understanding the underlying process for this relation is still pending. CSE involves that failures in the contingency domain elicit self-relevant emotions such as shame (e.g., Crocker & Park, 2004). Literature on shame assumes four maladaptive shame coping strategies individuals use to reduce shame: Avoidance, Withdrawal, Attack Self, Attack Other (Elison et al., 2006). We examined whether parents' shame coping mediates the link between child-invested CSE and CNR. In Study 1, 206 parents (86% mothers) of fifth through tenth graders reported on child-invested CSE. Next, parents recalled a situation in which their child failed in school. Parents reported their shame, maladaptive shame coping, and CNR in this situation. Path-analysis showed that child-invested CSE predicted parental shame ($\beta = .57, p < .001$), which in turn predicted all four maladaptive shame coping behaviors ($.32 < \beta < .58, p < .001$). Withdrawal ($\beta = .26, p < .01$) and attack child ($\beta = .45, p < .001$) predicted CNR ($R^2 = .49, p < .001$). Two indirect effects reached significance: via shame and withdrawal ($\beta = .08, p < .05$), and via shame and attack child ($\beta = .08, p < .001$). Study 2 replicated the findings with 211 romantic couples. Partner-invested CSE predicted partner CNR (as reported by the partner, $R^2 = .10, p < .001$) via shame and attack partner ($\beta = .04, p < .05$). These studies add to our understanding of CSE in highlighting the key role of shame and shame coping. It is discussed how findings from the broad research field of shame can contribute to understanding the impact of CSE.

Prenatal maternal contingent self-worth as a predictor of maternal conditional regard, and child's helpless coping in kindergarten and second grade

Liat Rabinovitz-Magen, Ben Gurion University of the Negev

This study showed that maternal contingent self-worth, assessed when mother was in the last trimester before the birth of her first child, predicted observed child helpless coping with difficult achievement tasks in kindergarten, (5 years of age), and then in the second grade (8 years). In the second grade, helpless coping was assessed by both an observed behavior in a task, and via teacher ratings. The association between mother prenatal contingent self-worth and child helpless behavior at age 5, was mediated by mother's prenatal intentions to use achievement oriented conditional regard as a socializing practice with their expected child. The effect of prenatal contingent self-worth on helpless child behavior in the second grade was mediated via maternal prenatal intention to use CR, and subsequent

use of CR when child was in the second grade (double mediation). The effects of prenatal contingent self worth and CR and on child helpless coping in the second grade were significant also after controlling for the effect of observed helpless coping three years earlier, when the child was in kindergarten. Importantly, prenatal maternal contingent self worth also had a direct effect on helpless child coping in the second grade. Evidence for the validity of this helpless coping measure is presented in the method section and in Assor et al. (2020). Fit indices for the path model presented in Figure 1, were satisfactory, and mediation tests indicated that conditional regard in first grade mediated the effect of prenatal conditional regard on each of the two helpless indicators assessed in the second grade.

Symposium 4C

Education | The Function of Students' Classroom Engagement: A SDT

Peninsula 5-7

Analysis

GENERAL OVERVIEW

Educators universally recognize student engagement as "the Holy Grail of learning". However, our recent self-determination theory-based research casts considerable doubt as to whether engagement is a causal predictor of achievement. In this symposium, we explore three possible functions of engagement: (1) motivational support (i.e., need satisfaction); (2) contextual support (i.e., autonomy support); and (3) achievement gains. Paper 1 asked students to report their perceived autonomy support, need satisfaction, classroom engagement, and achievement (grades, perceived skill development) to compare the explanatory power of the traditional engagement model (Social context \diamond Motivation \diamond Engagement \diamond Achievement) versus an alternative reconceptualized model. The alternative model better fit (explained) the data. Paper 2 utilized a 4-wave data collection in which students reported their perceived autonomy support, need satisfaction, engagement, and achievement in a single course throughout the academic year. RI-CLPM analyses showed that achievement predicted longitudinal changes in engagement but not vice versa. Instead of achievement, engagement predicted longitudinal changes in need satisfaction and perceived autonomy support. Paper 3 featured a meta-analysis of 40 empirical studies that included all the variables assessed in Papers 1 and 2. Effect size results show that engagement was a strong predictor of motivation, a moderate predictor of social contextual support, and a weak predictor of achievement. Paper 4 utilized a randomized control trial to predict students' mid-semester need satisfaction. Both manipulated autonomy-supportive teaching and students' baseline agentic engagement predicted mid-semester need satisfaction. The predictive power of student engagement was of the same magnitude as was teacher-provided autonomy support. The symposium reaches the following controversial conclusion: Engagement strongly predicts motivation, moderately predicts contextual support, but only weak predicts achievement.

Explaining achievement: Comparing the explanatory power of the reconceptualized vs. traditional models of engagement

Hyungshim Jang (Chair), Hanyang University

The purpose of this classroom-based questionnaire study was to compare the explanatory power of the traditional engagement model (Skinner et al., 2009) versus the recently reconceptualized engagement model (Reeve et al., 2020) to account for high versus low levels of student achievement. We collected two indices of course achievement: actual course grade and self-reported perceived skill developed during the course. Four hundred Korean students also self-reported their course-related experiences of perceived autonomy support, psychological need satisfaction (i.e., motivation), the four engagement components (behavioral, emotional, cognitive, and agentic), and several statistical controls. A nested structural equation model analysis showed that the reconceptualized model fit the data significantly better than did the traditional model. Three reasons explained the superior explanatory power of the reconceptualized model: (1) it is crucial to add agency as a fourth engagement component (in addition to behavior, emotion, and cognition); (2) like motivation, emotional engagement and cognitive engagement function as engagement antecedents or energizers, which means that emotional engagement and cognitive engagement predict the behavioral aspects of engagement (behavioral, agentic) rather than achievement per se and (3) only behavioral engagement and agentic engagement independently predicted achievement. We conclude that future engagement research may be enriched by giving greater prominence to agentic engagement, by reconceptualizing the roles of emotion and cognition in the engagement-to-achievement dynamic, and by recognizing that the best proximal predictors of achievement gains are motivationally-enriched effort and initiative.

An autonomy-supportive teaching intervention promotes need satisfaction in a low-SES school setting: Support from above and support from below

Lennia Matos, Pontifical Catholic University of Peru

The two-fold purpose of this intervention-based experimental study was to test the capacity of (1) an autonomy-supportive teaching workshop (Autonomy-Supportive Intervention Program; ASIP) to help teachers in low-SES Peruvian schools support their students' psychological need satisfaction (i.e., support from above) and (2) students' own agentic engagement to support their psychological need satisfaction (i.e., support from below). We randomly assigned 28 Peruvian teachers who taught 14 different subject matters (e.g., math, Spanish) to participate or not in the ASIP (i.e., experimental vs. control condition). The 672 middle- and high school students of these teachers self-reported their perceived autonomy support, psychological need satisfaction (autonomy, competence, and relatedness), and four aspects of their engagement (including agentic engagement) at the beginning, middle, and end of a semester. A hierarchical linear model analysis showed that experimental condition (L2 variable) predicted T2 need satisfaction ($B = .16$, $SE = .06$, $p = .011$) and students' T1 agentic engagement (L1 variable) also predicted T2 need satisfaction ($B = .10$, $SE = .02$, $p < .001$), controlling for T1 need satisfaction, gender, grade level, and class size. Further, T2 need satisfaction predicted end-of-semester (T3) overall engagement ($p < .001$). These findings are important because they show that (1) an autonomy-supportive teaching intervention works in a low-SES setting, (2) students' own agentic engagement is an important self-generated contributor to need satisfaction, and (3) the effect sizes for the teacher effect (greater autonomy support) and student effect (greater agentic engagement) were roughly equal in magnitude.

Directional ordering of autonomy support, motivation, engagement, and achievement over one year: New quadripartite model using within- and between-person perspectives

Hye-Ryen Jang, Australian Catholic University

We investigated the directional ordering of autonomy support, motivation, engagement, and achievement. Using a sample of middle and high school students taking a physical education course, and four-time points over 1 academic year, we tested a quadripartite reciprocal effects model (REM) with the following six bidirectional longitudinal paths: (1) autonomy-supportive teaching $\Downarrow\Diamond$ motivation (2) autonomy-supportive teaching $\Downarrow\Diamond$ engagement (3) autonomy-supportive teaching $\Downarrow\Diamond$ achievement (4) motivation $\Downarrow\Diamond$ engagement (5) motivation $\Downarrow\Diamond$ achievement (6) engagement $\Downarrow\Diamond$ achievement. In analysis, we employed cross-lag-panel-model (CLPM, between perspective) and CLPM with random intercept (RI-CLPM, within perspective). Overall, the model fit was good in both the CLPM and RI-CLPM and supported similar results. The result showed that the reciprocal paths of autonomy-supportive teaching $\Downarrow\Diamond$ motivation and motivation $\Downarrow\Diamond$ engagement were longitudinally and structurally invariant across 4 time-waves. However, the unidirectional of achievement \Diamond engagement were longitudinally and structurally invariant. Given these findings, we discuss directional order of engagement and suggested new quadripartite model in education research.

The three functions of student engagement: A meta-analysis

Rafael Gargurevich, Pontifical Catholic University of Peru

This study used a meta-analytic approach to synthesize existing research to evaluate the strength and existence of three possible functions of students' classroom engagement: (a) increase achievement; (b) increase personal motivation; and (c) increase social contextual support. We analyzed the 40 cross-sectional and longitudinal studies that met all inclusion criteria and included each of the following measures: All four engagement components (behavioral, emotional, cognitive, and agentic) and at least one measure of achievement, motivation, and/or social contextual support. The results showed strong effect sizes for engagement as a predictor of motivation, moderate effect sizes for engagement as a predictor of social contextual support, and weak (but statistically significant) effect sizes for engagement as a predictor of achievement. Moderator analyses showed that different engagement components predicted different outcomes, such that behavioral engagement best predicted achievement while agentic engagement best predicted social contextual support. While student engagement is often valued as "the Holy Grail of learning" and achievement, results suggest that the actual function of classroom engagement is mostly to support motivation and only partly to support social contextual support and achievement.

GENERAL OVERVIEW

While remote work is not a new phenomenon, the sudden practice with widespread use of home-office caused by the Covid-19 pandemic has made it a common way of organizing work. Despite the growing practice of remote and hybrid working arrangements, scientific research remains inconclusive about its impact, and it is unclear whether knowledge from the existing literature on remote work holds in the current situation where remote and hybrid work are common for a large part of the workforce (outside the context of the pandemic). A novel way to get an understanding of the opportunities and challenges of remote work, is by looking at the underlying psychological and motivational processes it may affect, which seems lacking in the existing literature. In this symposium, we will present findings from the ongoing research project "Remote work for all: Implications of motivation and job recovery for work-related health and performance in the context of home-office (REMOTE)" funded by the Research Council of Norway and founded on the principles of self-determination theory (SDT). In the first presentation, a general overview of the research project and the longitudinal panel study consisting of four measurement points across one year is provided. Further, some trends and descriptive results related to remote work in the representative sample of 3633 Norwegian employees are presented. The second presentation focuses on the development and psychometric properties of a scale capturing remote work characteristics drawing on the principles of basic psychological needs within SDT. The third presentation outlines findings from a study examining remote work in relation to basic psychological needs satisfaction and frustration, work motivation, and eudaimonic work well-being. The fourth contribution presents results from a study focusing on the role of various leadership behaviors in remote and hybrid work settings in relation to employee motivation and performance.

Remote work for all: Insights on opportunities and challenges from a representative sample of Norwegian employees Marte Bentzen, University of South-Eastern Norway

As a response to the need for a better understanding of hybrid and remote work arrangements caused by the Covid-19 pandemic, the research project REMOTE is designed to identify opportunities and challenges of remote work by looking at the underlying psychological and motivational processes of it. The three focus areas of the project are 1) work characteristics of remote work; 2) management of remote workers; 3) job recovery processes in remote work arrangements, all tied to the self-determination theory model of work motivation. In addition to a general overview of the project and its ongoing studies, some trends of remote and hybrid work in the transition out of the pandemic will be presented. In particular, we present findings from the first wave of data in a longitudinal panel study looking at 1) the scope of home office (and for whom), 2) potential differences between those who do not work in home offices and those who work in home offices in relation to their experiences of work design, management practices, work behaviors, and well-being, 3) potential differences between the experiences in point 2 based on the extent of home office work (none, moderate, high, full). The current study contributes with a nuanced analysis related to the extent and implications of remote and hybrid working arrangements post pandemic that extends the current literature that has focused on remote work pre pandemic or during the pandemic. The results highlight the opportunities and challenges that exists for employees and their organizations in providing a decent working environment while working in remote or hybrid work contexts that can give implications for how organizations should go about procedures and the organization of such work.

