



POSTER SESSION

Date/Time: 11/9/18 5:30–7:30 PM

Room: Komatke D

Come meet more than 130 presenters who will be sharing their academic research on a wide variety of topics related to contemplative research.

Poster Number: P001

Applicant Name: Anthony Zanesco

University/Institution: University of California–Davis

Title: *Mindfulness-Based Attention Training (MBAT) in Active Duty Military Cohorts: A Meta-analysis of Protective Effects on Sustained Attention and Working Memory*

Authors: AP Zanesco, JE Witkin, E Denkova, K Chichester, S Gonzales, SL Rogers, AP Jha

Abstract: Military servicemembers are vulnerable to cognitive decline as they face protracted demands across their military careers. Mindfulness training (MT) has been proposed to bolster cognitive resilience—the ability to maintain imperiled cognitive capacities. We conducted a meta-analysis of three longitudinal studies investigating the efficacy of a novel short-form (8-hours over 4-weeks) MT program, called Mindfulness-Based Attention Training (MBAT). Active duty US Military cohorts were assigned to either receive MBAT or serve as no-training controls (NTC). Soldiers were assessed on the Sustained Attention to Response Task (SART; N=279) and a delayed-recognition working memory (WM; N=245) task before (T1) and after (T2) MBAT. Fixed effects meta-analysis indicated a small but significant mean difference (MD)

between MBAT and NTC groups at T2 for SART performance (MD=0.028 A', 95% CI [0.002,0.054]) and working memory (MD=0.023, 95% CI [0.007,0.039]). These findings support the supposition that MBAT protects soldiers' performance relative to non-training controls.

Poster Number: P002

Applicant Name: Joanna Witkin

University/Institution: University of Miami

Title: *Mindfulness Training Influences Sustained Attention: Attentional Benefits as a Function of Training Intensity*

Authors: JE Witkin, AP Zanesco, E Denkova, J Carpenter, AP Jha

Abstract: Mindfulness training (MT) has been shown to improve attention. Two experiments investigated the influence of MT on sustained attention performance (A') measured in 3, 313-trial blocks of the Sustained Attention to Response Task (SART) and analyzed using Hierarchical Linear Modeling. In Experiment 1, MT practitioners were tested before (T1) and after (T2) a 1-month retreat (N=57), and were compared to age-matched no-training controls (N=32). At T2, A' was higher in the MT vs. control group across all blocks. In Experiment 2, participants were tested before (T1) and after (T2) an 8-week MT (N=32) or Nutrition Education (NE) program (N=33). A' increased for the MT group from T1 to T2, but only for the first block. There were no differences over time or between groups for the remaining two blocks. Results suggest that while MT may improve attention, the magnitude of benefits may vary with MT intensity and duration.

Poster Number: P003

Applicant Name: Lindsey Slavin

University/Institution: University of Miami

Title: *A Comparison of Two Cognitive Training Smartphone Applications on Working Memory and Mind Wandering Over the Academic Semester*

Authors: LE Slavin, K Chichester, E Denkova, AP Zanesco, AP Jha

Abstract: University students face arduous demands over the semester. They must work effectively to maximize their cognitive performance and minimize mind wandering (MW). Mindfulness training (MT) may improve cognitive performance and reduce MW. The present study evaluated the effectiveness of two smartphone-based training applications. Students were randomly assigned to an MT program (Headspace, n=27) or a cognitive game-based training program (Lumosity, n=25). Cognitive performance (accuracy, % correct) and MW (indexed by self-reported probe responses) were assessed in a working memory task at the middle (T1) and end (T2) of the semester. Repeated measures ANOVA found that while the groups did not differ at T1, the Lumosity group declined in accuracy and reported more MW from T1 to T2 (~45 days), whereas the Headspace group did not change over time. These results suggest that app-based MT may protect against cognitive degradation over high-demand academic intervals in students.

Poster Number: P004

Poster withdrawn by presenter

Poster Number: P005

Applicant Name: Adam Hanley

University/Institution: University of Utah

Title: *Mindfulness Training Disrupts Classical Conditioning*

Authors: A Hanley

Abstract: Mindfulness meditation is purported to de-automatize conditioned behavior. Conditioned behavior is implicated in a host of clinical concerns, including depression, addiction, and suicidality. However, the effects of mindfulness on classically conditioned behavior have not been assessed in a controlled experiment. This study is the first to demonstrate that mindfulness meditation training can attenuate classically conditioned behavior. Forty-nine healthy participants were recruited for an attention training study. Participants were randomized into either a mindfulness (n=26) or active listening (n=27) condition. Study procedures took place over six, individually scheduled study sessions. The mindfulness condition received training in basic Shamatha skills and the active listening condition listened to selections from Gilbert White's *The Natural History of Selborne*. State mindfulness and affective state was measured after each training. Delay eyeblink conditioning was performed after the final training in the sixth, study session. A repeated-measures analysis of variance revealed that mindfulness training increased state mindfulness. Separate one-way analyses of covariance revealed that mindfulness training delayed the onset of conditioned responding and that mindfulness training attenuated conditioned responding. Finally, path analysis revealed that experimental condition had a significant indirect effect on conditioned response frequency via change in state mindfulness. Findings from this study indicate that mindfulness training inhibits the acquisition of conditioned behaviors and the frequency with which conditioned behaviors are expressed. Thus mindfulness training may serve to inoculate against the development of maladaptive habits, allowing individuals to behave non-reactively and with greater intentionality when responding to present moment circumstances.

Poster Number: P006

Applicant Name: Fabian Stocek

University/Institution: Dartmouth College

Title: *Challenging the Notion of Fixed Stimulus-Response Associations Mediating Habit Expression*

Authors: ACG Crego, F Stocek, AG Marchuk, KS Smith

Abstract: Within the basal ganglia, the dorsolateral striatum (DLS) is known to play an important role in action selection and behavioral automatization. To find out more, we have begun to evaluate the DLS on a task requiring animals to navigate towards visual cues that could only be identified at the choice point in the maze, after the run had been initiated. The findings highlight a preferential role for on-line DLS activity in shaping how optimal and/or fluid a reinforced behavior is, whether that behavior involves active cognitive processing such as being mindful (i.e., locating and navigating towards a cue) or whether it might be mindless (i.e., executing a response routine). This finding is interesting for ISCR because it is a basic science study uncovering where in the brain a mindful behavior can be initiated.

Poster Number: P007

Applicant Name: Alexandra Crosswell

University/Institution: University of California–San Francisco

Title: *Mind States and Stress: When You Don't Like the Present Moment*

Authors: A Crosswell, M Coccia, E Epel

Abstract: Traditional Buddhist philosophy and existing empirical evidence suggest that spending more time engaging in and accepting the current moment, is associated with greater well-being. However, being present and engaged in the moment is difficult given the competing demands for our attention in daily life. This may be especially true when we experience stressful events, when accepting the present moment may be particularly difficult. How stress exposure influences engagement in daily life has received little empirical attention. This study examines how chronic and daily stress influence present moment awareness. For 21 days, participants (n=183) reported levels

of mind wandering, engagement with the present moment, mood, and quality of connection to their partner. Half of the sample were chronically stressed mothers of children with autism spectrum disorder, and half were low stress control mothers of neurotypical children. Results show that across 21 days of daily reports, mothers under chronic stress reported more mind wandering, less engagement, and more rejection of the present moment, compared to controls. These mind states in turn were associated with worse mood. Furthermore, exposure to a moderately stressful event was associated with more mind wandering and less engagement, while feeling positively connected to your partner was associated with less mind wandering and more engagement. These findings provide empirical evidence that psychological stress interferes with daily engagement in the present moment, and conversely, feelings of connection to one's partner promotes a present oriented focus. Daily rejection of the present moment may be an important hallmark of chronic stress.

Poster Number: P008

Applicant Name: Brandon King

University/Institution: University of California, Davis

Title: *Personality Correlates of Individual Differences in Lifetime Meditation Experience and Retreat Practice Engagement*

Authors: BG King, QA Conklin, AP Zanesco, CD Saron

Abstract: Contemplative researchers frequently rely on correlational evidence from practitioner estimates of lifetime meditation experience or reported engagement during targeted interventions. This approach assumes that practice estimates indicate proficiency or familiarity with particular meditation techniques. However, practice estimates may instead reflect individual differences in trait patterns of affect, motivation, and social engagement. We examined associations between meditation practice estimates, major personality characteristics (Big Five), and attachment style across two studies. In Study 1, Insight meditation practitioners (N=56) estimated their lifetime meditation experience. In Study 2, experienced meditators (N=59) recorded their daily

practice of focused attention meditation across a 3-month residential retreat. In both studies, estimates of practice were negatively associated with trait neuroticism and attachment anxiety, and positively associated with conscientiousness. These findings suggest that measures of practice engagement may share variance with individual differences in personality characteristics, which should be considered when reporting associations with meditation experience.