Development and validation of a remote work scale: A self-determination theory perspective Susanne Tafvelin, Umeå University

The global outbreak of Covid-19 accelerated the use of home-office, and expectations are that many organizations will continue to allow employees working from home. Despite the growing practice of remote working arrangements, scientific research remains inconclusive about its impact. Some studies point to favorable outcomes for employees such as reduced stress, better work-life balance, and higher performance, while others report unfavorable individual outcomes such as lower satisfaction, reduced performance, and loneliness. To better understand when and why

remote work may be beneficial or not, the aim of the current study is to, based on Basic Psychological Need Theory (BPNT), develop and validate a theory-based measure of remote work that may help to explain the contradictory findings in the literature. We used a two-wave survey design, consisting of a sample of 636 employees in Norway. We developed and validated our scale using a four-step procedure. In Phase 1 we generated a pool of items. In Phase 2 we selected items and assessed factorial validity. In Phase 3 we assessed criterion-related validity, convergent validity, and discriminant validity. In Phase 4 we assessed longitudinal invariance and invariance based on gender. Preliminary analyses confirm the factorial validity of the 14-item scale of remote work as well as criterion-related validity in terms of correlations with employee outcomes. Invariance remains to be examined. Our newly developed scale will help to shed light on when and why remote work will be beneficial for employees. This will help organizations to better understand for whom remote work may be beneficial, and when it may in fact be harmful for employees.

Satisfied or frustrated? Examining the longitudinal implications of remote work in relation to employees' basic psychological needs, work motivation, and work-related well-being

Anja H. Olafsen (Chair), University of South-Eastern Norway

Although research on remote work dates back about a decade, much remains unknown regarding how remote work impacts employees. Not only are previous studies ambiguous when it comes to its effects, but the increased prevalence of remote work and the dynamics of today's work life justifies further studies examining how it is experienced by workers to secure their work functioning and health. Self-determination theory postulates that satisfaction of basic psychological needs is important for employees' behaviors, attitudes, and well-being at work. Thus, the present study seeks to understand the dynamics underlying the impact of remote work on employees' work-related well-being. Specifically, the model proposed will examine how extent of remote work is related to satisfaction and frustration of employees' basic psychological needs for autonomy, competence, and relatedness, work motivation, and eudaimonic well-being at work. The study draws on the panel study in the REMOTE project with four measurement points over one year in a sample of 3633 Norwegian employees, where data collection will be completed by the end of 2022. Data will be analyzed using multilevel structural equation modeling separating between- and within-person effects, and simultaneously exploring potential mediated and moderated effects. With this, the current study will provide novel knowledge about the role of motivational processes in remote and hybrid work arrangements, of importance for the new normal in work life after the pandemic.

Leadership behaviors in remote and hybrid work settings: Longitudinal implications for employee work motivation and performance

Andres Stenling, Umeå University

Remote and hybrid work arrangements have increased substantially because of the Covid-19 pandemic and is now viewed as a normal part of working life. Remote and hybrid work has also created a new context for leadership, however, knowledge about how leadership behaviors in remote/hybrid work settings affects employee outcomes is lacking. Therefore, the aim of the current study is to examine longitudinal relations between perceived leadership behaviors and employees' work motivation and performance in remote/hybrid work settings. More specifically, we will examine if the extent of remote/hybrid work is: (1) a predictor of perceived leadership behaviors and indirectly related to employees work motivation and performance; or (2) a moderator of the relations between perceived leadership behaviors, employees' motivation, and work performance. The current study is a part of a large-scale longitudinal project (REMOTE) focused on Norwegian employees work environment, motivation, well-being, and performance in remote and hybrid work settings. The analyses will be based on four waves of data collected every three months across one year. Data collection will be completed by the end of 2022. The sample consists of 3633 employees (50% women) at baseline with an age range of 19 to 70 years ($M = 49.7$, $SD = 11.3$). Of these, 49.5% work in the private sector and 80% works full-time. In the current study, we will focus on self-reported data on perceived need-supportive, controlling, and laissez-faire leadership behaviors, autonomous and controlled work motivation, and work performance across all four measurement points. Data will be analyzed using multilevel structural equation modeling, allowing us to separate between- and within-person effects and simultaneously estimate mediated and moderated effects. The current study will provide unique information about the role of various leadership behaviors in remote and hybrid work settings and their implications for employee motivation and performance over time.

10:45 AM –
12:00 PM

Individual Talks 6

Individual Talk 6A Theory & Methods | Dynamics of Need Satisfaction & Need Frustration

Peninsula 1-4

What role do managers play in addressing needs at work? Investigating the usefulness of need frustration at work above and beyond need satisfaction

Paul Story, Kennesaw State University
Nicole Baker, Kennesaw State University
Evan Bell, Kennesaw State University
Eric Zhu, Kennesaw State University

The goal of our series of studies was to examine the usefulness of assessing need frustration in the workplace above and beyond need satisfaction. We did this by testing whether positive or negative contexts, or in this case manager's leadership styles, would match predictions made by self-determination theory. That is, are positive leadership styles more strongly associated with need satisfaction and negative leadership styles more strongly associated with need frustration? We also tested the usefulness of need frustration in predicting outcomes and whether the needs would be best at predicting outcomes that matched in valence. We expected that no matter how leadership was defined, good leaders would satisfy one's needs in the workplace, and bad leaderships would thwart, or frustrate those needs. Across three cross-sectional studies using students who worked at least 20 or more hours per week (N = 258, 233, & 238), we found support for the usefulness of both need frustration and need satisfaction at work. No matter how leadership was measured, bad leaders, such as toxic, tyrannical, and derailed leaders, tended to frustrate needs in the workplace and good leaders, assessed by leader-member exchange, transformational, constructive, and supportive leadership scales, tended to satisfy needs in the workplace. Additionally as predicted by SDT, need frustration tended to be better at predict negative outcomes (i.e., workplace deviance, counterproductive workplace behaviors, and turnover intentions) whereas need satisfaction was stronger at predicting positive outcomes (i.e., job satisfaction, organizational citizenship behavior, and organizational commitment). As long as it was a negative outcome, and even with some positive outcomes, need frustration would consistently explain additional variance beyond need satisfaction. This effect held even when controlling for positive and negative affect.

Bifactor modeling of the basic psychological needs: Why, what & how?

Wim Beyers, Ghent University
Beiwen Chen, Ghent University
Bart Soenens, Ghent University
Maarten Vansteenkiste, Ghent University

Within Self-Determination Theory (SDT), the basic psychological needs for autonomy, competence and relatedness are considered as crucial vitamins for psychological growth and development (Ryan & Deci, 2017). Whereas satisfaction of these needs contributes to better mental health, frustration of these needs increases risk for ill-being. Ample research supported the validity of this mini-theory within SDT. However, researchers often ignore that the three needs are substantially correlated. In classic regression analysis, the three needs are modeled as simultaneous predictors and variance shared between the needs is eliminated. However, this shared variance has substantive meaning because it indicates that the needs mutually reinforce one another. To deal with this problem, recent research increasingly relies on an alternative modeling of the psychological needs, that is, a bifactor model in which items load both on their specific factor and on a general factor, the latter capturing what the three needs share. This way, both the specific nature of the three needs is captured, as well as the general feeling of need satisfaction/frustration. In this presentation, we provide several empirical examples of a bifactor model of the needs, mainly reanalyzing Chen et al.'s (2015) initial data with the Basic Psychological Needs Satisfaction and Need Frustration Scale (BPNSNFS), and with a motivated comparison between different models. Initial analyses on the US data of this study (N = 509) supported fit and validity of the bifactor model of the needs. For example, a straightforward 6 factor model of the needs explained 49% of the variance in depression, whereas a 6+1 bifactor model explained 70% of this variance. Further analyses will

test this model in data from the other countries in this study (Belgium, China, and Peru) and in domain-specific versions of the BPNSNFS. Discussion will focus on the advantages and implications of the bifactor approach.

Exploring the “dim light” colors of motivational processes at work: The unique roles of need-indifferent behaviors and need unfulfillment

Tiphaine Huyghebaert-Zouaghi, Université de Reims Champagne-Ardenne

Nicole Gillet, Université de Tours

Sophie Berjot

Claude Fernet

Nikos Ntoumanis, University of Southern Denmark

Recent research has suggested that tripartite conceptualizations of interpersonal styles and psychological needs could extend our understanding of the “dim light colors” (need indifferent behaviors and need unfulfillment), alongside the bright and dark colors of motivational processes. Through multiple studies (including a longitudinal one) based on questionnaire surveys, our goals were to investigate 1) supervisors’ need indifferent behaviors (alongside supportive and thwarting behaviors) and test the validity of a tripartite measure of these behaviors ; 2) whether need unfulfillment constitutes a distinct need state (alongside need satisfaction and frustration) and test the validity of a tripartite measure of these need states; and 3) how the distinct components of supervisory behaviors on one hand, and of psychological need states on the other hand, combine to produce distinct profiles of employees, with differing implications for their functioning. Results supported the distinctiveness of need indifferent behaviors (relative to supportive and thwarting behaviors) and need unfulfillment (relative to need satisfaction and frustration). We also supported the validity of the tripartite instruments measuring these constructs and their added-value in predicting employees’ functioning (e.g., satisfaction, boredom, rumination). Finally, we found that the three types of interpersonal behaviors were not mutually exclusive, in that employees could perceive their supervisors to be concurrently supportive, thwarting, and/or indifferent, with distinct implications for subordinates’ functioning. Similarly, need satisfaction, frustration, and unfulfillment may co-occur in the lives of some employees, with differentiated predictive effects on their work motivation. In sum, these results enrich our understanding of the dim light colors of motivational processes at the socio-contextual (indifferent behaviors) and the personal (need unfulfillment) levels and show that these constructs are associated with a wide array of detrimental consequences.

Introducing the dormant need state: Upgrading SDT to a three-process model

Jennifer Moss, Emporia State University

Johnmarshall Reeve, Australia Catholic University

Hye-Ryen Jang, Australia Catholic University

Cheon HeeRa

Ko Hyunghsim

It is widely accepted that our basic psychological needs for autonomy, relatedness, and competence can be satisfied or thwarted, leading to positive or negative functioning, respectively. However, we also exhibit diminished functioning, such as disengagement or disconnection. Is this dual-process model the best way to explain diminished functioning or should we consider a third possible need state of dormancy, as suggested by Ntoumanis et al. (2015) and by Cheon and et al. (2020)? The present study compared the predictive power of the dual-process model vs. that of the newly proposed three-states model of satisfied, thwarted, or dormant needs, in terms of high school students' diminished functioning outcomes. In the first study (n=402), we operationalized the dormant need state, where our current situation renders our psychological needs temporarily dormant. For example, a need-indifferent activity or relationship can leave our sense of autonomy, competence, and relatedness feeling momentarily inactive or turned off. We then developed a questionnaire that would distinguish satisfied, thwarted, and dormant need states. The second study (n=320) assessed the predictive power of the Three State Questionnaire (TSQ). Students completed the TSQ along with a battery assessing 18 outcomes. In a dual-process model regression, as expected, high frustration did predict diminished functioning. However, in a three-process model regression, this predictive power of high frustrated needs disappeared. Instead, dormant needs predicted all aspects of diminished functioning, including amotivation, behavioral disengagement, agentic disengagement, boredom, depletion, and deactivated affect. These robust

findings demonstrate that incorporating the dormant need state and creating a three-process model provides more power in explaining students' diminished functioning over the dual-process model. Our new, validated measure, the Three States Questionnaire, provides opportunities for further research incorporating this unique dormant need state.

Individual Talk 6B

Special Topics | SDT & Vulnerabilities

Biscayne

Integrating the theory of planned behaviour and self-determination theory to understand norms and challenges of solitude in everyday life

Thuy-vy Nguyen, Durham University

Delali Konu, Durham University

Pearl Tshimbalanga

Solitude – defined as the subjective experience of being physically and virtually away from social contacts – can offer opportunity for rest, relaxation, and emotion regulation. But many people might find solitude challenging. Some associate it with loneliness and isolation, and thus shy away from engaging with this experience for its potential benefits. Empirical research has not paid much attention to the challenges that people face to find time for themselves, and their difficulties to spend this time meaningfully and constructively. In this presentation, I will present findings from a systematic review that revealed only a few studies that looked at internalised norms that might shape people's perceptions and experiences of solitude. Then, informed by these findings, I will describe a three-year ESRC-funded project aiming to identify and test the factors that contribute to people's daily engagement with solitude. Particularly, the project will combine the theory of planned behaviour and self-determination theory to investigate a) the barriers that prevent people from deriving happiness from solitude, and b) identify drivers that make solitude better and more enjoyable. With the aim to encourage attitudinal and behavioural changes that allow people to have more positive solitude in their life, the goal of this project is to deliver an intervention that promote self-determined motivation for solitude and need-satisfying activities in solitude. I hope to gather feedback from the audience in this presentation to bring this project to success.

Always ruminating on the dark side of life; Personality and rumination content, duration, and style

Laura Thomas, Liverpool John Moores University

Emily Oliver, Newcastle University

Rumination is common and has well-evidenced impacts on mental health, however, our understanding of this process is limited. Here, we used the tenants of self-determination and personality theories to explore three understudied areas: first, rumination in non-clinical populations, second, the nature and impacts of positive rumination, and third, how and why rumination differs between people. A convenience sample of one hundred and thirteen participants ($M_{age} = 32.75$, $SD = 16.87$) completed online self-report questionnaires assessing personality traits, theorised mechanisms underpinning the rumination and wellbeing relationship (i.e., psychological need satisfaction), and rumination style and duration. Participants also provided qualitative data regarding the content of their rumination, on one occasion at the end of the day. In line with the hypotheses, significant positive relationships were identified between theoretically adaptive personality traits (e.g., conscientiousness, extroversion, and agreeableness), positive rumination styles, and need satisfaction. In contrast, maladaptive personality traits (neuroticism and covert narcissism) were associated with both negative rumination styles and need frustration. Deductive content analysis of participants' ruminations identified causes, response strategies, and outcomes of positive and negative events. Comparative analysis of extreme adaptive and maladaptive personalities demonstrated use of more harmful and ineffective (as identified by: Skinner, Edge, Altman & Sherwood, 2003) response strategies used by maladaptive personalities. Overall, the data reinforce the importance of capturing both positive and negative rumination, as well as focusing on how we process small, daily hassles and events. The findings highlight opportunities for future intervention and adaptation, including, importantly, the promotion of positive rumination, to promote well-being.

Weakening the link between craving and addiction: The role of passionate engagement

Devin Mills, Texas Tech University

Lauren Lewis, Texas Tech University

Uibin Lee, Texas Tech University

Drawing on the support for behavioral activation therapy, addiction counselors often encourage clients to find an activity they love and identify with (i.e., passions) as a means of supporting their recovery process. It is generally assumed that such an activity will support greater mental well-being and serve as an outlet for individuals in the event they experience strong cravings or urges. However, can any passion serve this role? Applications of the dualistic model of passion have shown that outcomes are dependent on the quality of passion engagement, which is represented by two passion types that generally reflect a healthy (i.e., harmonious passion [HP]) vs a harmful (i.e., obsessive passion [OP]) pattern of engagement. Thus, the assumed benefits of passion for individuals at-risk for addiction are expected to be limited to a HP. The present study assesses the role of passion type in moderating the effect of cravings and addiction severity across two online samples of individuals at-risk for problem gambling (N=460; 273 males; M=41.0 years, SD=13.1) and problem drinking (N=407; 239 males; M=39.6 years, SD=12.9). Participants were recruited via Amazon Mechanical Turk following a screening process. Participants meeting eligibility criteria completed an online survey. Participants were classified as either HP (Gambling: n=245; Drinking: n=204) or OP (Gambling: n=215; Drinking: n=203) based on their passion scale scores. Findings from two separate linear regressions supported the hypothesis. Gambling cravings were more weakly related to problem gambling for those endorsing a HP (B=0.92, $p < 0.001$; 95%CI[0.35, 1.48]) compared to those endorsing an OP (B=2.03, $p < 0.001$; 95%CI[1.54, 2.52]). Similarly, alcohol craving was more weakly related to problem drinking for those endorsing a HP (B=0.96, $p < 0.001$; 95%CI[0.61, 1.30]) compared to those endorsing an OP (B=1.81, $p < 0.001$; 95%CI[1.57, 2.04]). The role of HP as a protective factor and resource for individuals at-risk for addiction will be discussed.

How does a self-support approach satisfy basic psychological needs

Behzad Behzadnia, University of Tabriz

Based on Self-Determination Theory (SDT), social contexts are among the most determinants of individuals' basic psychological needs. However, the important question is how individuals can thrive and experience need satisfaction when social contexts are not available. Are there possibilities for individuals to experience need satisfaction and well-being amidst external pressures or threats, when either social contexts (e.g., teachers) or students need to support by others? In this talk, I will first discuss the importance of a self-support approach to satisfy basic psychological needs, next, how to create a self-support climate, and finally, present recent findings regarding the role of a self-support style in relation to need-based experiences, motivational regulations, and well-being outcomes. The results will discuss in terms of SDT, and highlight the importance of a self-support approach as a promising way to facilitate individuals' motivation and well-being.

Individual Talk 6C Education | Student Motivation & Career Decision Making

Canaveral

8th grade students' career decision-making readiness and SDT

Rosemarie Morris, Okaloosa County School District

Giang-Nguyen Nguyen, University of West Florida

Dramatic fluctuations in employment trends pose a problem for young adolescents embarking on the career decision-making process. Paired with inadequate career-guidance resources, this creates a serious societal problem. This ex post facto, correlational study examined the role of self-determination in 8th grade students' career decision-making readiness. Eighth grade students in northwest Florida completed the Basic Psychological Need Satisfaction Scales and the Career Thoughts Inventory. Correlational analyses revealed statistically significant relationships between students' perceptions of autonomy and student perceptions of decision-making confusion, external conflict, and commitment anxiety. Student perceptions of competence showed significant relationships with student perceptions of decision-making confusion and external conflict. Perceptions of competence were associated with commitment anxiety, decision-making confusion, and external conflict. Satisfaction of relatedness needs were associated with external conflict, decision-making confusion, and commitment anxiety. The results provide valuable insights for parents, educators, and education policy directors. Development of a career-readiness curriculum designed to meet the basic psychological needs of young adolescents may prove effective in overcoming career decision-making confusion, alleviating commitment anxiety, and reducing external conflicts.

From conformity to self-determination: Examining female graduate students' pursuit of international education

Mark Malisa, University of West Florida

Giang-Nguyen Nguyen, University of West Florida

Stella Kpogli, University of West Florida

In the 21st century, there is a rise in women from the Global South pursuing international graduate studies. Many students were determined to leave their home countries to find ways of fulfilling their dreams, with the goal to obtain terminal degrees in foreign countries. We investigated these females' motivation to study abroad in a qualitative research study. We used the Self-Determination Theory as a lens to understand these female's motivation. We found most participants shared a variety of reasons to pursue an international education. They were determined to move to new countries. Self-determination played a crucial role in identifying characteristics of the past and goals to be achieved in the future. While there might be a variety of reasons for the pursuit of international education, the Self-Determination Theory provided an all-encompassing rationale for moving to new countries. These participants see education as a pathway to fulfilling individual rights and or their basic psychological needs of relatedness, competence, and autonomy. In some cases, studying internationally did not mean abandoning home countries and customs, but rather transforming and enriching them. In this presentation, we will share more about the motivation (their desires for self-determination) brought about significant changes, some temporary, and others almost permanent

The role of self-determination in acquiring data literacy skills

Meredith Rocchi, University of Ottawa

Simon Beaudry, University of Ottawa

Bianca St Denis, University of Ottawa

Ariane Gauthier, University of Ottawa

Data literacy is the ability to interpret, critically evaluate, and communicate statistical-, text-, and probability-based information. These competencies are essential for deriving meaningful interpretations from data and converting this knowledge into action. Increasingly, university graduates are expected to have a solid foundation of data literacy skills and competencies before they enter the job market. One potential entry-point for teaching data literacy could be through quantitative research methods courses, which are a required component of many undergraduate program. Although it is often assumed that students acquire data literacy competencies through these courses, the focus is on mathematical and statistical knowledge, and not the skills required to navigate the complexities of our daily lives. The objectives of this study were two-fold: (1) To establish the extent to which data literacy skills are currently acquired in quantitative methods courses; (2) To explore the mediating role of Self-Determination Theory (SDT) in promoting these skills. These objectives were achieved using a longitudinal experiential sampling design. Specifically, undergraduate students were invited to participate in the "Stats Study" while completing their first quantitative methods course in either psychology, business, sociology, communication, health sciences, criminology, and economics. A sample of (N = 150) students completed a baseline assessment during the first week of their course measuring a variety of indicators including their psychological needs, academic motivation, and baseline data literacy. Then, throughout the semester, with the assistance of a momentary ecological assessment app, students received a push notification to answer a short series of SDT-based questions about their course that week (N = 11 assessments). At the end of the course, students repeated the baseline questionnaire. Multi-level analyses were conducted to explore the relationship between the baseline and post-semester measure, as well as explore the role of SDT in predicting any changes in data literacy skills.

SDT + equity-centered design: Supporting learner engagement in community colleges

Miriam S Kalk, Education Design Lab

Education Design Lab is a nonprofit organization that uses human- and equity-centered design with education and workforce partners to help make career pathways more equitable so that all people can create the futures they want for themselves. Over the past several years, the Lab has integrated core principles from Self-Determination Theory throughout its design approach in order to support greater learner-centeredness across education and the workforce,

incorporating a focus on learners' and workers' sense of competence, autonomy, and relatedness throughout our design process. In this presentation, we will share how we support our education and workforce partners – college leaders, employers, and other workforce leaders from across the United States – using this framework as a lens through which to understand and better support deeply engaging learning and work experiences, especially for those who have been historically underinvested in and underserved. We will describe how our application of SDT principles comes to life throughout the lifecycle of a design engagement: how we introduce the framework to institutional and organizational partners, situate SDT concepts within the context of the education-to-workforce space, collect quantitative and qualitative data about learners' fulfillment and frustration of competence, autonomy, and relatedness in different environments, and develop prototypes and pilots of new learning and support models that support these basic psychological needs for learners who have been underinvested in. To illustrate all of this, we will walk through case studies from the Lab's work with community colleges working to redesign education to better support high-quality engagement of rural learners, single mother learners, and learners working to build the next phases of their careers through short-term, job-relevant micro-credential pathways. We will share feedback we have received from learners about the impact of new programs and practices that have emerged from this work and from institutional partners about the perspective and practice shifts they have experienced as a result of this consistent application of SDT.

Individual Talk 6D **Education | Designing Motivational Environments for Systems & Language** Longboat Learning

Developing self-determination through a STEM project-based learning with integrated elements of systems thinking after-school program model

John Carlo S. Tuliniao, University of Miami

Massia Bailey, University of Miami

"I am needed here. We need to finish our bridge project. My team needs me." This is the response of Maria, a pseudonym, when asked by her 10th grade teacher why she skipped class in the morning yet attended the "Tulay ng Pag-asa" (Bridge of Hope) after-school program. This study investigates the effect of a STEM Project-Based Learning with Integrated Elements of Systems Thinking Model from the perspective of Self-Determination Theory (SDT) through a qualitative exploratory methodology of the after-school program in a junior high school in Antipolo City, Philippines. We employed the theoretical perspective of SDT to examine student's autonomy, competence and relatedness following the implementation of the program through the analysis of students' and teachers' written reflections and interview responses, and researchers' memos. Current narratives revealed patterns that show different motivations acquired by the student after being exposed to the program. The observed and documented lived-experiences of the participants helped the researchers to understand how the designed program developed self-determination in the students. We argue that the characteristics and nature of the model, as opposed to the traditional interventions, reinforced the student's self-determination and motivation not just in their academic outlook but also in their lived-reality outside the school. Limitations, classroom implications, results and future studies will be discussed.

The influence of autonomy-supportive teaching on EFL students' classroom autonomy: SDT perspective

Fakieh Alrabai, King Khalid University

Based on the principles of self-determination theory (SDT), this two-wave longitudinal experimental intervention examined the actual practicality of certain strategies that have been theoretically acknowledged as having potential positive effect on English as a foreign language (EFL) learner's autonomy. Strategies targeting learners' self-determined learning in the classroom in terms of satisfying learner basic psychological needs (BPNs) of autonomy, competence, and relatedness as well as SDT key concepts, such as learner sense of choice, intrinsic motivation, control over learning, goals and needs, and metacognitive skills, were implemented in a treatment group for 12 weeks. A classroom observation was used to evaluate teachers' autonomy-supportive teaching and a student self-report measure, and an observation were used to assess learners' autonomy. The findings derived out from analyses of variance, covariance and a hierarchical regression revealed that the experimental intervention led to statistically significant increased EFL autonomy for learners in the experimental group. Learner perceived choice, autonomy support, competence, and intrinsic motivation mediated the relationship between teacher autonomy-supportive teaching and learner autonomy; with perceived choice being the strongest predictor of learner autonomy. These

findings acknowledge the vital role of teacher autonomy-supportive teaching in promoting EFL learner autonomy and recommend that, beside satisfying their BPNs, students should always be granted a larger space of freedom of choice, more control over learning, and more involvement in decision-making process.