Poster Number: P009

Applicant Name: Lyndahl Himes

University/Institution: University of Texas at Dallas

Title: *The Relationship Between Dispositional Mindfulness and Depressed Mood After Negative Mood Induction*

Authors: L Himes, N Hubbard, C Ellison, J Gallagher, C Heinrich, S Khan, and B Rypma

Abstract: Mindfulness, purposeful attention to present moment experiences, is associated with psychological well-being. The role of dispositional mindfulness in maintaining positive mood in healthy individuals is unknown. In this study, we assessed components of dispositional mindfulness to determine if certain components prevent depressed mood following negative mood induction. 66 undergraduates (Mean-age=22.24) were administered the Five Facet Mindfulness Questionnaire (FFMQ) which assesses 5 mindfulness components: observing, non-judgment, non-reactivity, acting with awareness, and describing, and the Beck Depression Inventory (BDI-II). After baseline-mood assessment, participants were administered a negative mood induction procedure followed by a subsequent mood assessment. After negative mood induction, higher BDI-II scores (> 11) were negatively affected ($p=.001$). Higher levels of dispositional mindfulness predicted lower levels of sadness after the negative mood induction ($R^2=0.278$, $F(1,64)=24.608$, $p=.001$). Dispositional mindfulness might afford

protection against depressed mood. The mechanisms by which mindfulness staves off depressed mood require further research.

Poster Number: P010

Applicant Name: Stephanie Fountain-Zaragoza

University/Institution: The Ohio State University

Title: *Higher Trait Mindfulness and Lower Mind-Wandering Propensity Predict Enhanced Attentional Control in Older Adults*

Authors: S Fountain-Zaragoza, NA Puccetti, P Whitmoyer, RS Prakash

Abstract: Older adults exhibit declines in attentional control, but they report higher trait mindfulness and less frequent mind-wandering (MW) than young adults, which may be protective. This study examined age-related differences in the impact of MW on attentional control performance and the variability in performance that is explained by trait mindfulness and MW. Fifty young adults (ages 18-30) and 75 older adults (ages 60-75) completed a Go/No-Go task and a Continuous Performance Task with quasi-random MW probes. Older adults reported less MW and higher trait mindfulness. MW was not associated with average performance, but examination of performance directly preceding probes revealed detrimental local effects of MW for both age groups. Older adults higher in trait mindfulness reported less MW and exhibited better attentional control. Therefore, interventions that increase present-moment focus and reduce lapses in attention, such as mindfulness training, may yield attentional benefits for older adults.

Poster Number: P011

Applicant Name: Noah Ringler

University/Institution: Claremont Graduate University

Title: *The Alchemy of Mindfulness: Assessing the Relationship Between Mindfulness and Meaning Making*

Authors: N Ringler

Abstract: Research has shown both meaning-making and cognitive flexibility to be effective buffers against otherwise traumatic experiences. However, within the domain of meaning-making, research has rarely looked at factors that increase automatic meaning-making capabilities, instead focusing upon deliberate activities, such as expressive writing, which enhance these skills. Past explorations within this domain suggest that activities which emphasize distancing oneself from the traumatic event can enhance meaning-making capabilities. With this in mind, the present study looks at how mindfulness, which emphasizes decentering and cognitive flexibility, relates to meaning-making capacity. The author suggests there is a positive relationship between mindfulness and meaning-making capabilities and it is partially and positively mediated by two correlated factors, decentering and cognitive flexibility. Collecting a sample from Amazon Mechanical Turk, 283 individuals who had recently gone through a traumatic event were surveyed. Results from SEM analysis supported the prediction that those higher in mindfulness are better able to cope positively with traumatic life experiences as it enhances one's ability to gain a more distanced perspective on the incident and increases our capacity to find alternative explanations as to why the event may have occurred. The relationship amongst these variables and its implications will be discussed further.

Poster Number: P012

Applicant Name: Olivia Silke

University/Institution: California State University, Long Beach

Title: *Mindful Disposition During Pregnancy Predicts Greater Benefit Finding at Postpartum*

Authors: O Silke, G Urizar

Abstract: Major life events (e.g., the transition into motherhood) are often accompanied with challenges that can result in negative health outcomes. Pregnancy for low-income women can involve economic stressors, as they try to financially prepare for a child. Therefore, it is important to examine protective factors that can help address challenges experienced during pregnancy. Mindful disposition is one factor that may allow individuals to better evaluate negative circumstances, leading them to derive meaning from their experiences. The ability to find benefits in adverse situations is termed as benefit finding, which is a key construct in the cognitive adaptation theory. This research aims to understand whether mindful disposition is associated with greater benefit finding at postpartum. Women with higher mindful disposition tend to observe each moment-at-hand with an open, nonjudgmental mindset, allowing them to effectively appraise their experiences, which might be linked with greater benefit finding. The present study recruited one hundred, low-income pregnant women, in their first trimester (<17 weeks of gestation), and assessed mindful disposition using the self-report, Mindful Attention Awareness Scale. At three months postpartum, a self-reported measure of benefit finding was collected using the Positive Aspects of Motherhood questionnaire. Results indicated that mindful disposition during pregnancy was significantly related to benefit finding at postpartum, indicating that women who are more mindful during pregnancy are more likely to perceive the upsides to the challenges associated with pregnancy. Further research is needed to assess whether benefit finding mediates the relationship between mindful disposition and maternal and infant health outcomes.

Poster Number: P013

Applicant Name: Robert Redford

University/Institution: University of Toronto

Title: *Measurement Invariance of Trait Mindfulness Between Experienced and Inexperienced Individuals*

Authors: R Redford, E Carlson

Abstract: Does experience with mindfulness affect how people respond to trait mindfulness measures at the structural level? Using measurement invariance analyses, we aim to explore structural differences (e.g., factor structure, factor loadings, mean levels and variability of scores) in trait mindfulness measures (e.g., MAAS, FFMQ, PMS) between individuals that are naive about mindfulness and those that are experienced and/or knowledgeable of mindfulness-based practices. Thus, we will explore how experience with mindfulness relates to one's understanding of trait mindfulness measures and their items. Between-group analyses will be conducted on data from an online sample of participants (expected N~1500). Within-participant analyses will be conducted on archival data including participants (expected N~500) that have undergone mindfulness-based intervention programs (e.g., MBCT, MBSR). Results will have implications for the accuracy of statistical comparisons between mindfully-experienced and inexperienced individuals regarding scores on trait mindfulness measures, and the relationships between trait mindfulness measures and other constructs (e.g., well-being).

Poster Number: P014

Applicant Name: Christopher Lyddy

University/Institution: University of Providence

Title: *Exploring the Relationship Between Dispositional Mindfulness and Job Performance*

Authors: D Good, C Lyddy

Abstract: Interest in mindfulness at work has grown as research has increasingly supported the benefits of mindfulness for workplace well-being. However, far less evidence links mindfulness to workplace behaviors and job performance, which masks the full value of mindfulness in organizational contexts. To address this gap, we hypothesized that trait mindfulness will correlate with lower job performance, operationalized as social loafing behavior. Social loafing occurs when individuals “slack

off” and exert less effort while working together than alone. We theorized that through enhanced self-regulation of attention and energy, more mindful individuals would maintain their task effort while working in teams, and therefore report less social loafing. Further, we theorized this relationship would persist after controlling for neuroticism, workload, and the social loafing of colleagues. We assessed this relationship among a cross-sectional sample of 178 team workers. Consistent with our hypothesis, trait mindfulness correlated with lower social loafing behavior.

Poster Number: P015

Applicant Name: Julian Lim

University/Institution: Duke-NUS Medical School

Title: *Dynamic Functional Connectivity Markers of Objective Trait Mindfulness*

Authors: J Lim, J Teng, A Patanaik, J Tandi, S Massar

Abstract: Measuring dispositional mindfulness via self-report is prone to various biases, making it useful to identify objective behavioral or biological markers of this trait. Here, we conducted resting-state (rs)-fMRI to investigate the individual differences in functional connectivity associated with dispositional mindfulness. 125 healthy young participants were recruited to perform a breath-counting task, a validated objective measure of mindfulness. Based on task accuracy, we selected individuals who were high (HTM; N=21) or low on trait mindfulness (LTM; N=18), and invited them to undergo an ~8 minute rs-fMRI scan. Whole-brain fMRI data were parcellated, and functional connectivity analysis was performed between all regions pairwise. Connectivity metrics were compared between the HTM and LTM groups. Static rs-fMRI connectivity maps showed that HTM individuals had greater within-network connectivity in the default mode network (DMN) and the salience network, and greater anti-correlations between the DMN and task-positive networks. Dynamic functional connectivity analysis revealed two reproducible patterns of connectivity, corresponding to "task-ready" and "idling"

brain states. HTM individuals spent significantly more time in the task-ready state, and significantly less time in the idling state compared to LTM individuals. HTM individuals transitioned between brain states more frequently, but the dwell time in each episode of the task-ready state was equivalent between groups. Across individuals, time spent in the task-ready state was correlated with self-reported mindfulness, measured by the Five Facet Mindfulness Questionnaire. In sum, behavioral testing and neuroimaging may be useful supplementary tools for the measurement of trait mindfulness.