Motivation to learn a foreign language during the soviet period: The case of specialized foreign language schools in Estonia

Merilyn Meristo, Tallinn University

During the 1960s under the Soviet regime Khrushchev's educational reforms created a paradoxical situation - specialized foreign language classes were opened for gifted students, yet the Party's slogan was the principle of egalitarian education. Those schools became prestigious and highly selective, and for the most part only accessible for children of urban, intellectual and party elite. Language learning was intense, starting in the first grade. In the Middle and High school, certain subjects were taught fully in the target language. Today, in Estonia, it can be seen that many job positions of social, political and economical importance are occupied by these 'special school' alumni. Twenty alumni from 8 different schools have been interviewed to find answers to the following questions: How do the alumni recall their motivation to learn a foreign language during the Soviet occupation, a period with little to no use of a foreign language, and a few opportunities to practice language skills outside of the school environment? How do their experiences differ across the contextual factors: location, temporal factors, language of specialization? The interview questions were guided by Self-Determination Theory aiming to understand the satisfaction of the basic psychological needs. Their motivation to learn a foreign language pivoted on how competence, autonomy and relatedness were supported by their foreign language teachers. Although their sense of autonomy was low, it was enhanced by intellectual eye-opening conversations with their language teachers. Relatedness was supported by their strong sense of community. However, there was a clear distinction in the perception of competence between the learners of English, French and German. Furthermore, competence depended on the location of the school. The findings also highlight the intellectual values, mostly gained from foreign language classes that were often deeper than the usual Soviet education provided, and the systematic study habits these schools offered.

Using SDT to design books to teach foreign language in Uruguay

Aldo Rodriguez, Administracion Nacional de Educacion Publica

Stephen Tonks, Northern Illinois University

Javier Polastian

In this paper, we report on how the educational authorities in Uruguay have been applying self-determination theory in the development of textbooks for teaching foreign languages nationwide and also in other countries. First, we summarize our process and give an overview of the texts we have created in different languages, especially English and French as a foreign language. Then, using a text for teaching Armenian as a foreign language, we give specific examples of how the curriculum supports students' motivation and three psychological needs: autonomy, competence and relatedness. Our most recent project is to develop a new textbook for teaching Armenian as a foreign language (AFL), as there are currently not many texts or curricula for teaching this language as a foreign language in the diaspora. The text will act as an artifact to understand the manifestations of organizational culture, and incorporates motivational processes to facilitate learning in the AFL classroom. More particularly, it aims at studying all the book components which trigger intrinsic motivational processes to promote foreign language learning. This artifact also embodies how this group of authors addresses the main components of the Self-determination Theory and how this approach may affect policy making in teaching AFL within the context the book will be used. Framing the textbooks within this theoretical framework makes students feel autonomously motivated. The activities presented to students promote autonomy and learners have the real opportunity to study AFL making their own choices and constructing knowledge using meaningful scaffolding. Consequently, students feel competent about learning the foreign language as they incorporate a wide array of strategies, feeling more self-efficacious and independent. The situations portrayed in the book are close to the students' so learners feel engaged to study the target language while feeling identified with the characters.

A prospective study of knowledge sharing at work based on self-determination theory

Anne Halvari, University of Oslo; University of South-Eastern Norway

Andreas Ivarsson, Halmstad University

Halgeir Halvari, University of South-Eastern Norway

Anja Olafsen, University of South-Eastern Norway

Bård Solstad

Geoffrey Williams

Knowledge sharing involves the provision or receipt of information, know-how, best practices, lessons learned, and/or feedback about a task, product, and/or procedure in order to develop new skills and competencies at work which can improve individual, group, and/or organizational performances. Based on self-determination theory, the study partners hypothesized that people with more self-determined latent profiles will report more knowledge sharing at work over 18 months than people with less self-determined latent profiles. Participants were 299 dental hygienists who completed a national online survey at baseline and at 18 months. Results of a Latent Profile Analysis revealed that dental hygienists with the most self-determined profile (Profile 2) reported a higher level of knowledge sharing at work at 18 months than dental hygienists in: Profile 1, "the controlled profile," characterized by perceptions of managerial control and relatively high levels of the control orientation—moderate effect size; Profile 3, "the helpless profile," characterized by the impersonal orientation and an absence of the autonomy orientation—large effect size; and Profile 4, "the mixed profile," characterized by both the highest levels of fear of failure and control orientation but also by high levels of autonomy orientation and perceived managerial autonomy support—moderate effect size. Applied implications, particularly around ways to maximize managerial autonomy support and minimize managerial control to promote well-being and performance and reduce ill-being and non-effective functioning, are discussed.

SDT in an academic mobility exchange: Photovoice as a window

April Luehmann, University of Rochester

Merilyn Meristo, Tallinn University

International mobility has become a top priority at universities worldwide. More than students, researchers and academic staff are encouraged to take advantage of available programs in order to collaborate and learn from partnering institutions. This study sheds light on experiences of two researchers' international short-time staff exchange mobilities using novel Photo-Voice methods, Self-Determination Theory (SDT) as an analytic lens, and the following research questions: How was the experience of the first visit to the host university as manifested in photos by the participants? Using SDT as an analytic lens, how do the participants explain their choice of photos? Following the structures of PhotoVoice, while visiting each other's universities, each participant took photos and selected a subset of 30 that reflected a "meaningful" situation, place or people. Six months later, interpretations were authored for each photo. Analyses of these interpretations suggest that the photos reflected "Competence" the most (Using my experience to develop my academic arguments and thinking), followed by "Relatedness" (The visit goes beyond professional relationships, new friendships develop). "Autonomy" was the least captured in the photos (Seeking out what I imagined would be important to the university). Interestingly, some interpretations went beyond the professional position (Competent as a world traveler; This barista got to know me and connected me with others; The time allowed me to visit nearby natural wonders). A few additional categories emerged that could fall under basic psychological needs (e.g., Inspiration, Empathy, Challenges). Academic exchanges were interpreted as meaningful when the participants contributed to their visit and expectations were discussed. Photos carry strong messages that can provide insights into the range of ways an exchange is "meaningful" to an academic. For example, insights can be used by exchange organizers to design experiences that further enhance researchers' sense of autonomy, the category least cited.

Is learning and development the only relevant key to human flourishing?

Hester Nienaber, University of South Africa

Richard McNeill, Jr., Northern Arizona University

Background: Flourishing requires people to apply their competence in organizational strategy execution. Execution is essential to organizational performance. Competence refers to humans' inborn motivational need to master their environment. Competence is generated through learning and development (L&D) opportunities. However, L&D will only be successful if: (a) People deem these opportunities pertinent and consequential in task execution and (b) People are provided the chance to apply their competence. Hence, while organizations spend large amounts of money on L&D, numerous reports detail concurrent unfavorable determinants e.g., occupational stress which hamper human flourishing. In essence neglecting human competence as significant organizational resource. Thus, both human and organizational performance suffers. Goal of the study: As an integral part of a larger study, here, we explored organizational investments in people development linking L&D to organizational strategy. Method: Limited information justified an exploratory approach. Thus, an exploratory online survey collected vast amounts of standardized data according to ethical research principles and from a purposively selected population. The data were descriptively analyzed. Results: The responses met the norms for exploratory surveys and met trustworthy criteria. Most respondents reported their use of L&D in strategy implementation. However, responses indicated an ineffective integration of L&D, strategy, and its link to employees' competence – the essential key to flourishing. These responses confirm the literature: (a) Investments in learning and development (L&D), alone, do not consistently optimally benefit organizations and (b) There are extant and simultaneous unfavorable conditions hampering human flourishing. L&D, alone, does not ensure human flourishing. Conclusions This paper offers actionable information based on proven theory and validated by an exploratory survey. Organizations can use this information to activate human flourishing in pursuit of sustainable organizational success. We recommend further descriptive and explanatory research to enable broader generalizations.

A theoretical framework for understanding feedback-seeking behaviors from a self-determination perspective

Seyyed Babak Alavi, Sharif University of Technology

The importance of feedback-seeking behavior (FSB) in personal development and the effectiveness of performance management in organizational settings has been emphasized in the literature. Despite the importance of FSB in today's organizations, the literature on FSB still needs further theoretical and empirical investigations from different perspectives. Self-Determination Theory (SDT) has considerable potential for filling some crucial gaps in the (FSB) literature. Some key issues are addressed in this presentation, providing a theoretical framework for future investigations. First, the influence mechanism of FSB on performance improvement may be explained by the role of motivational factors introduced by SDT in forming positive reactions to negative feedback and the quality of feedback received by the feedback seeker. This issue is critical in the FSB literature as there is no conclusive evidence on the relationship between FSB and individual work performance. Second, SDT can be used to explain the feedback seekers' subjective well-being (SWB) during the FSB process, which is almost overlooked in the FSB literature. SWB may be endangered during FSB because of stress and fears of being humiliated or frustrated by feedback seeking. Third, motivational regulations proposed in this theory can be used to explain the formation process of FSB motives. Finally, the framework provided in this presentation relates motivational self-regulation mechanisms to the FSB dimensions (e.g., method, sign, type) beyond the popular dimension of FSB frequency. Investigating other dimensions of FSB beyond FSB frequency has been emphasized in this literature, which requires theoretical foundations. The current paper argues that SDT is helpful for understanding individuals' motives for seeking feedback considering such dimensions due to the potential of SDT for analyzing different types of motives within an integrated theoretical framework. Improving the quality of FSB based on other dimensions may help improve feedback-seekers' performance and SWB.

12:05 – 1:05 PM	Rapid Talks 4	
Rapid Talk 4A	Theory & Methods Defining & Advancing BPNT	Biscayne
Unlocking the predictive power of need frustration in video games Nick Ballou, Queen Mary University of London Sebastian Deterding, Queen Mary University of London		

As need frustration—experiences of failure, loneliness, or coercion—matured as separate from need satisfaction within SDT, it emerged as a promising lens for understanding how people interact with video games and other entertainment media. Need frustration may help explain when media use is (de)motivating, and when it undermines wellbeing or leads to disordered play. However, research on game-related need frustration has been hindered by a lack of naturalistic observation: we know little about how need frustration arises in video games, nor the mechanisms through which it may lead to disengagement. This has contributed to a lack of appropriate measures; while there exist prominent scales for need satisfaction in games (e.g., PENS), need frustration in games currently relies on general instruments with unclear content validity for the games domain. In this talk, I describe a series of studies we conducted or are conducting to understand how need frustration manifests in video game play, and to develop a questionnaire that better measures these experiences. First, we conducted interviews with 12 players, who reported that need frustration was a common and impactful experience in games, that it arose in unique ways (e.g., perceptions of unfairness when matched against opponents of very different skill), and that it directly affected ongoing engagement. This qualitative data informed the ongoing development and validation of the Basic Needs in Games (BANG) questionnaire. We are currently assessing the measure's construct validity and ability of need frustration to predict playtime above and beyond need satisfaction, and will have results from multiple validation studies to share in the coming weeks. The talk will finish with opportunities for further research on need frustration in games, and next steps for measure development (e.g., the creation of a short-form version for easier use).

The BPNSFS probably does not validly measure need frustration

Brett Murphy, University of North Carolina at Chapel Hill

Ashley Watts, Vanderbilt University

Zachary Baker, Arizona State University

Brian Don, University of Auckland

Tatum Jolink, University of North Carolina at Chapel Hill

Sara Algoe, University of North Carolina at Chapel Hill

In Basic Psychological Needs Theory (BPNT), the separable constructs of need satisfaction and need frustration are theorized as pivotally related to psychopathology and broader aspects of well-being. The Basic Psychological Need Satisfaction and Frustration Scales (BPNSFS; Chen et al., 2015) have rapidly emerged as a main self-report measure in the BPNT domain, with translated versions available in a wide range of languages and a plethora of versions adapted for specific populations and life contexts. Through (a) an extended conceptual discussion of the BPNSFS and (b) a collection of complementary data analyses in eight samples, we demonstrate that the BPNSFS probably does not validly measure need frustration. Most importantly, we conclude that the ostensible distinction between need frustration and need satisfaction in the BPNSFS is likely primarily a method artifact caused by different item keying directions, given the way the measure currently assesses the intended constructs. If so, then the use of the BPNSFS may be generating misleading conclusions, obstructing sound investigation of current BPNT.

Measuring basic needs in Germany: Validation study of the German version of the work-related basic need satisfaction scale (W-BNS)

Klara C. Grünwald, University of Regensburg

Anja van den Broeck, North West University

Daiana Colledani

Eva Lermer

Rosella Falvo

Matthias F. C. Hudecek, University of Regensburg

Specific Goals. The Work-related Basic Need Satisfaction scale (W-BNS, van den Broeck et al., 2010) is a well-established and valid tool for measuring autonomy, competence and relatedness in an organizational context. Meanwhile, there is a Turkish, a Finnish and an Italian version, yet, there is no German instrument to do valid research. Thus, we intended to develop and validate a German version of the W-BNS. Methods. We aimed to replicate the three-factor structure, the reliability, the discriminant, and the criterion-related validity of the original W-BNS for our German version. Additionally, we tested for cultural measurement invariance (CMI) by comparing the data of this study

with the Dutch (Van den Broeck et al., 2010) and the Italian sample (Colledani et al., 2018). The W-BNS was translated using the translation/back-translation (Brislin, 1970) procedure to develop an accurate German version. Summary of results and conclusions. Based on our preliminary sample (N=302; N>500 intended), we replicated the three-factor structure, Cronbach's α (0.78–0.82) indicates good reliability, and we found the expected correlations regarding job resources to prove discriminant validity. We also replicated criterion-related validity, confirming positive associations between basic needs and job satisfaction, work engagement, life satisfaction, affective organizational commitment, and performance, as well as a negative association with burnout. Additionally, the basic needs were positively correlated to intrinsic motivation and negatively to amotivation. Multi-group comparisons could not establish full CMI for either the Dutch or the Italian versions. However, preliminary results indicated partial CMI with the original Dutch version. The newly developed and validated German version of the W-BNS is a reliable and valid instrument to capture the basic needs in an organizational context in Germany. Validity of the original W-BNS by van den Broeck et al. (2010) could be fully replicated.

A replication study of measuring psychological need satisfaction and thwart in sport: A sample of Taiwanese basketball players

Chiao-Lin Nien, National Taiwan University of Sport

En-Lin Ju, National Taiwan University of Sport

Psychological need satisfaction and thwart were considered mediators of sport motivation and situational factors such as leadership behaviors. Literature of self-determination theory has repeatedly demonstrated its applications of basic psychological need in sport, not only an adaptive pathway but also a maladaptive approach via need thwart. The present study was aimed to replicate Bhavsar et al., (inpress)'s Psychological Need States in Sport-Scale (PNSS-S) on a male Taiwanese basketball players sample. Over 10 different college and high school male basketball teams were involved in this study (n = 240). A battery of questionnaires, including paternalistic leadership behavior, PNSS-S, sdt motivation, well-being and ill-being indicators such subjective well-being, subjective vitality, positive and negative affect, and athletic burn-out scales were conducted on paper or online. Results revealed that adaptive leadership behaviors predicted need satisfaction of autonomy and competence, but controlled-like coach behavior predicted need thwart. Furthermore, basic need satisfaction link to SDT motivation as well well-being indicators such as vitality and subjective well-being, and positive mood. On the other hand, need thwart related to ill-being variables such as burn-out syndrome. Results concluded that PNSS-S not only a validate tool to measure psychological need states, but also in line with theoretical argument of Self-determination theory.

How to foster pro-activity? Testing the effectiveness of an on-line need crafting intervention among college students

Daphne van den Bogaard, University of Ghent

Maarten Vansteenkiste, University of Ghent

Nele Laporte, University of Ghent

Katrijn Brenning, University of Ghent

Bart Soenens, University of Ghent

Student life is an ambivalent period: it entails both opportunities for pro-activity and growth but is also characterized by struggle, self-doubt and increased vulnerability for ill-being. Being aware of one's psychological needs as a college student and taking pro-active action to foster one's needs (i.e. need crafting; Laporte et al., 2021) is a critical yet understudied skill to smoothly navigate through student life, especially in times of distress. The present research aims to test the effectiveness of the student version of 'Life Craft', an online prevention program to help college students in training their need crafting capacities during a distressing period. In addition, we sought to examine under which conditions, for whom and why a need crafting intervention yields benefits. Study 1 (N=374; 78.07% female) involves an intervention and a waiting list condition, with choice being offered with respect to the optional use of WhatsApp support and the pace (1 or 2 weeks) to complete the program. Latent change modelling indicates that LifeCraft contributed to enhanced need crafting, which helped to explain the need- and well-being benefits of the program. Neither the use of WhatsApp support nor the chosen pace of the program systematically moderated the effectiveness of the program. Study 2 (N= 527; 85.01% female) offers a more conservative test of the program effectiveness by comparing both a passive and an active control condition to the experimental condition and by including longer term

follow-up. Within these studies we also take into account the moderating role on program effectiveness of attachment style, self-criticism and dependency. Data collection of study 2 is completed and all analyses will be finished by the time of the conference.

Rapid Talk 4B

SDT & Well-being | Forwarding the Field of Well-being

Canaveral

Self-awareness and personal growth of counselor trainees in experiential training groups: An application of self-determination theory's motivational framework

Rostyslaw Robak, Pace University

Poonam Doshi, Pace University

Internally regulated forms of motivation have been associated with positive outcomes in various domains such as work, health, and parenting (Gagne et al., 2015; Viorel, 2013; Williams et al., 2006; & Ryan & Deci, 2000). However, this line of research in the field of counselor education and training is limited. The purpose of the present study was to examine if counselor trainees' participation in an experiential process group predicted positive outcomes such as personal and interpersonal growth. Specifically, we sought to examine whether intrinsic types of motivation (i.e., intrinsic, identified, and integrated) for participating in such a group predicted increased positive outcomes and lower distress. To measure positive outcomes, we developed a quantitative measure aimed at assessing personal growth outcomes of counselor trainees participating in experiential growth groups. Results of factor analyses identified three factors in this outcome scale: relationship with others, clarification of one's own values and increase in self-awareness (Corey, 2016). Findings of simple regression analyses showed that intrinsic, identified, and integrated forms of motivation individually predicted personal growth. However, multiple regression analyses indicated that integrated form of regulation was the only significant predictor of positive outcome. Finally, we also found that in general, the internally regulated motivations predicted less distress as measured by existential isolation scale. Future research implications for self-determination theory (SDT) researchers in the field of counselor training and counselor education are discussed.

Self-determination and subjective well-being: A scoping review

Sevil Momeni Shabani, T.C İstanbul Kültür University

Introduction:

Life satisfaction, happiness and hope indicate subjective well-being in the past, present and future, and many studies have shown that self-determination theory can be effective in promoting life satisfaction, happiness and hope. The purpose of the research is to examine studies related to the theory of self-determination in promotion of subjective well-being.

Method:

The present study is a scoping review with the framework determined by Arksey and O'Malley (2005) in the field of scoping review. In this study, MESH words and PubMed Search Builder features were employed to prepare the research strategy in the PubMed database, and only clinical trial studies related to the theory of self-determination and subjective well-being were used for the final review. The research strategy is: Autonomy, Personal OR [Self Determination] OR [Free Will] AND subjective well-being" OR [subjective wellbeing] OR ["well-being"] OR ["wellbeing"]. The articles found in the PubMed database were entered into the Endnote software and the rest of the research steps were followed.

Results:

With the first search strategy, 93718 articles about self-determination and with the second search strategy, 4304 articles about subjective well-being, and after combining the two strategies and preparing the final strategy, 86 articles for self-determination and mental well-being were found in the database. The final articles were reviewed based on the inclusion and exclusion criteria and their full text. These articles are mostly used in social environments to get better communication with others and in schools for academic progress and in sports environments to get top ranks and in the workplace for better career success and then to promote subjective well-being and happiness.

Conclusion:

Although improving subjective well-being based on self-determination theory can be seen in studies, using this theory to improve subjective well-being requires more and more detailed studies.

Self-efficacy as a mediator of the relationship between basic psychological needs and life satisfaction in Chinese university freshmen

Xin Rong, University College London

Background: According to self-determination theory, people have three basic psychological needs: competence, autonomy, and relatedness. In recent research, these three needs have been demonstrated to predict life satisfaction via self-efficacy. However, the studies were conducted in western contexts or with older age groups. It remains to be determined whether such a conclusion can be generalised to young adults in eastern cultures, especially considering the overall lower autonomy satisfaction in collectivist cultures. **Aims:** The present study aimed to further explore the relationship between basic psychological needs and life satisfaction in a population of Chinese university students. Two research questions were proposed. First, whether self-efficacy is a mediator of this relationship. Secondly, if the mediating role exists, which need is the strongest predictor of self-efficacy? **Methods:** Data were collected from 165 Chinese first-year university students through an online questionnaire. Basic Psychological Needs-general, College Self-efficacy Inventory, and Satisfaction with Life Scale measured each variable. Structural equation modelling was established to examine the relationship of the variables. **Results:** Self-efficacy mediated the relationship between two basic psychological needs (competence and relatedness) and life satisfaction. The need for autonomy did not predict self-efficacy in this population. In terms of the predictive power, competence was a stronger predictor of self-efficacy than relatedness. **Conclusion:** The current study partially aligned with the existing literature that basic psychological needs and self-efficacy play an influential role in the prediction of life satisfaction. It should be acknowledged that self-determination theory may demonstrate culture- and age-related variation concerning autonomy satisfaction.

Reconciling two eudaemonic perspectives on wellbeing

Jason Payne, University of Toronto

Ilrich Schimmack, University of Toronto

Eudaemonic well-being has been predominantly conceptualized and measured by researchers using Self-Determination Theory (SDT) or Psychological Well-being (PWB) scales. However, such well-being research has been siloed where these eudemonic perspectives are studied in isolation. This lack of translational research is particularly salient given that the Self-Determination Theory factors of Autonomy, Competence, and Relatedness seem at face to be highly related to Psychological well-being factors of Autonomy, Environmental Mastery, and Positive Relations with Others. We hypothesize that these sets of eudemonic factors may highly overlap, partially overlap, or be largely distinct. However, the direct empirical comparison of these perspectives has not been conducted in the literature. Self-report data were collected in two independent datasets (N = 500, and N = 750). Ryff's 42-item Psychological Well-being Scale and Chen and colleagues basic Psychological Need Satisfaction and Frustration Scale were used. Confirmatory Factor Analysis was employed to mathematically disentangle item variance from Halo and Acquiescence shared-method response bias influence. Big Five Personality trait influence was also controlled for at the factor level. These results suggest that Relatedness and Positive Relations with Others largely measure the same underlying factor. Competence, however, largely overlaps with all Psychological Well-being factors other than Autonomy and Positive Relations. The two measures of Autonomy, on the other hand, seem to capture two distinct factors. SDT's Autonomy items seem to capture bodily autonomy whereas PWB Autonomy items focus more on autonomy from the influence of other people. These empirical findings are the first to suggest that PWB measures may be credibly explained under the SDT's theoretical framework. This work represents a critical step in reconciling otherwise disparate eudemonic perspectives. Further implications on the psychometric measurement of the PWB and SDT scales will also be discussed.

Rapid Talk 4C

Special Topics | Motivational Differences Across Life Domains

Peninsula 1-4

Authenticity, need satisfaction and motivation: Directions for counselor trainees and counselor educators

Poonam Doshi, Pace University

Rostyslaw Robak, Pace University

Authenticity feelings have been linked to increased personal outcomes and well-being (Cha et. al, 2010). In the work context, those who experienced feeling authentic reported lower burnout and higher work engagement (Van den Bosch & Taris, 2018). In the health setting, a work climate characterized with authenticity was associated with lower resource depletion of health professionals (Grandey et al., 2011). Research suggests that individuals' motivation influences this relationship (Van den Bosch & Taris, 2018). One purpose of our study was to investigate the relationship among these variables in the domain of counselor education field. The second purpose was to investigate, using self-determination theory (SDT) framework if types of motivation and basic psychological needs (satisfaction/frustration) explain the underlying the relationship between authentic feelings and well-being in the counselor education domain. In the present study, we conducted an experiential process group for counseling students in training within the Masters' program in mental health counseling during the group dynamics course (n=58). The group consisted of 6 sessions of both structured and unstructured activities. The results of a repeated measures design analyses show associations between authenticity, basic need satisfaction and motivation for being in the group. Findings of this study underscore the importance of authentic living for basic needs satisfaction and being motivated for participants of this experiential process group. Results also suggest that self-alienation and accepting external influences were linked with lower need satisfaction and decreased motivation among participants of an experiential group. We discuss implications for future researchers in the field of counselor education.