Poster Number: P016

Applicant Name: Anne Cox

University/Institution: Washington State University

Title: *Examining Changes in Trait and State Mindfulness and Body Image Across 16 Weeks of Yoga Participation*

Authors: AE Cox, S Ullrich-French, AK McMahon

Abstract: Habitual body surveillance reflects a state of low mindfulness and fails to promote positive body image. Practices that promote being more mindful may help shift attention away from habitual body surveillance and support positive body image. The purpose of this study was to examine changes in state and trait mindfulness, body surveillance, and body appreciation during 16 weeks of yoga participation. Participants were 175 (152 female) college students who completed survey measures at multiple time points across a 16 week yoga course. Repeated measures ANOVA's showed that over the 16 weeks of yoga participation, trait mindfulness and body appreciation increased, and trait body surveillance decreased. Change in trait mindfulness and state body surveillance significantly predicted change in trait body surveillance and body appreciation. Findings indicate that becoming more present in everyday life and surveying one's body less during yoga classes may both support improvements in body image.

Poster Number: P017

Applicant Name: Danilo Santaella

University/Institution: Hospital Israelita Albert Einstein

Title: *Greater Brain Motor-Attentional Functional Connectivity in Elderly Female Yoga Practitioners*

Authors: DF Santaella, JB Balardin, RF Afonso, JR Sato, SS Lacerda, E Amaro Jr., EH Kozasa

Abstract: The aging brain presents functional connectivity losses between motor and attentional networks and decreases in resting-state connectivity. On the other hand, there is some evidence that yoga may be cognitively and physically beneficial for the elderly. Objective: To compare brain resting-state functional connectivity of the motor and attentional networks in elderly female Yoga practitioners and healthy non-practitioners. Methods: Two groups of right handed elderly women (>60 years), Hatha Yoga practitioners (n=20, at least 8 years of practice) and control (n=20, Yoga-naive) paired by age, physical activity and years of education, underwent resting-state functional magnetic resonance imaging. Functional connectivity analysis was performed comparing the groups at regions of interest of attentional and motor networks. Results: Control group had no greater connectivity between any of the regions of interest compared to the Yoga group, while in the Yoga group, connectivity was greater both from motor to frontoparietal networks (between posterior cerebellum and right middle temporal gyrus; putamen and left supramarginal gyrus), and also in reciprocal ways, between left thalamus and right middle frontal gyrus; right thalamus and left middle frontal gyrus. Conclusion: Women who practiced at least 8 years of yoga presented greater unidirectional and reciprocal brain functional resting-state connectivity between motor and frontoparietal attentional networks, than non practitioners. Yoga practice may contribute for a healthier cognitive and motor aging process.

Poster Number: P018

Applicant Name: Robin Nemeroff

University/Institution: William Paterson University

Title: *Reductions in Rumination, Worry, and Negative Affect Following a 3-Week Yoga Intervention*

Authors: R Nemeroff, C Pearsall

Abstract: Rumination, worry, and negative emotions are associated with psychological distress and predictive of psychological disorders such as depression and anxiety. In this study, we offered free yoga classes to 22 college students reporting high levels of stress and psychological distress. Hatha yoga classes were conducted on the college students' campus twice each week, for one hour each class, over the course of three weeks. Trapnell and Campbell's Rumination-Reflection Questionnaire (RRQ), The Penn State Worry Questionnaire (PSQQ), and the Positive and Negative Affect Schedule (PANAS) were administered before students began the yoga classes and after 3 weeks of participation in the yoga classes. Statistically significant reductions in rumination, worry, and negative affect were observed. This research offers preliminary support for the effectiveness of yoga in shifting cognitive patterns that may increase young adults' risk of developing mental health issues.

Poster Number: P019

Applicant Name: Moe Kishida

University/Institution: Arizona State University

Title: *A Daily Diary Approach to Examine the Effects of Yoga on Self-transcendent Emotions*

Authors: M Kishida

Abstract: Self-transcendent emotions (gratitude, awe, compassion) are discrete positive emotions with important social functions. The mind-body practice of yoga is a relational practice that could develop prosociality; however, whether self-transcendent emotions can be cultivated from yoga practice has yet to be determined. The objective of this study was to examine the potential influence of yoga to generate self-transcendent emotions in the context of practitioners' day-to-day lives. Community-dwelling yoga practitioners (N=104; age range; 18-76 years) with a yoga practice of at least once a week were recruited for a 21-day daily diary study. At the end of the day, practitioners were asked to complete daily Internet surveys, which included questions with respect to one's yoga practice, emotions, and prosocial behaviors. At the within-person level, multilevel analyses indicated substantial variability on gratitude (ICC=0.67), awe (ICC=0.49), and compassion (ICC=0.48), on a day-to-day basis. On yoga practice days, practitioners reported being more grateful ($b=2.10$, $p<.0001$), awe-inspired ($b=3.26$, $p=.0019$), and compassionate ($b=2.29$, $p=.002$) in comparison to no practice days. A within-person association with the duration of yoga practice and self-transcendent emotions also emerged such that practitioners reported enhanced gratitude, awe, and compassion on days when one practiced more yoga (minutes) than one's usual practice time. In this community-based sample of yoga practitioners, findings suggest yoga practice has a positive influence in boosting a range of self-transcendent emotions on a day-to-day basis. Further experimental studies are warranted to better understand the processes in which yoga works to cultivate self-transcendental emotions.

Poster Number: P020

Applicant Name: Jonathan Gibson

University/Institution: South Dakota School of Mines and Technology

Title: *The Mindfulness Misattribution: An Interoceptive Awareness Hypothesis*

Authors: J Gibson

Abstract: The benefits of mindfulness meditation are well documented. Neuroimaging studies have shown that mindfulness meditation can produce a neuroplasticity effect

resulting in an anatomical integration between various brain structures which provides a viable explanation for the functional benefits mentioned throughout the literature. Interestingly, many of those same benefits have been linked to interoceptive or body awareness. In this presentation, I will briefly review and compare some of the findings as described in the neuroimaging and neurophenomenological literature for both mindfulness and interoceptive awareness. I will then discuss qualitative and quantitative findings from my own study in which participants practiced two body-centered meditations. The body-centered meditations engendered similar effects and benefits as identified in the mindfulness literature even though the participants did not practice a mindfulness meditation. The participant's descriptions were further supported using the Mindful Awareness Attention Scale (MAAS). It will be proposed that some of the benefits attributed to mindfulness may actually be due to an increase in interoceptive awareness.

Poster Number: P021

Applicant Name: Kathryn Devaney

University/Institution: Stanford University

Title: *Cortical Attention Networks in Focused Attention Meditators Assessed With Functional Magnetic Resonance Imaging*

Authors: K Devaney, E Levin, J Higgins, S Lazar, D Somers

Abstract: Meditation experience correlates with improved performance on behavioral assessments of attention, but the neural bases of this improvement are unknown. Two prominent, competing attention networks exist in the human cortex: a dorsal “focused attention” network and a ventral “circuit-breaker” network by which stimuli can capture attention. Additionally, a third network, the default mode network, demonstrates deactivation during demanding tasks. Here, we used functional magnetic resonance imaging to contrast cortical network activation between experienced vipassana meditators and controls. Participants performed two standard attention tasks during scanning: a sustained attention task and an attention-capture task. Meditators demonstrated increased magnitude of differential activation in the dorsal attention vs.

default mode network in a sustained attention task, relative to controls. In contrast, attentional reorienting did not reveal behavioral or attention network differences between meditators and controls. These results demonstrate increased stability in sustained attention processes without an associated attentional capture cost in meditators.

Poster Number: P022

Applicant Name: Gunes Sevinc

University/Institution: Harvard University

Title: *Common and Dissociable Neural Activity Following Mindfulness-Based Stress Reduction and Relaxation Response Programs*

Authors: G Sevinc, BK Hölzel, J Hashmi, J Greenberg, A McCallister, M Treadway, ML Schneider, JA Dusek, J Carmody, SW Lazar

Abstract: We investigated common and dissociable neural correlates of two widely used meditation-based stress-reduction programs. Participants were randomized to the Relaxation Response (RR; n=18) or the Mindfulness-Based Stress Reduction (MBSR; n=16) programs. Both programs utilize a bodyscan meditation, however the RR program explicitly emphasizes physical relaxation, while the MBSR program emphasizes mindful awareness. Following the programs, neural activity during the respective bodyscan meditation was investigated using fMRI. Both programs were associated with reduced stress and enhanced mindfulness. Conjunction analyses revealed functional coupling between ventromedial prefrontal regions and supplementary motor areas. The disjunction analysis indicated that the RR bodyscan was associated with stronger functional connectivity of the right inferior frontal gyrus with supplementary motor areas. The MBSR bodyscan was associated with significant functional connectivity of the right anterior insula with pregenual anterior cingulate during bodyscan meditation compared to rest. These results may have implications for the differential effects of these programs.