Examining motivation in distance education using self-determination theory: A mixed-methods study of undergraduate students in Mozambican universities

Simao Elias Luis, University of Rochester

Due to the COVID-19 pandemic and the advent of educational technologies, Mozambican universities have increasingly adopted online distance education, but the students' motivational orientations remain largely unknown. Most research into motivation in online distance education has tended to argue that online learners are primarily motivated by intrinsic factors. Hence, the design of learning environments should promote optimal learner motivation. However, these approaches largely ignore the complex and multifaceted nature of students' motivation in online distance education. Research into motivation in online distance education has been extensively conducted in North America, Europe, and Asia. However, such research in former Portuguese colonies of Africa is still underdeveloped. Using self-determination theory (SDT) as a framework, the present study explores the nature of motivation to learn in online distance education in Mozambique, an under-researched context. Using a convergent mixed-methods design, a total of hundred and seventeen student teachers (N=117, males 74 and females 43) from two higher education institutions completed an online situational motivational scale developed by Guay, Vallerand, and Blanchard (2000), which operationalizes the variables of the SDT continuum: amotivation, external regulation, controlled regulation, and intrinsic motivation. An open-ended question was developed for each variable. The findings show higher intrinsic and extrinsic motivation levels among student teachers, demonstrating situated, complex, and multifaceted motivational orientations affected by demographic variables, including gender, education level, and work experience. Notably, females reported higher levels of intrinsic and extrinsic motivation than males. These findings have significant pedagogical and theoretical implications. With intrinsic and extrinsic motivation as explanatory powers on motivation in online distance education, educators can design relevant learning activities that meet student teachers' needs, aspirations, and interests. Furthermore, with awareness of student motivation complexity, educators can adopt communication strategies that foster students' complex motivational orientations. Keywords: Motivation; self-determination theory; online distance education; intrinsic; extrinsic

Public service and prosocial motivation - crowded out or crowded in? The role of SDT in reconciling two divergent themes in public service motivation

Adina Dudau, University of Glasgow

Georgios Kominis, University of Glasgow

Roxana Corduneau, Warwick University

The relationship between extrinsic monetary rewards and different forms of intrinsic motivation such as prosocial motivation, altruism, public service motivation (PSM) and sense of community responsibility (SOC-R), have attracted

growing attention from public management scholars in the past few decades, particularly in light of an increased performance management pressure in public sector organisations (Burgess and Rato, 2003; Weibel et al, 2010), as well as an increased number of government initiatives for community empowerment and public service coproduction (Voorberg et al., 2017). The questions of how to effectively motivate professionals through financial rewards, and how to encourage prosocial behaviour, however, are still largely left unanswered by studies yielding mixed findings and not taking account of the key socio-contextual and individual-level factors affecting the motivation process. Adopting an inter-disciplinary approach, the aim of this conceptual paper is to help reconcile the inconsistent state of the literature and propose moderating factors affecting the relationship between extrinsic incentives and the motivation to contribute to the public good for public service professionals. Indeed, drawing on motivation crowding theory (Frey and Jegen, 1999; 2001) and self-determination theory (Deci and Ryan, 1985), we propose that extrinsic rewards are not detrimental to intrinsic motivation, provided that they support individuals' feelings of autonomy, self-esteem, competence, relatedness and beneficence. We provide a framework for empirical work and further development in the future.

Examining motivational profiles of the pediatric obesity treatment patients

Bryan Armstead, University of Georgia

Yangyan Deng, National Institutes of Health

Taewoo Kim, University of Georgia

YongJu Hwang, University of Georgia

Nicole Kirk, University of Georgia

Sami Yli-Piipari, University of Georgia

This study examined motivational profiles of pediatric obesity treatment patients. A sample of 72 obese children (aged 11-16 -years) participated in the experimental group of the 12-week randomized controlled lifestyle intervention consisting of exercise (dose 24hrs), family nutrition education (dose 6hrs), and self-determination centered empowerment during years 2014-2022. Latent profile analysis was used to identify motivational profiles. Variables included gender (covariate), Δ BMI (residual changes score), intrinsic motivation (INT) and integrated (INTEG), identified (ID), introjected (INTRO), extrinsic regulation (EXT), and amotivation (AM). Analyses revealed three profiles: "Self-Determined (n= 32)," "Controlled (n=14)," and "Highly Motivated (n=26)." Participants in the Self-Determined group had the highest levels of self-determined motivation (INT, INTEG, ID) and the lowest levels of EX and AM. These participants' Δ BMI was 55% greater than those in the smallest weight loss group (Controlled) who had the lowest levels of self-determined motivation and very high EX. Finally, the Highly Motivated group, were participants with high self-determined motivation, INTRO, and EX. Highly Motivated participants' Δ BMI was 20% higher than the Controlled but 30% lower than Self-Determined participants. There were no gender differences between these groups. It can be concluded that participants' motivational profiles impacted the success of the pediatric obesity treatment program.

Rapid Talk 4D **Development & Parenting | Parenting: Observational, Experimental & Longitudinal Methods**

Peninsula 5-7

The role of maternal warmth in cultural variations in the relations between maternal guilt-induction and young adults' psychological needs

Gulsen Guldeste, Norwegian University of Science and Technology

Athanasios Mouratidis, National and Kapodistrian University of Athens

Bart Soenens, Ghent University

Jolene Van der Kaap-Deeder, Norwegian University of Science and Technology

There is an ongoing debate on the universality of the detrimental effects of parental guilt-induction in offspring's adaptation. This vignette-based experimental study aimed to contribute to this debate by investigating culturally diverse young adults' appraisals of and responses to parental guilt-induction, and whether parental warmth plays a role herein. We randomly assigned participants from Turkey (N = 103; Mage = 20.91; 73% female) and Greece (N = 161; Mage = 21.42; 80% female) to one of three vignettes depicting maternal autonomy support, guilt-induction with

warmth or guilt-induction without warmth conditions. In terms of appraisals, participants in the autonomy support condition perceived higher warmth and autonomy support, and less guilt-induction compared to the other conditions (which did not differ). A multivariate analysis showed that vignette condition and participants' country had significant effects and interacted in the prediction of the need-related experiences. Specifically, participants' country moderated between-vignette effects such that only Turkish participants reported higher autonomy satisfaction as well as higher competence frustration in response to guilt-induction in the presence (versus absence) of warmth. Overall, the current findings extend our understanding of the role of culture in the effects of parental guilt-induction by suggesting parental warmth as an important mechanism. We are currently conducting the same study among German young adults, of which the results will also be presented at the conference (enabling a comparison between Turkish, Greek, and German young adults' appraisals of and responses to parenting).

High quality listening and dyadic well-being: the role of basic need satisfaction

Wilbert Law, The Education University of Hong Kong

Netta Weinstein, University of Reading

Guy Itzchakov, University of Haifa

High-quality listening including behaviors that convey attention, care, and understanding are associated with better social connection and self-expression (Carl Rogers, 1980; Weinstein et al., 2022). Despite such importance, not much empirical attention was put on this matter particularly outside of Western cultures. In the current project, we collected data from parent-child dyads (Study 1) and romantic couples (Study 2) from Hong Kong (Eastern and collectivistic culture) to examine how both listening and being listened could contribute to basic psychological need satisfaction in Hong Kong. In turn, how would this affect outcomes such as personal well-being and couple satisfaction. Results from Study 1 showed that both parental listening and being listened by their child were associated with higher basic need satisfaction in the relationship (autonomy and relatedness), and this further associated with better psychological well-being. Similar results were found on the children side such that children listening and being listened by their parents were associated with higher basic need satisfaction in the relationship (all three basic needs) and, in turn, predicted better psychological well-being. In Study 2, we found that both listening to partner and being listened by partner were predictive of higher basic need satisfaction in the relationship (all three needs), and this further predicted higher couple satisfaction. The current results have theoretical implications on the literature of basic need satisfaction and listening. In addition, they have practical implications for interventions that target to improve personal and social well-being.

A longitudinal examination of mothers' observed reminiscing style and children's emotion regulation

Deniz Çetin, Norwegian University of Science and Technology

Silje Steinsbekk, Norwegian University of Science and Technology

Jolene Van der Kaap-Deeder, Norwegian University of Science and Technology

The way parents talk about emotional memories with their child relates to the child's socioemotional development. Yet, only a few studies have focused on children's emotion regulation, finding inconsistent results. Moreover, although the importance of child-effects is well-recognized in the broader parenting literature, no research examined the predictive role of children's emotion regulation in parents' reminiscing style. In this longitudinal study, we examined the relation between mothers' observed provision of autonomy support and structure during parent-child reminiscing and children's emotion regulation. At T1, 87 mothers and children (M_{age} = 4.62 years, SD = 0.86; 47.2% female) participated and they were followed up about seven months later. At both timepoints, mothers and children talked about a shared positive and a negative memory and the mother filled out the Emotion Regulation Checklist. We coded mothers' speech for provision of autonomy support and structure (i.e., elaboration, positive evaluation, and negative evaluation). Results showed that while mothers' autonomy support, elaboration, and negative evaluation was stable across time, their use of positive evaluation decreased. Also, mothers used more elaboration and positive evaluation when talking about positive (vs. negative) memories. In terms of the relation between mothers' reminiscing style and children's emotion regulation, mothers' autonomy support, elaboration, and negative evaluation at T1 were unrelated to children's emotion regulation at T2. Further, positive evaluation during negative memory conversations at T1 related to more adaptive emotion regulation in the child at T2. Examining child-effects, we found that children's emotional lability at T1 related negatively to mothers' level of autonomy support during reminiscing regarding positive

memories at T2. The current findings indicate that especially positive evaluation could benefit the child's emotion regulation, while child emotional lability might hinder mothers in supporting their child's volitional functioning.

1:50 – 2:50 PM

Keynotes 6

Keynote 6A

Peninsula 1-4

The role of passion in psychological resilience

Robert Vallerand, Université du Québec à Montréal

This talk will focus on the construct of passion and recent research on its role in psychological resilience. It will show how one type of passion (Harmonious Passion) may foster resilience while another (Obsessive Passion) may undermine it

Fulfilling the promise of SDT: A journey from theory to practical application

Susan Fowler, CEO and founder of Mojo Moments, University of San Diego

How would the world of work be transformed if SDT principles were integrated into everyday leadership behaviors? What if organizations grasped the business case for optimal motivation at work? How could applying SDT-based leadership capacities facilitate those who joined the Great Resignation only to experience the Great Regret and end up as quiet quitters?

For decades, Susan has dedicated herself to honoring SDT research while endeavoring to get to the other side of complexity to make good science applicable to leaders at all levels.

In her keynote, Susan will

- Highlight the challenges and thrills of applying SDT principles

in workplaces intent on driving for results and manipulating people's motivation based on outdated command-and-control leadership competencies.

- Reveal learning journeys focused on the Spectrum of Motivation and leadership capacities that encourage choice, deepen connection, and build competence.
- Share stories of leaders who have embraced a new leadership imperative based on SDT principles—and their astonishment at how elegantly it results in both flourishing and workplace effectiveness.
- Susan celebrates how your research is helping organizations unravel the mystery of human nature and release the vitality of a workforce that no longer needs to be held captive by antiquated leader-centric perceptions of leadership.

Keynote 6B

Peninsula 5-7

Mindfulness: An inner resource to support basic psychological need satisfaction

Kirk Warren Brown, Carnegie Mellon University

Conceptualized as a receptive awareness of and attention to present moment events and experiences, mindfulness is regarded by SDT as a critical psychological factor that facilitates the fulfilment of basic psychological needs for autonomy, relatedness, and competence. In this talk, I will review research that has shown that trait, state, and trained mindfulness are related to more autonomous functioning, greater social well-being, and increased felt competence and task performance. Also discussed will be proposed mechanisms that may explain those salutary effects, including a shift from automatic processing of experience to conscious attention regulation, and observation of experience without egoic identification. Also discussed will be the importance of intervention and other experimental research to examine the role of specific mindfulness practices (e.g., focused attention, open monitoring) in promoting need satisfaction, and to investigate the interaction between mindfulness and need supportive vs. need frustrating environments.