Poster Number: P023

Applicant Name: Mauricio Ribeiro

University/Institution: Hospital Israelita Albert Einstein

Title: *Short Stress Recovery Protocol Applied to High Performance Helicopter Pilots: EEG Preliminary Results*

Authors: MW Ribeiro, CS Deolindo, MA Aratanha, EH Kozasa

Abstract: Stress impacts emotional control and performance. In this preliminary study, we applied a short stress recovery protocol based on guided relaxation/respiration in experienced helicopter pilots after high workload flights. The first flight was a control and the intervention was applied in the second. EEG datasets were recorded in three sequential moments: (1) just before the flight; (2) just after the flight; and (3) either with no instruction, in the control condition, or following the recovery protocol. The Alpha/Theta ratio of 32 EEG channels were normalized in relation to the preflight recording. In the control flight, the mean ratio of 6 pilots increased 14% comparing (1) and (2) and was followed by a 2% decrease. In the flight with the intervention, the mean ratio increased 31% between (1) and (2) but it decreased 30% after a two minute meditation. The results indicate that the protocol might be beneficial for stress-recovery.

Poster Number: P024

Applicant Name: Alea Skwara

University/Institution: University of California, Davis

Title: *Retreat-Related Reductions in EEG Beta Band Power Observed During Mindfulness of Breathing Practice Are Maintained at Rest*

Authors: AC Skwara, BG King, AP Zanesco, KR Wineberg, CE Powers, CD Saron

Abstract: A key tenant of meditation practice is that the benefits of mental activities undertaken during meditation extend beyond the bounds of formal practice—that is, what a person does “on the cushion” generalizes to other contexts. Using data collected across two intensive three-month meditation retreats, I report changes in brain activity—as measured by EEG spectral power—while participants “rested” without engaging in any form of directed mental activity. Analyses revealed retreat-related reductions in centroparietal and posterior beta band power in retreat participants at rest, but no changes in control participants. These patterns closely mirror previously reported longitudinal reductions in beta band activity observed during mindfulness of breathing meditation in these same participants. These findings indicate that retreat-related changes in brain activity during meditation are maintained during rest, offering support for the idea that meditation-related changes may generalize beyond the specific domain of training.

Poster Number: P025

Applicant Name: Tracy Brandmeyer

University/Institution: University of California, San Diego; French National Center for Scientific Research (CNRS); Institute of Noetic Sciences

Title: *FM θ Neurofeedback: Implementing Strategies Based on Focused Attention Meditation*

Authors: T Brandmeyer, A Delorme

Abstract: Based on findings demonstrating robust frontal midline theta EEG during focused attention meditation in advanced practitioners (Brandmeyer & Delorme, 2016) alongside accumulating findings suggesting that frontal theta serves as the mechanistic backbone for cognitive control, we developed a methodologically novel neurofeedback protocol with the aim of training frontal midline theta (3-7 Hz at electrode site Fz) by means of instructing our subjects to engage in a focused breathing technique similar to focused attention meditation. Subjects who received neurofeedback as compared to subjects who received sham feedback were able to significantly modulate theta activity

(3-7 Hz) over Fz across eight sessions. We additionally observed significant modulations in the alpha (9-11 Hz) and beta bands (13-20 Hz) in subjects who received real neurofeedback training, as well as changes on several measures of executive functions. Our findings further narrow the explanatory gap by connecting neurophysiological data to the phenomenological nature of our experience.

Poster Number: P026

Applicant Name: Robert Goodman

University/Institution: Northern Arizona University

Title: *Mindfulness Modifies the Relation Between the ERN and Negative Affectivity Following Self-threat*

Authors: TN West, RJ Goodman

Abstract: We examined the moderating roles of dispositional mindfulness and the error-related negativity (ERN) on negative affect following self-threat. The ERN is an event-related potential (ERP) marker sensitive to emotional responses elicited by performance errors, and we hypothesized it would predict affective responses following self-threat. After capturing ERN responses with an incentivized Flanker task, participants were randomized to receive feedback indicating failure or success and then reported their state affect. As expected, participants higher in dispositional mindfulness reported lower negative affect following failure feedback than participants lower in mindfulness. Additionally, the ERN moderated this effect. For participants higher in dispositional mindfulness, larger ERN responses predicted significantly lower negative affect following failure feedback. For those lower in dispositional mindfulness, higher ERN amplitudes predicted greater negative affective responses following failure feedback. The present work connects ERP markers with individual differences and real-world emotional outcomes to demonstrate the value of meeting threats with mindfulness.

Poster Number: P027

Applicant Name: Quinn Conklin

University/Institution: University of California, Davis

Title: *Plasma BDNF Shows No Change During 1-month Retreat Involving Meditation Only*

Authors: C Patterson, Q Conklin, B King, C Saron

Abstract: Brain-derived neurotrophic factor (BDNF) is a modulatory neuroprotein involved in learning, memory, and higher cognition. Low levels of BDNF are implicated in anxiety, depression, and emotional exhaustion. A recent, uncontrolled study by Cahn et al. (2018) found increased plasma BDNF during a 3-month retreat involving yoga and meditation. We extend this finding by examining plasma BDNF in participants before and after a 1-month Insight meditation retreat (n=28), compared to a control group (n=34), similar in age, gender, and meditation experience. We found a significant group difference, such that retreat participants had lower levels of BDNF than controls, but no retreat-related changes in BDNF. These results suggest that the yoga component may have contributed to the BDNF increases observed by Cahn et al. Further work is needed to verify this hypothesis in a controlled and randomized study comparing a meditation only retreat to a retreat with both meditation and yoga.

Poster Number: P028

Applicant Name: Brianna Morseth

University/Institution: Dharma Realm Buddhist University

Title: *An Interdisciplinary Perspective on the Embodied Community: Intercorporeality and Limbic Resonance in Mahayana Buddhist Monastic Culture*

Authors: BK Morseth, L Liang

Abstract: Combining the Merleau-Pontian intercorporeal approach to social cognition with the neuroscientific study of "limbic resonance" or shared emotion, the present study empirically investigates diverse contemplative practices among retreatants at Fo Guang Shan monastery in Taiwan. Saliva samples were collected from 30 participants before and after "huatou" (silent contemplation of the question "Who am I?"), compassion meditation, bowing, and "nianfo" (chanting the name of "Amitabha," the Buddha of Light, which is traditionally understood to induce focus and calm). Samples were subject to enzyme-linked immunosorbent assay for extraction of oxytocin. The huàtóu "Who Am I?" elicited the greatest neuroendocrine response in the peptide hormone oxytocin, a physiological correlate of pro-sociality. Participants also demonstrated elevated pro-social, communally-oriented behavior, reporting phenomenological accounts of trance, fractal patterns, deep peace, and pure bliss, suggesting that contemplative practices, like huàtóu, aimed at investigating the nature of "self" contribute toward the cultivation of self-less (i.e., altruistic) behavior.

Poster Number: P029

Applicant Name: Lisa Olson

University/Institution: University of Redlands

Title: *A Salivary Stress Marker Inversely Correlates to Forgiveness and Self-Compassion*

Authors: A Musleh, K Krause, LE Olson

Abstract: Alpha-amylase is an enzyme secreted in saliva induced by the sympathetic nervous system (the "fight or flight" response). We tested 104 undergraduate student subjects by measuring psychological traits using the State Trait Anger Expression Inventory, Heartland Forgiveness Scale, Self-Compassion Scale, and Rumination-Reflection Questionnaire. We then conducted an anger induction protocol, collecting saliva samples after four different periods: baseline, neutral speaking, anger recall, and a silent recovery period. Alpha-amylase levels, measured by kinetic enzyme assay, were inversely correlated to reflection, forgiveness, and self-compassion, and

positively correlated to anger. These correlations were driven by data from female participants. To our knowledge, our use of alpha-amylase is a new addition in psychophysiological measurement of anger induction and recovery. Since we show here that alpha-amylase is related to anger, reflection, forgiveness, and self-compassion, these may be areas to consider in designing interventions to mitigate the negative health effects of the stress response.