Autonomy support across domains of socialization

Geneviève Mageau, University of Montreal

Autonomy support is a key ingredient of high-quality parenting and other hierarchical relationships. Yet, how authority figures can support children's autonomy³⁴ that is, their sense of volition³⁴ in various daily situations remains unclear: the operationalization of autonomy support often varies across studies. In an effort to further our understanding of autonomy-supportive (AS) behaviors, I will highlight their common features (i.e., empathic, informational, and supportive of active participation) and their variability. Importantly, I will propose that AS behaviors may have varied across studies because volition is derived from two different processes (i.e., intrinsic motivation and internalization) and that different AS behaviors may be needed to effectively support the volitional functioning that originates from each of these processes.

Guided by Grusec and Davidov (2010)'s Domains-of- socialization framework, I will further argue that intrinsic motivation and internalization are likely to operate differently across domains of socialization (i.e., reciprocity, guided learning, discipline, protection, and group participation), which could account for the variability of AS behaviors. I will then present the different parenting behaviors that have been linked to autonomy-related outcomes (e.g., autonomous motivation) in each of these domains (Mageau & Joussemet, 2023), including those of the How-to Parenting Program (Joussemet et al., 2014, 2018; Mageau et al., 2022, 2022).

Finally, I will present a new coding scheme (Labelle et al., in revision), designed to test some of the hypotheses derived from this domain-specific approach to socialization and autonomy support. In this coding scheme, we more clearly differentiate behaviors that are uniquely autonomy-supportive or uniquely structuring from those that may be both, depending on the domain of socialization. Our first set of findings reveals that these different sets of behaviors have unique correlates in the guided learning domain, which suggests that investigating them separately could be a fruitful research avenue to clarify how parents can support their children's volitional functioning across daily socialization challenges.

2:55 – 4:10 PM

Individual Talks 7

Individual Talk 7A SDT & Well-being | Need Frustration & Pathology

Peninsula 1-4

Basic psychological needs as an explanation of body image and eating pathways to adolescent adjustment: A prospective study testing an integrated self-determination theory model

Shi Yu, Chinese University of Hong Kong,
Ziyi (Zoey) He, China Europe International Business School
Tianxiang Cui
Jinbo He

Body image and eating dysregulations have important influences on adolescents' adjustment. Based on self-determination theory, the current research examines adolescents' experiences related to basic psychological needs as explanations for the development of body image and eating dysregulations. Self-determination theory proposes that when the basic psychological needs for autonomy, relatedness, and competence are frustrated vs. satisfied, adolescents develop need substitutes (e.g., fixation on body image goals) and compensatory behaviors (e.g., rigid eating or loss of control in eating). Thus, body image disturbances and eating dysregulations may be seen as dual pathways leading from need frustration to maladjustment. Furthermore, self-determination theory proposes that adolescents' need experiences are explained by autonomy-supportive vs. controlling parenting. The objective of this study is to conduct the first longitudinal research that systematically examines these propositions. Prospective data (N = 2566, 54.05% female ; age M = 13.80, SD = 1.56 at baseline) were collected from Chinese adolescents at four time points from 2019 to 2021. Results from panel models show that parental autonomy support vs. psychological control predicted changes in basic psychological needs satisfaction vs. frustration, which subsequently predicted changes in body image inflexibility, which then predicted changes in eating dysregulation and psychological adjustment. The "bright side" of need experiences (i.e., need support and satisfaction) is found to have similarly important effects on the development of body image and eating dysregulation as the "dark side" (i.e., need thwarting and frustration). Overall, the current findings support body image concerns as a need substitute pathway leading to adolescents' compensatory eating and maladjustment.

Stress, traumatization and psychopathology seen in terms of need thwarting and introjected internalization: A SDT perspective on the foundations of psychiatry

Ib Ravn, Aarhus University

In much current research on stress, psychological trauma and psychopathology there is a converging interest in the role of the stress response in engendering trauma, emotional dysregulation and mental illness. Both the acute stressors known from PTSD and the persistent, low-level stressors involved in complex PTSD may create a stress response that is not properly down-regulated. This leaves the person in a permanent state of high arousal and hyper-vigilance, common characteristics of many psychiatric disorders. Such stressors may be seen as examples of the challenges that confront everyone: trivial, optimal or overwhelming. Optimal challenges invite learning and development; overwhelming challenges may lead to trauma and mental ill-being. From the perspective of Self-Determination Theory (SDT), flourishing and resilience derive from the satisfaction of basic psychological needs, as well as from the integrative internalization of experiences and challenges to the self. The overwhelming challenges involved in trauma and psychopathology may be interpreted as experiences that frustrate or thwart psychological needs and thus fail to integrate to the self. If internalized, such experiences enter an individual's psychic make-up as introjects. They remain "outside" of the self, pushing it about through guilt, shame, ego-involvement and pride, producing anguish and mental pain. This talk brings together SDT with the stress—>traumatization—>psychopathology research literature and suggests that SDT's analysis of early-life psychological need thwarting (e.g., emotional, physical and sexual abuse) and introjected internalization (e.g., controlling parenting) offers clues to the etiology of psychopathology that is so often ignored by mainstream psychiatry. Indeed, the discussion of transdiagnostic factors that several SDT researchers have identified in emotion dysregulation may be extended to many other aspects of psychopathology. Thus, the SDT position may herald a major change in the very foundations of psychiatric theorizing, including radically different meta-psychological assumptions about the nature of psychological health and illness.

A 3-year longitudinal examination of weight change in young adults: The role of need frustration

Lara LaCaille, University of Minnesota Duluth
Rick LaCaille, University of Minnesota Duluth
Stephanie Hooker, Health Partners Institute
Dakota Leget, University of Minnesota Duluth

Emerging adulthood may be a period of vulnerability for unhealthy weight change. College students appear to be at particular risk, with meta-analytic findings indicating 60% of students gain weight their freshman year. Research identifying theory-driven mechanisms to explain this phenomenon is sparse. From a self-determination theory (SDT) perspective, it seems likely that changes in need satisfaction and frustration that occur during the transition to college have potential for predicting weight regulation. Although cross-sectional data indicate that need satisfaction and frustration are related to weight changes, there is limited longitudinal data examining how need fulfillment relates to weight changes and the potential moderating role of gender. In this longitudinal study, 287 college freshmen (56% female, MAge=18.1 years; MBMI=23.3 kg/m²) completed a series of questionnaires assessing weight and need satisfaction and frustration at five time points over 3 years (T1=August 2019, T2=November 2019, T3=April 2020, T4=April 2021, T5=April 2022; completion rate per time point 51-91%). Multilevel modeling indicated that on average, students gained 8.1 lbs over 3 yrs ($p < .0001$). Changes in relatedness satisfaction and frustration were not related to weight change. However, increases in competence frustration were significantly associated with weight increases at each time point ($p = .04$). There was a significant interaction between males and females on autonomy frustration in associated weight changes ($p = .03$). For males, every one point increase in autonomy frustration was significantly associated with an increase of 0.92 lbs ($p = .03$), but not so for females ($b = -.21$, $p = .19$). These findings indicate that interventions targeting reduction of competence and autonomy frustration may be particularly important during the transitional period of starting college. Other variables, including life aspirations, regulatory approach to weight regulation, and health related behaviors (eating, physical activity) will also be discussed.

People might use alcohol to compensate for basic psychological need frustration

James Conigrave, Australian Catholic University

Emma Bradshaw, Australian Catholic University

Richard Ryan, Australian Catholic University

Purpose Alcohol is a major cause of death and disease globally. Those who are most disadvantaged in society are often those most at-risk from drinking. For example, Indigenous peoples colonized by Western powers tend to be at greater risk from drinking than others. Perhaps alcohol consumption is used by some to facilitate temporary experiences of self-determination: Inhibition caused by intoxication might lend itself to curiosity and intrinsic motivation, it might facilitate connection with others, and drinking might make people feel competent. We hypothesized that people who feel need satisfied while drinking would consume more alcohol than others. Further, we hypothesized that the link between experiencing alcohol as need-satisfying and drinking more would be strongest among those with frustrated basic psychological needs. Methods We performed two cross-sectional surveys: A cross-sectional survey of Indigenous Australians (aged 16 years or older) living in two South Australian communities (stratified by age, gender and SES), and a representative survey of American adults (stratified by age, gender, and region). Correlations and linear regressions were used to examine the links between alcohol consumption and feeling need satisfied while drinking. Results In our sample of Indigenous Australians, reporting need-satisfaction while drinking was linked to spending more money on alcohol ($r = .25$), drinking more alcohol ($r = .23$), and experiencing more frequent symptoms of dependence ($r = .22$). Controlling for participant demographics, for each standard deviation increase in need-satisfaction from drinking the number of standard drinks consumed per day increased by an average of 61.72% [95% CI 38.77, 88.45]. Similarly in our sample of American adults, need-satisfaction from drinking was strongly linked to having a higher AUDIT score ($r = .59$). The link between finding alcohol need-satisfying and AUDIT score was highest among those with need-frustration. Conclusions Feeling need satisfaction while drinking alcohol is linked with risky drinking, especially among those with frustrated needs. If the causal ordering is as theorised, then improving need-satisfaction among marginalised peoples might help reduce risky drinking.

Individual Talk 7B **Special Topics** | Social Issues & Policy

Peninsula 5-7

Utilization of SDT for innovative agriculture extension service in developing countries

Jiro Aikawa, Japan International Cooperation Agency (JICA)

Nobuo Sayanagi, College of Yamanashi Eiwa

Akiko Fukuda, Japan International Cooperation Agency (JICA)

An agricultural extension approach that utilises SDT has been implemented and established in Kenya. Livelihoods were noticeably improved through increased farmers' incomes. Subsequently, the Japanese Government pledged at the African Development Conference to develop SHEP within Africa. Since then, it is now being deployed in 28 African countries. Meanwhile, in 2019, the Government of Japan declared that it will contribute to improving the livelihoods of one million small-scale farmers worldwide by utilising the SHEP approach. SDT is taught as a mandatory subject in SHEP approach training for administrators and extension workers in each country, which also includes an exercise in creating a mock project using SDT. Participants from each country who have received training are practising SDT-based agricultural extension to farmers in the field. In Latin America, in particular, farmers are taught about SDT itself, and that breaking away from external dependence will lead to improved farming and, ultimately, improved livelihoods. As a result, the farmers' awareness of SDT has changed dramatically. Interviews with trainees reveal how SDT contributes to effective agricultural extension practice.

Self-determination theory and social work values

Rachel Kirzner, Stockton University

Marianne Miserandino, Arcadia University

Social work researchers are increasingly incorporating Self-determination Theory (SDT) into program planning and evaluation. We compare the core tenets of SDT to values found within the National Association of Social Workers Code of Ethics, and find that there is significant overlap between SDT and social work values. Areas of congruence include autonomy, relatedness, and the importance of human relationships. There are some concepts within SDT that need special consideration when used by social workers, in particular competence and motivation. These constructs have been used to support narratives of individual responsibility in the face of problems caused by societal structures. Further, the theory's traditional framing of context has not explicitly highlighted social justice. SDT has been shown to

be an effective strategy in supporting behavioral change. Social work researchers must be careful to include structural factors such as poverty and discrimination when applying SDT to planning and evaluating social service programs. With these considerations, we suggest that SDT can be a powerful tool for planning and evaluation of social interventions. As part of the SDT Conference presentation, we will share information from focus groups with a low-income population that highlight the importance of including a social justice approach when applying SDT concepts. The information in this presentation will be especially relevant for social work researchers and practitioners, and also for those working on multidisciplinary teams or with low-income and marginalized populations.

Evaluating a programme called 'Noise Solution': Exploring digital music mentoring, where BPN are supported via a cloud-based platform, that also evaluates well-being change

Simon Glenister, Noise Solution

Noise Solution provide 1:1 SDT informed music-mentoring to around 200 young people in the UK a year, often at a point of crisis. These points of crisis present as emotional based school avoidance, anxiety, depression, neuro diversity and emotional and behavioural challenges, often in combination. In this presentation, Simon Glenister, CEO and founder, discusses this work through the lens of his recent chapter authored for Oxford University Press' Music for Inclusion and Healing in Schools and Beyond: Hip Hop, Techno, Grime, and More. Noise Solution are considered to be at the forefront of digital youth work and additionally, impact capture and analysis of well-being. In 2021-2, we were listed in the NatWest Social Enterprise index as a top 100 Uk Social Enterprise and have won national awards for impact and analysis from the Royal Society For Public Health and Price Water House Cooper. A significant part of our work is enabling young people to capture and share weekly highlights of their music mentoring journey including videoed reflections of their experience from every session. This private interactive 'feed' is automatically shared securely every week with family and key workers, to facilitate relatedness. That platform also enables the capture and automatic analyses each participants levels of subjective well-being (using a nationally benchmarkable UK Well-being scale). In this way we have, within the same platform, population level well-being data we can compare against national data sets; automatic statistical analysis for statistical significance and range of change of well-being alongside case studies for every data point (or person!) where they create their own case study of their experience, co-produced with family and key workers. The talk will discuss results and how we are also now instituting audio to text transcription sentiment and linguistic analysis and AI approaches to live well-being analysis.