Poster Number: P030

Applicant Name: Liudmila Gamaiunova

University/Institution: University of Lausanne

Title: *The Phenomenology of Stress Experience in Long-term Meditators and Matched Controls*

Authors: L Gamaiunova, P-Y Brandt, M Kliegel

Abstract: According to the Social Preservation Theory, the situations which threaten the maintaining of positive social self, such as loss of acceptance, status or self-esteem, give rise to self-conscious emotions and cognitions, and prompt a distinctive physiological response, which can be detrimental for health and well-being. Do Buddhist meditation practitioners experience the social evaluative situations in the same manner as non-meditators? The present study compares personal accounts of long-term meditation practitioners (N=29) and a matched group of meditation-naïve participants (N=27) after a laboratory task including critical social evaluation (Trier Social Stress Test). The qualitative analysis is focused on the between-group differences in the appraisal process, emotional experience and emotion regulation strategies during the task. Our findings are triangulated by the results of the psychophysiological assessments (endocrine and autonomic nervous system) accomplished in the same study.

Poster Number: P031

Applicant Name: Willeke Rietdijk

University/Institution: University of Southampton

Title: *The Micro-Phenomenology of Insight Meditation*

Authors: W Rietdijk

Abstract: In contemplative research, little attention is paid to the lived experience of meditation as it unfolds moment by moment. This PhD research explored how insight mindfulness meditation unfolds experientially at a micro-level in order to gain a deeper understanding of its possible processes and mechanisms. The micro-phenomenology method was used to interview three intermediately experienced, adult Vipassana mindfulness meditators three times for one hour about their just practised 30-minute meditation. This yielded nine interviews which were analysed via the micro-phenomenology data analysis process as well as thematic analysis. This poster will present the key experiential processes and mechanisms of Vipassana meditation identified in the participants of this study. Implications and suggestions for further research developed from this small-scale, but in-depth research project will also be presented.

Poster Number: P032

Applicant Name: Mary Rees

University/Institution: Saybrook University

Title: *Characteristics of Pre-Reflective Consciousness in Theory and Practice*

Authors: M Rees

Abstract: In this study cross-domain descriptions of pre-reflective consciousness are identified. These descriptions are then compared to successful processes described in the creating process and in the noting practice of meditators trained in awareness of the continual flow of experience. A noting practice requires ability to concentrate on an

open field of awareness, developing a contemplative and thus receptive quality of mind, and the ability to lightly note or frame objects and phenomena arising within the flow of experience. Noting practices are analyzed for verbalization during the process and in autoelicitations immediately following the noting practice in which the participants name experiences noticed but not named or developed during noting practice.

Poster Number: P033

Applicant Name: Joel Fishbein

University/Institution: University of Colorado Boulder

Title: *Exploring Unique Facets of Self-transcendence*

Authors: JN Fishbein, RA Baer, J Correll, JJ Arch

Abstract: Psychotherapies and contemplative practices promote transcending one's normal perspective of the world (self-transcendence). The psychological flexibility model suggests that self-transcendence entails a sense of distanced observing of the content of present experience (Distancing), a stable locus of observing (Sanctuary), and connection with other beings (Inter-transcendence). Three psychological flexibility model-informed self-transcendence questionnaires exist, but their items incompletely assess these constructs. We administered the existing questionnaires and new items that we created to community adults (N=348) and students (N=298). Exploratory factor analysis of a dataset including our new items and the existing questionnaires yielded three factors. Factor 1 captured Distancing; Factor 2 captured Sanctuary; and Factor 3 captured Inter-transcendence. We found that Sanctuary, Inter-transcendence, and Distancing are distinct facets of self-transcendence. We demonstrated that Inter-transcendence is a unique facet not measured by the existing scales. We will attempt to replicate these findings with experienced meditator and clinical populations.

Poster Number: P034

Applicant Name: Helané Wahbeh

University/Institution: Institute of Noetic Sciences

Title: *Investigating Extraordinary Experiences in Meditation*

Authors: C Vieten, H Wahbeh, R Cahn, A Delorme

Abstract: The science of meditation has grown tremendously in the last few decades. Most studies have focused on evaluating the clinical effectiveness of mindfulness-based interventions, neural and other physiological correlates of meditation, and individual cognitive and emotional aspects of meditation. Far less research has been conducted on more challenging domains to measure, such as profound subjective experiences during meditation. However, these aspects of meditation may be crucial to people's psychological and spiritual development, and could represent important mediators and/or mechanisms by which meditation confers benefits. In addition, since large numbers of novices are being introduced to meditation practice, it is helpful to investigate experiences they may encounter that are not well understood. Over the last five years, an interdisciplinary task force of meditation researchers and teachers met regularly to develop recommendations for expanding the current meditation research field to include these important yet often neglected topics. These meetings led to a cross-sectional online survey to investigate the prevalence of a wide range of experiences in 1120 meditators. Results show that the majority of respondents report having experiences rarely mentioned in the current literature including group and relational, transpersonal and mystical, and difficult aspects of meditation; anomalous or extraordinary phenomena related to meditation; and post-conventional stages of development associated with meditation. These arenas represent largely uncharted scientific terrain and provide excellent opportunities for both new and experienced researchers.

Poster Number: P035

Applicant Name: Helané Wahbeh

University/Institution: Institute of Noetic Sciences

Title: *A Systematic Review of Transcendent States Across Meditation and Contemplative Traditions*

Authors: H Wahbeh, A Sagher, W Back, P Pundhir, F Travis

Abstract: Across cultures and throughout history, transcendent states achieved through meditative practices have been reported. The practices to attain transcendent states vary. While these transcendent states are ascribed many different terms, those who experience them describe a similar unitive, ineffable state of consciousness. Despite the common description, few studies have systematically examined transcendent states during meditation. The objectives of this systematic review were to: 1) characterize studies evaluating transcendent states associated with meditation in any tradition; 2) qualitatively describe physiological and phenomenological outcomes collected during transcendent states and; 3) evaluate the quality of these studies. Twenty-five studies with a total of 672 combined participants were included in the final review. Participants were mostly male (61%; average age 39 ± 11 years) with 12.7 ± 6.6 (median 12.6; range 2 - 40) average years of meditation practice. A variety of meditation traditions were represented: (Buddhist; Christian; Mixed (practitioners from multiple traditions); Vedic: Transcendental Meditation and Yoga). The mean quality score was 67 ± 13 (100 highest score possible). Subjective phenomenology and the objective outcomes were measured. Transcendent states were most consistently associated with slowed breathing, respiratory suspension, reduced muscle activity and EEG alpha blocking with external stimuli, and increased EEG alpha power, EEG coherence, and functional neural connectivity. The transcendent state is described as being in a state of relaxed wakefulness in a phenomenologically different space-time. Heterogeneity between studies precluded any formal meta-analysis and thus, conclusions about outcomes are qualitative and preliminary. Future research into transcendent states during meditation is warranted.

Poster Number: P036

Applicant Name: Sabine Grunwald

University/Institution: University of Florida

Title: *Reconciliation of Buddhist Notions and Western Psychology in Support of a Whole Person Psychology*

Authors: S Grunwald

Abstract: There have been notable misunderstandings while transferring Buddhist notions into Western psychology due to poor translations and attempts to merge or equate metaphysical notions and psychological constructs not to mention other cross-cultural issues. The integration of wisdom constructs into Western psychology is an ongoing process and involves clinical assessments, psychotherapy, mindfulness meditation, and other modalities. This study explores the similarities and differences of psychological constructs of attachment theory and wisdom constructs of Buddhism including mindfulness, attachment, detachment, disidentification, nonattachment, secure self, nonself, nonduality, equanimity, judgement, and other terms. Evidence from empirical mindfulness studies contrasting securely and insecurely attached individuals show that shifts in egocentrism and self-perception play a critical role to bring forth affective, cognitive, and well-being benefits that share similar characteristics as reported in Buddhist meditation studies. A synthesis of attachment theory and Buddhist psychology holds much promise for a refined whole person psychology.

Poster Number: P037

Applicant Name: Chris Wegemer

University/Institution: University of California, Irvine

Title: *The Structure of the Self: A Cluster Approach*

Authors: C Wegemer

Abstract: Dambrun and Ricard argue happiness is associated with the structure of the self; their Self-centeredness/Selflessness Happiness Model (SSHM) proposes that self-centered and selfless styles of psychological functioning relate differently to happiness. The authors also hypothesize linkages between self-centeredness/selflessness and various outcomes related to well-being. This study tested the SSHM using a person-centered approach. First, cluster analyses identified distinct profiles that revealed nuances in the self-centered/selfless dichotomy. Second, the central prediction of the SSHM was supported by using regressions with robust controls to link self-centered clusters with fluctuating happiness and selfless clusters with durable happiness. Third, Bonferroni-corrected exploratory analyses were used to test predicted relationships between self-centered/selfless clusters and various interdisciplinary variables, with an emphasis on educational contexts. The NICHD Study of Early Child Care and Youth Development (NICHD-SECCYD) data was used for this investigation. Participants were followed from pre-birth to age 26; the most recent wave of data collection surveyed over 750 participants in 2017. In addition to a broad range of psychosocial indicators and outcomes, the survey included items from well-established inventories developed to assess constructs directly related to self-centeredness and selflessness, such as Levenson's Adult Self-Transcendence Inventory and Wayment's Quiet Ego Scale. This work builds on previous research aimed at deepening collective understanding of the self. Findings may have implications for contemplative practices, particularly in educational settings. The considerable potential for the use of cluster analyses to explore patterns in the structure of the self is discussed. Future studies using the rich longitudinal data of NICHD-SECCYD are proposed.

Poster Number: P038

Applicant Name: Travis Dumais

University/Institution: Brown University

Title: *A Systematic Review of Self-Related Processes as Potential Mechanisms of Action of Mindfulness-Based Interventions*

Authors: T Dumais, S Peters, E Moitra, E Loucks, Z Schuman-Olivier, SW Lazar, R Ferrer, D Vago, J Lipsky, J Lindahl, H Kimmel, L Sager, H Rahrig, P Acero, J Scharf, W Britton, G Desbordes

Abstract: A systematic review was conducted to assess the state of evidence for self-related processes (SRP), such as experiential self or self-compassion, as potential mechanistic targets of Mindfulness-Based Interventions (MBIs) and the degree to which MBIs engage SRP in randomized control trials. 10,802 studies were initially identified, of which 19 publications were found to assess constructs associated with SRP and were included in this review. None of the SRP assays were reliably engaged by MBIs. Moreover, many theoretically-relevant SRPs were not measured in the studies reviewed. MBI target engagement appeared to be influenced by type of control, type of sample, and timepoint. Specifically, MBI target engagement of SRPs was higher for non-clinical samples, immediately post-treatment (rather than at follow-ups), and in comparison to passive (waitlist) rather than active controls. Overall, the state of the evidence of SRP as potential mechanistic targets of MBIs remains largely unexplored and unverified.

Poster Number: P039

Applicant Name: Hiroe Hu

University/Institution: Touro University California College of Osteopathic Medicine (TUCCOM), UCSF

Title: *The Concept of Self in Morita Therapy and Mindfulness-based Cognitive Therapy: Similarities and Differences in the Therapeutic Mechanisms, Philosophies, and Methods*

Authors: H Hiroe

Abstract: While the effects of mindfulness practices on the self are not widely recognized, a reduction in self-centered or “self-referential” processing stands as one of the central therapeutic mechanisms of mindfulness-based psychotherapy. In this literature-based research, I compared two cultural variations of mindfulness-based

psychotherapy: Mindfulness-Based Cognitive Therapy (MBCT), developed recently in the West, and Morita Therapy, founded in Japan during the 1920's based on Zen Buddhism. Despite the vast cultural/historical gap between them, they are strikingly similar in a number of respects. The most significant similarity is that they both use mindfulness as their primary therapeutic means; both, in turn, involve a change in the conception of 'self' via mindfulness. Despite the remarkable similarities, there are also discrepancies in their philosophies, methods, and techniques, which likely arose from the difference between the western individualistic and eastern collectivist values. Throughout, I show that the self can be understood as a two-layered structure.

Poster Number: P040

Applicant Name: Yuval Hadash

University/Institution: University of Haifa

Title: *Experiential Self-referential and Selfless Processing in Mindfulness and Mental Health: Conceptual Model and Implicit Measurement*

Authors: Y Hadash, R Plonsker, DR Vago, A Bernstein

Abstract: We propose that Experiential Self-Referential Processing (ESRP)—the cognitive association of present moment subjective experience with the self—underlies various forms of maladaptation. We theorize that mindfulness contributes to mental health by engendering Experiential Selfless Processing (ESLP)—processing present moment subjective experience without self-referentiality. We developed a novel behavioral measure of ESRP and ESLP of fear which we named the fear Single Experience & Self Implicit Association Test (SES-IAT). In the fear SES-IAT we experimentally elicit a subjective experience of fear, while concurrently measuring participant's cognitive association between her/himself and fear. Our results indicate that the SES-IAT measures ESLP of fear and two forms of ESRP—identification with fear and negative self-referential evaluation of fear. Furthermore, our findings indicate the

cognitive association of self with experience (i.e., ESRP) may be an important substrate of the sense of self, and an important determinant of mental health.

Poster Number: P041

Applicant Name: Dorote Lucci

University/Institution: Institute of Transpersonal Psychology at Sofia U

Title: *Virtual Reality as a Mental Health Application*

Authors: D Lucci

Abstract: Virtual Reality may well be an ideal tool to use for psychotherapeutic support. What are the possible uses for mobile virtual reality (VR) and VR within the mental health field? What are the possibilities to produce worldview shifts that encourage growth, balance and integration within the individual and the group? What would be better than to be able to provide patients with a universe and a world view that is a way for embodied cognition and visual stimuli to be activated in a positive manner? VR may well prove to be a major mental health tool in the future.

Poster Number: P042

Applicant Name: Marcia Ash

University/Institution: Emory University

Title: *A Conceptual Framework for CBCT® (Cognitively-Based Compassion Training)*

Authors: M Ash, M Pinto, T Harrison, R DiClemente, S Negi

Abstract: CBCT® (Cognitively-Based Compassion Training) provides a framework for the cultivation of compassion through contemplative practice. CBCT is a secular program that was adapted from the Tibetan Buddhist practice of lojong – mind training. CBCT

training employs both stabilizing and analytical practices to foster greater compassion. The objective of this research is to propose a conceptual model articulating the theory and processes of behavior change present in CBCT training.

Poster Number: P043

Applicant Name: Adam Burke

University/Institution: San Francisco State University

Title: *A Metacognitive Resource to Support Meditation Practice: Qualitative and Quantitative Results*

Authors: A Burke, J Rolff, S Hassett

Abstract: Although meditation is a widely used mind-body practice there is limited research on meditation instruction. For this reason a mindfulness-based instructional resource was developed and evaluated. The instructional resource, a simple graphical model of the meditation process, portrayed a generalized four-step recursive cognitive cycle (from attention to inattention to attention). This model was employed as a heuristic to help participants understand and work with the ubiquitous challenge of distracted mind wandering. Participants practiced mindfulness meditation for two weeks, alternating days using and not using the resource. A within-subjects comparison showed that sessions using the instructional resource were rated as significantly more positive on all measures and were of significantly longer duration. Content analysis of summary reports revealed six themes, including that the instructional resource improved awareness of mind wandering, that it was helpful, and that it contributed to relaxation. Simple instructional resources may help support meditation practice.

Poster Number: P044

Applicant Name: Poppy Schoenberg

University/Institution: Vanderbilt University

Title: *Altered Current Density Functional Localization and Connectivity Dynamics Following Mindfulness-Based Cognitive Therapy for Major Depressive Disorder*

Authors: PLA Schoenberg, DR Vago, AEM Speckens

Abstract: Understanding mechanistic pathways of mindfulness-based intervention remains central to optimized precision medicine. Mindfulness-Based Cognitive Therapy (MBCT) shows high clinical utility for mood disorders, whilst mechanistic specificity has not been fully disentangled. LORETA based current density vector magnitude localization and connectivity dynamics were examined concomitant to an affective Go/NoGo paradigm pre-to-post treatment for patients with MDD randomized to either MBCT vs. wait-list control. Based on our previous data, we examined the following regions of interest and connectivity across frequency spectra; (1) the anterior cingulate cortical hub involved in executive functioning; (2) neural correlates of emotion (dys-)regulation in MDD comprising prefrontal and limbic regions; (3) areas related to self-referential processing, including visceral interoceptive awareness and 'default-mode' function; and (4) fronto-parietal connectivity associated with regions specialized in inhibitory control. This first examination of complex neurophysiological parameters in MBCT contributes greater insight into the multi-dimensional functional and connectivity network dynamics underlying its clinical efficacy.

Poster Number: P045

Poster withdrawn by presenter

Poster Number: P046

Applicant Name: Kibby McMahon

University/Institution: Duke University

Title: *Generalizing Mindful Emotion Regulation: Toward a Transdiagnostic Approach to Training Emotion Regulation With Mindfulness*

Authors: K McMahon, J Quaglia, N Zerubavel, M Rodriguez, MZ Rosenthal

Abstract: Emotion dysregulation, difficulties managing intense emotions, is common across many psychiatric disorders and is central to some of the most severe and difficult-to-treat populations in psychiatry. This project was funded by a 2017 Mind & Life Varela Award and will evaluate whether a novel, mindfulness-based intervention can reduce emotional distress and associated dysfunction within a transdiagnostic sample of psychiatric patients with emotion dysregulation. The specific aims of this study are: 1. to evaluate the direct impact of a brief mindfulness training on emotional arousal and indices of social and psychological functioning (e.g., distress, emotion perception, and emotion dysregulation) within a laboratory-based training session, and 2. to investigate the effects of this intervention over one week, using our method of generalizing emotion regulation skills via mobile phone reminders. We will start data collection in June of 2018 and will present the rationale, study design, and preliminary analyses at the 2018 ISCR.