Individual Talk 7C **Education | Blended Learning**

Biscayne

Examining students' self-regulatory behaviors in a translation SPOC

Karen Chung-chien Chang, National Taipei University

In the past three years, COVID-19 has impacted the entire world and led to many changes. In Taiwan (as well as many other countries), teachers have been challenged to expand their teaching approaches. Synchronously-taught online courses and blended/hybrid learning have both become norms in the trend of emergency remote teaching brought by the COVID-19 pandemic. Students have also experienced the challenges and growth in the wake of these changes. At present, facing the arrival of the post-COVID era, many universities in Taiwan have started to explore a variety of course formats. Small Private Online Courses (SPOCs) takes a similar format as blended/hybrid teaching and learning, allowing instructors to upload visual and audio teaching materials onto the learning management systems (LMSs) of their schools. To optimize their students' learning outcomes, the instructors in SPOCs are encouraged to make use of different learning activities to interact with their students, so the effects of online learning can be enhanced or elevated. This study reported the implementation results of a translation course delivered in the SPOC format. A total of 38 students was enrolled in this SPOC course, and their performances were analyzed in two aspects. The first aspect was their self-regulatory behaviors in accessing and learning from the instructor-taped lectures, and the second aspect focused on the students' assignment performances (their learning outcomes). Three data analysis tools were employed: the students' learning progresses retrieved from the university's LMS, a learning questionnaire (LSRQ), and an interview. The findings indicated the students were highly motivated and demonstrated strong self-regulations in translation skill acquisition and assignment performance. The course materials uploaded onto the LMS offered the students high flexibility in pacing their own learning and strengthening their learning outcomes.

Student motivation in HyFlex learning environments

Lakshmy Mohandas, Purdue University

Leslie Miller, Purdue University

HyFlex learning models have gained popularity as a result of the COVID-19 pandemic. Studies show the post-pandemic importance of blended learning models like HyFlex is believed to potentially improve higher education for years to come. Self-Determination Theory (SDT) has shown to optimize student learning in traditional and face-to-face settings (Ryan & Deci, 2017, 2020), but not yet in online or technology-mediated settings (Chiu, 2021). Further, articles published in Harvard Business Publishing and The Chronicle of Higher Education highlight that classrooms are unlikely to return to the pre-COVID-19 instructional delivery model as this shift in higher education enabling technological competencies inside classrooms have reset students' expectations (McMurtrie, 2020a, 2020b). Ryan and Deci, in their recent article highlighted that "future SDT research will no doubt be looking more closely at how educational media, e-learning, and remote classrooms, and other opportunities afforded by technology can be successfully created to motivate engagement and learning" (Ryan & Deci, 2020, p. 8). Through this presentation, we will be discussing the relationship between students' self-determined motivation and their choice of participation (remote/ face-to-face) in a HyFlex design thinking course. In the course under study, students' have the flexibility to join each class meeting synchronously remote or face-to-face (Mentzer & Mohandas, 2022). Student's choice of participation was collected in the form of attendance of their chosen modality, and self-determined motivation data was collected as an end-of-semester survey response. A Multivariate Analysis of Variance (MANOVA) was employed in the study. As such, the current study extends SDT research by examining student motivation in an autonomous and technology-mediated learning environment.

Coach learning: The influence of basic need satisfaction and motivation on engagement in training sessions

Jody Langdon, Georgia Southern University

As a result of COVID-19, coach developers have found that both virtual and in-person coach training sessions can be valuable in different ways. To further examine how these virtual and in-person coach training sessions impacted coaches, the current study examined how basic need satisfaction and motivation influenced engagement in a sample of lacrosse coaches. Collected in spring 2021 and spring 2022, 774 coaches participated in online (N=676) or in-person (N=98) training sessions and completed a survey measuring basic need satisfaction and thwarting, motivation, and engagement. Before running regressions, several one-way ANOVAs were run to determine potential differences in study variables between the in-person and virtual participants. The analysis revealed significant differences in relatedness satisfaction, relatedness frustration, emotional engagement, and agentic engagement. Therefore, regression models for emotional and agentic engagement were run separately for virtual and in-person participants. The regressions revealed that relatedness satisfaction, autonomy satisfaction, and amotivation were predictors of behavioral engagement (10.9% of variance explained (VE)). For in-person participants, competence satisfaction predicted emotional engagement (25% VE), while virtual participants' emotional engagement was predicted by autonomy satisfaction, relatedness satisfaction, and relatedness frustration (17.6% VE). Agentic engagement for in-person participants was predicted by autonomy satisfaction (24.2% VE) while autonomy satisfaction and relatedness satisfaction were predictors of virtual participants' agentic engagement (11.7% VE). Lastly, autonomy satisfaction and relatedness satisfaction predicted cognitive engagement (8% VE). Since supporting the coaches' basic needs increased the likelihood that they would be more behaviorally, emotionally, cognitively, and agentially engaged, future research should evaluate how basic needs can be satisfied in various training formats.

Motivation and metacognition: What drives learning strategies in undergraduate kinesiology students?

Anna Brady, Georgia Southern University

Jody Langdon, Georgia Southern University

Diana Botnaru

Metacognitive skills are crucial for kinesiology students to be successful in their classes and careers. In the education literature, it is common to see metacognition measured via perceptions of students' deep and surface learning approaches. The purpose of this study was to examine the influence of basic psychological need satisfaction and

motivation on students' use of deep and surface learning approaches across kinesiology courses. This study used a survey consisting of demographic questions and three self-report questionnaires assessing basic need satisfaction, motivation, and deep and surface learning approaches. The survey was administered via Qualtrics at the end of two semesters (fall 2020 and spring 2021). The participants consisted of 1125 undergraduate kinesiology students (81.9% female, 55.3% white, 94.8% non-Hispanic) at a midsize university in the southeastern part of the United States. Path modeling showed that autonomy, competence, relatedness, volition, and internal perceived locus of causality predicted intrinsic motivation, identified regulation, introjected regulation, and external regulation via various pathways. Further, external regulation and identified regulation predicted surface learning approaches, while intrinsic motivation predicted deep learning approaches. Competence indirectly affected surface learning approaches (via identified regulation) and deep learning approaches (via intrinsic motivation). This analysis serves as preliminary evidence of the connection between motivation and metacognition, highlighting the importance of satisfying basic needs to influence motivation, and in certain cases, learning approaches as well. Although the sample is relatively representative of the total kinesiology student population, it would be beneficial to better understand these connections in a more diverse sample of students in the future. Future studies should also investigate how instructors motivate students to use different metacognitive approaches and the potential impact on engagement and course performance.

Individual Talk 7D **Education | Needs and Need Support in Higher Education**

Canaveral

Study the fulfillment of basic psychological needs on student teachers' affective outcomes

Choon Yip Siteo, Nanyang Technological University

Liu Woon Chia, Nanyang Technological University

Alexius Chia Ti Yong, Nanyang Technological University

The primary research objectives of this mixed method study are to use the self-determination theory as the underpinning theoretical framework, to examine how the perceived roles of mentor by the student teachers, have an impact on the latter's affective outcome. A total of about 400 student teachers and 300 cooperating teachers were involved in this study. Data were analyzed through cluster analysis and multiple linear regressions. The overall findings from the study showed that the roles of mentor have an implication on the student teachers' needs satisfaction and affective outcomes. Keywords: self-determination theory; basic psychological needs; pre-service student teachers; practicum; level of enjoyment, value, effort and pressure; perceived competence in teaching.

SDT-informed writing supports in an honors thesis program

Krysta Banke, University of South Florida

Honors thesis and other undergraduate research experiences are HIPs (high impact practices) that require student to design and implement a research project and write it up. Writing in the Disciplines (WID) experiences help student to learn disciplinary knowledge (Carter, 2007). In many cases, students rely on their faculty mentor for guidance and feedback. Writers are challenged by their thesis project. Many experience overwhelm, and writer discomfort is a known phenomenon in writing studies. Elbow (1973) describes the rollercoaster of first beginning with a plan for writing and feeling "a sense of satisfaction and control," but then after writing, "not being in control feeling stuck, feeling lost, trying to write something and never succeeding (p. 35)." Like Elbow, McLeod called for considering writer affect, or "emotions, attitudes, beliefs, moods, and conation" (1987, 1991). Writer motivation is touched upon by the eight habits of mind (curiosity, openness, engagement, creativity, persistence, responsibility, flexibility, and metacognition) in the 2011 Framework for Success in Postsecondary Writing (Council of Writing Program Administrators et al. 2011) as motivation concepts. While interesting and valuable, the framework did not present a full explanatory and contextualized theoretical base, which was needed for this study (Summerfield and Anderson, 2012). This rapid talk presents writing supports as identified by SDT as basic needs for autonomy, competence and/or relatedness, as well as disciplinary knowledge. This past May, I graduated with a PhD from USF in English Rhetoric and Composition and completed a graduate certificate in Health & Wellness Coaching. I'm currently an adjunct instructor of technical writing and an honors engineering advisor, also at USF.

The learning climate in an Italian blended university class: Possible future research perspectives

Pierpaolo Limone, University of Foggia
Benedetta Ragni, University of Foggia
Giusi Antonia Toto, University of Foggia
Guendalina Peconio, University of Foggia

The study was inspired by the application of the Italian validation made by the authors of the Learning Climate Scale Questionnaire (LCQ) in initial teacher education courses. The theoretical framework of the study hinges on the more general theme of self-determination at school, particularly in the area of climate/classroom management. The English-language questionnaire is used in both college and graduate courses. Its particular value in linking the learning climate to motivation and academic success determines the need for a further application of the tool to university students in the Italian context. A 33-item questionnaire was instead administered (with the addition of the scales of perceived stress and grit (8 items) as a precursor of academic success (10 items) in this study) to students of the degree course in psychology delivered in a blended mode, to understand the validity of the tool in blended university study courses too. The relationship between stress and motivation has been amply demonstrated in the literature, but there are still few studies that correlate the latter with grit and academic success. The questionnaire was administered to a population of 275 students, distributed geographically all over Italy, thanks to the particular type of course provided by the University of Foggia. The results demonstrated good internal validity of the scale and reliability of the tool, persuading the authors to conclude and consider the tool valid not only for the adults for which it was designed but also for the category of young adults in a blended course. Besides evaluating the tool, this study aims to investigate how the scientific community has been doing the relationship between soft skills and academic success for some years, in particular concerning grit and motivation.

Predicting motivation to transfer in first year composition: A self-determination theory perspective

Oluwatosin Ogunnika, Virginia State University

The goal of first year composition (FYC) courses is that students apply the skills and knowledge they gain in the courses to other contexts within and outside the university. Despite transfer being the ultimate aim of education, there is controversy whether transfer actually occurs (Bransford & Schwartz, 1999). Over a century of transfer research in education has failed to create a consensus on whether transfer is actually possible, how it should be defined and studied, or whether it can be taught to students. Researchers in the human resources development field have argued that motivation to transfer training is a critical factor in the transfer of training. Using self-determination theory (SDT) as a framework, this presentation examines the relationship between the satisfaction of the basic psychological needs of autonomy, relatedness, and competence and students' motivation to transfer skills and knowledge from their FYC courses to other contexts within and outside the university. A correlational quantitative research design was used to investigate three research questions. Respondents were selected from a higher education institution in central Virginia. Students who were taking or had taken at least one semester of FYC were invited to participate in the study. The study found that autonomy need satisfaction had a positive relationship with identified transfer motivation and integrated transfer motivation. The results for competence need satisfaction were similar – competence need satisfaction correlated positively with identified transfer motivation and integrated transfer motivation. Relatedness need satisfaction did not have a statistically significant relationship to motivation to transfer. The results of this study suggest that students in an FYC classroom environment that supports their needs for autonomy and competence will be more likely to have more autonomous motivation to transfer learning from their FYC course to other contexts within and outside the university.

4:15 – 5:15 PM

Q&A with Richard Ryan and Closing Ceremony

Peninsula 1-4