Poster Number: P047

Applicant Name: Valérie Morin-Alain

University/Institution: Université Laval

Title: *Effects of a Mindfulness-Based Intervention on Peripheral Inflammation of Elderly With Amnesic Mild Cognitive Impairment*

Authors: V Morin-Alain, E Larouche, AM Chouinard, S Goulet, C Hudon

Abstract: Peripheral inflammation plays a central role in the pathophysiology of Alzheimer's disease and dysregulations at this level are detectable as soon as the amnesic mild cognitive impairment (aMCI) prodrome. In this randomized-control trial, the impact of a mindfulness-based intervention (MBI) was compared to that of a

psychoeducation-based intervention (PBI) on the peripheral inflammation profile of people with aMCI. Plasma samples were collected from 12 participants per group before and after the 8-week interventions. Flow cytometry allowed for inter-group comparisons of cytokines Interleukin-6 (IL-6) and Tumor Necrosis Factor- α (TNF- α). In the MBI group, there was a tendency towards normalization of inflammation through a decrease of TNF- α and an increase of IL-6 levels. In the PBI group, the cytokine levels remained unchanged post-intervention. Thus, MBI appears to have a physiological effect on one important risk factor for AD, inflammation.

Poster Number: P048

Applicant Name: Nirmala Lekhak

University/Institution: University of Nevada Las Vegas

Title: *Effect of Meditation and Prayer on Cognitive Function of Older Adults With Multimorbidity*

Authors: N Lekhak, T Bhatta

Abstract: Drawing from a racially heterogeneous subsample from Health and Retirement Survey (N=1046), this study investigated the longitudinal effect of meditation/prayer on cognitive function of older adults with multimorbidity. Older adults with multimorbidity show greater decline in health status and are prone to cognitive decline, disability, frailty, and death. Human beings, from time immemorial, have used meditation/prayer to reduce psychological distress and promote healing. Little attention has been paid to its significance in buffering the adverse effect of multimorbidity on older adults' cognitive function over time. Generalized estimating models were used to investigate an average change in cognitive function. The findings although not statistically significant, showed that the respondents who had multimorbidity and used prayer or meditation had an increase in their cognitive function score over time. This study provides much-needed research evidence to design effective community-level interventions to reduce the risk of cognitive decline associated with age and multimorbidity.

Poster Number: P049

Applicant Name: Frederic Theriault Couture

University/Institution: Laval University

Title: *Mindfulness-Based Intervention for ADHD Children: Association Between Home Practice and Daily Functioning Improvement*

Authors: F Theriault-Couture, F Veillette, N Rouleau

Abstract: ADHD is characterized by an unattended level of inattention, hyperactivity and impulsivity, and social/academic dysfunctions, for which mindfulness-based interventions (MBIs) could be considered. We previously shown that during a MBI, ADHD children practice more frequently yoga compared to meditation and body scan, but how practice influence their dysfunctions is unknown. Objectives: To evaluate 1) the impact of a MBI on functioning, and 2) the contribution of home practice to functioning. Methods: 28 ADHD children (aged 7 to 11) participated in PEACE, a MBSR-adapted program. Eight weekly sessions include, yoga, meditation and body scan. Participants were asked to practice and record them daily in a log. Functional impairments were assessed by parents (WFIRS-S) at pre-, mid- and post-intervention. Results are now analyzed with repeated measures ANOVA and correlations to quantify the improvement and its relations with practice. Results will contribute to a better understanding of MBI's contributions for ADHD children.

Poster Number: P050

Applicant Name: Samuele Dallaire-Habel

University/Institution: University Laval

Title: *Assessment of Mindfulness Trait in Children With Attention Deficit Hyperactivity Disorder*

Authors: S Dallaire-Habel, S Charest-Langlois, N Rouleau

Abstract: Attention Deficit Hyperactivity Disorder (ADHD) is the most commonly diagnosed neurodevelopmental disorder in children and is characterized by an unattended level of inattention, impulsivity and hyperactivity. Some authors hypothesized that ADHD could be associated with a lower mindfulness trait due to the symptoms, yet the evidence is still lacking. Objective: This study aimed to compare the mindfulness trait of ADHD children with normative data. Methods: 28 ADHD children (mean age 9.33; range 7 to 11) participated in the study. Mindfulness was assessed using the French version of the Child and Adolescent Mindfulness Measure. Results: Total scores (/40) were compared to Greco's published data. Counter-intuitively, a one sample t-test showed a better performance of patients compared to normative sample. Further studies will investigate the factors underlying this effect, such as the impact of being diagnosed at a young age on metacognition and mindfulness skills.

Poster Number: P051

Applicant Name: Brittany Alperin

University/Institution: Oregon Health and Science University

Title: *How the Mind Wanders in Adults With ADHD*

Authors: BR Alperin, BD Shirley, JT Nigg, SL Karalunas

Abstract: Mind-wandering, or a shift in attention away from a task, is a common phenomenon that is often extreme in psychiatric disorders such as attention-deficit/hyperactivity disorder (ADHD) and is a common target of contemplative-based interventions. However, mind-wandering is multi-faceted. A growing literature is beginning to better define mind-wandering, differentiating spontaneous/constrained and stimulus-dependent/independent dimensions of thought; however, few studies have applied this methodology to studies of ADHD or other disorders. The current study examined whether adults with ADHD have more spontaneous/variable thoughts during mind-wandering than their peers. EEG was

recorded while adults completed a sustained attention task and periodically reported their thought content. Individuals with ADHD reported more variable thoughts during mind-wandering as compared to non-ADHD individuals. EEG complexity measures will be used to corroborate self-report measures and better understand the neural processes engaged during mind-wandering. These results begin to differentiate the relative contribution of different aspects of mind-wandering to clinical problems.

Poster Number: P052

Applicant Name: Simon Goldberg

University/Institution: University of Washington - Seattle

Title: *Utilization, Treatment Targets, and Perceived Effectiveness of Mindfulness Meditation in Veterans: Results From a National Survey*

Authors: S Goldberg, S Zeliadt, T Simpson, J Fortney, S Taylor

Abstract: Complementary and integrative health (CIH) practices are increasingly common in health care and mindfulness is one such evidence-based CIH practice. However, research on the application of mindfulness in certain subpopulations is limited. The current study explored the utilization of mindfulness among military veterans who receive VA health care using a large (n=1,230) national survey. We report the frequency and demographic predictors of veterans' utilization of mindfulness and examine the physical and mental health treatment targets for mindfulness along with self-reported effectiveness for these targets. 17.64% of veterans reported using mindfulness meditation in the past year, a rate of utilization that exceeded other CIH practices ($p < .001$) with the exception of massage and chiropractic care. Mindfulness was most commonly used for stress reduction (72.81%) and for addressing symptoms of depression and anxiety (51.15%). Effectiveness ratings indicated that mindfulness was similarly effective relative to other CIH practices (Cohen's $d=0.04$, $p=.391$).

Poster Number: P053

Applicant Name: Kelly Doyle

University/Institution: University of North Carolina, Chapel Hill

Title: *Ashtanga Vinyasa Yoga for PTSD in a Veteran Population*

Authors: K Doyle

Abstract: Posttraumatic stress disorder (PTSD) is a serious medical and mental health issue currently faced by many veterans. Existing treatments have not proven to be fully effective. The purpose of this study was to test an Ashtanga Vinyasa Yoga (AVY) breath-based-yoga intervention designed to improve the symptoms of PTSD and sleep quality in a veteran population diagnosed with PTSD. This was a quasi-experimental pilot study. Sixteen veterans who screened positive for PTSD were assigned to a 'yoga group (treatment)' or a 'waitlist yoga group (control).' Assessments were conducted for both groups at pre-treatment, and post-treatment. Differences in pre and post-treatment self-report symptom survey data were compared. Treatment group and non-treatment group pre and post-treatment scores were also compared. Outcome measures were the Posttraumatic Stress Disorder Checklist for the DSM-5 (PCL-5) and the Insomnia Severity Index (ISI). The 'yoga group' was provided a one-month, eight-session, twice-a-week, 60-minute AYP intervention class adapted for all mobility levels. At the conclusion of the study, 88% of the treatment group no longer met the criteria for a provisional diagnosis of PTSD and 88% no longer displayed moderate or severe clinical insomnia. There was no significant change in the control group. Clinically significant reductions in the PCL-5 and ISI scores were shown in the treatment group. The control group showed no meaningful reduction in PCL-5 or ISI scores. Results of this study support existing evidence, demonstrate AVY is an effective and safe intervention for people experiencing the symptoms of PTSD, and provide evidence to support further inquiry.

Poster Number: P054

Applicant Name: Anne Malaktaris

University/Institution: VASDHS Center of Excellence for Stress and Mental Health

Title: *Chronic Pain and PTSD: A Pilot Study of Cognitive-Based Compassion Training (CBCT®)*

Authors: A Malaktaris, S Baca, P Casmar, S Golshan, T Harrison, L Negi, AJ Lang

Abstract: Compassion meditation (CM), a meditative practice that focuses on the wish to remove suffering, has been associated with reductions in pain severity in civilians with chronic pain (CP) but has not been investigated among veterans. We conducted a secondary analysis of pain data from a randomized pilot study of Cognitive-Based Compassion Training (CBCT®) for veterans with posttraumatic stress disorder (PTSD). Veterans were randomized to CBCT® or Veteran.calm (VC), an enhanced relaxation intervention. Participants completed pre- and post-treatment evaluation of PTSD, depression, pain severity and interference. CBCT® participants experienced a significantly greater reduction of PTSD and depressive symptoms than control participants. There were no group differences in pain severity or interference; case data are used to understand patterns of response. This study demonstrates the feasibility of CM for veterans with PTSD. Future directions include additional research on the use of CM for veterans with co-occurring CP and PTSD.

Poster Number: P055

Applicant Name: Stephanie Schuette

University/Institution: Duke University

Title: *Further Exploring Emotion and Interoception Links: FEEIL Study*

Authors: SA Schuette, MJ Smoski

Abstract: Interoceptive awareness (awareness of physiological sensations in the body) is a primary focus of mindfulness practice and has unique associations with psychological wellbeing. It is unclear if interoceptive awareness has a unique relationship with psychological distress and pain outside of its relationship with

dispositional mindfulness. Eighty undergraduate participants will complete objective (heartbeat perception task) and subjective (Multidimensional Assessment of Interoceptive Awareness) measures of interoceptive awareness, along with measures of distress, chronic pain, dispositional mindfulness, and emotion regulation. We first hypothesize that higher mindfulness will be associated with lower distress and pain. Next, we will use a step-wise regression to determine if interoceptive awareness predicts pain and distress scores accounting for mindfulness and emotion regulation skills use. Results will be discussed for their relevance towards understanding the mechanisms of mindfulness, and how pain physicians, contemplative researchers, and mental health professionals can tailor interventions for unique clinical populations.

Poster Number: P056

Applicant Name: Akeesha Simmons

University/Institution: Lewis and Clark College

Title: *Immediate and Lasting Chronic Pain Reduction Following a Brief Self-Implemented Mindfulness-Based Interoceptive Exposure Task: A Pilot Study*

Authors: A Simmons, B Cayoun

Abstract: Mindfulness-based interventions have been shown to affect pain-related distress. This pilot study assessed the effects of a brief mindfulness-based interoceptive exposure task (MIET) on pain sensations, depression, anxiety, and stress in fifteen patients diagnosed with chronic pain. Participants completed the task at baseline with a trained researcher and on their own over a period of approximately ten weeks. Results indicate an immediate reduction in pain sensations and pain anxiety after task exposure. Additionally, reductions in depression, anxiety, and stress were observed from baseline to two-month follow-up, indicating that the MIET could be an efficacious complementary task in chronic pain treatment.

Poster Number: P057

Applicant Name: Bruce Bough

University/Institution: University of Aberdeen, Scotland

Title: *Mindfulness Practice in the Treatment of Insomnia Sleep Disorders and Associated Neural Mechanisms*

Authors: B Bough, D MacCarthy-Bough

Abstract: Insomnias are common health problems, with significant morbidity and increasing demands on health-care resources. Current recognized treatments are Cognitive Behavioral Therapy and Medication. Mindfulness Practice trains attentional, relational and cognitive capacities and an attitude of acceptance, potential mechanisms for influencing sleep-related self-regulatory functioning. Original basic research into the interactions between Mindfulness and Sleep-related Self-regulatory functioning resulted in a Clinical Trial of Mindfulness Practice in the therapeutic management of Insomnias, with the recommendation that Mindfulness Meditation Practice be considered as an early non-pharmaceutical therapeutic intervention by Physicians, particularly in relation to Sleep-Onset Insomnia, Sleep-Maintenance Insomnia and Sleep Inertia. Therapeutic advantages include ease and speed of introduction, appropriateness to the timing of the sleep problem, low side effects and a reduced drain on existing resources. Integration with existing therapies is considered. Neural mechanisms associated with the restoration of Sleep Normalcy are discussed in relation to neural correlates of Mindfulness and Acceptance Practice.

Poster Number: P058

Applicant Name: Veronica Womack

University/Institution: Northwestern University Feinberg School of Medicine

Title: *The Association of Mindfulness and Sleep Quality Among Multi-Ethnic American Women: Chicago Healthy Eating, Environment, and Resources Study*

Authors: VY Womack, CL Jackson, KN Kershaw

Abstract: Psychological health is related to sleep quality and mindfulness, but previous research has utilized a predominately white or clinical sample. We tested the hypothesis that higher levels of mindfulness were associated with better sleep quality in a cross-sectional sample of multi-ethnic, American women. Participants (n=172) from the community-based, Chicago Healthy Eating, Environments, and Resources Study were white (49.7%), black (18.5%), and Hispanic (41.0%) women aged 18-45 years old. They completed the Mindful Attention and Awareness Scale (15 items) and a single-item measure of sleep quality in 2016-17. In multivariable linear regression models, participants who reported high mindfulness had less poor sleep quality, independent of body mass index, age, and racial/ethnic background. In summary, our findings suggest an association of mindfulness with sleep quality among a racially diverse sample of women. Future research should investigate the mechanisms by which mindfulness effects sleep.

Poster Number: P059

Applicant Name: Vanessa Somohano

University/Institution: Pacific University

Title: *A Trauma-Informed Adaptation of Mindfulness-Based Relapse Prevention for Women in Residential Substance Use Treatment: A Pilot Trial*

Authors: VC Somohano, T Shank, S Bowen

Abstract: Women with substance use disorders (SUD) who have a history of trauma, compared to those without, are more vulnerable to severe physiological, psychological, and socioeconomic health disparities. There are few evidence-based treatments that address this dual vulnerability of SUD and trauma. Informed by focus groups with

primary counselors and women residents who have completed Mindfulness-Based Relapse Prevention (MBRP), this pilot trial will determine feasibility, acceptability, initial efficacy, and candidate mechanisms of a trauma-informed adaptation of MBRP among residents with trauma histories in a women's residential substance abuse treatment setting. Intervention feasibility and acceptability is hypothesized, as measured by recruitment and retention rates, homework compliance, and post-intervention client feedback. It is also hypothesized that decreases in craving, substance use, trauma symptoms, and experiential avoidance, and increases in resilience, mindfulness, coping strategies, and emotion regulation, will evince upon program completion, as compared to a treatment-as-usual group. Preliminary data will be presented.

Poster Number: P060

Applicant Name: Mayra Machado

University/Institution: Universidade Federal de São Paulo

Title: *Feasibility Study of a Mindfulness Based Intervention in the Public Health Treatment of Substance Use Disorder in a Middle-income Country*

Authors: M Machado, E Opaleye, A Noto

Abstract: Substance use disorders (SUD) are of great concern in public health worldwide, and its treatment is of high complexity. Mindfulness Based Relapse Prevention (MBRP) improves outcomes related to substance use and brings significant benefit to people with SUD. However, little is known about its dissemination in countries with different public health systems, socioeconomic situation, and culture, which may impact on how MBRP is received and implemented. To address this issue, we conducted a feasibility study of MBRP in Brazilian public health treatment for people with SUD, investigating acceptability, adaptation, and implementation. Results from 15 MBRP groups with 171 participants from 8 treatment centers points to great acceptance, and participants reported benefits such as better impulse control and better self-efficacy in managing high-risk situations. However, to be implemented some adaptations are

needed, especially regarding the 8 weeks closed structure. Rolling groups may be more indicated, and future studies should explore this possibility.

Poster Number: P061

Applicant Name: Emerita Opaleye

University/Institution: Universidade Federal de São Paulo

Title: *Dispositional Mindfulness and Anger Management in People With Substance Use Disorder*

Authors: ES Opaleye, CSN Yano, MPA Machado, DF Curado, AR Noto

Abstract: History of perpetrated and suffered violence is common among people who seek treatment for Substance Use Disorders (SUD), which is linked to aggressiveness and low anger management. We aimed to evaluate the relationship between dispositional mindfulness and anger management in a cross-sectional study performed with 156 patients from 8 specialized SUD treatment centers, using the State-Trait Anger Expression Inventory-2 (STAXI-2) test and the Five Facet Mindfulness Questionnaire (FFMQ). The results revealed an inverse relationship between anger expression and dispositional mindfulness, and this relationship was moderated by depression and anxiety symptoms. A higher score in dispositional mindfulness was related to lower expression and greater anger control. The mindfulness facet of 'acting with awareness' was the most relevant, as it was related to all scales and subscales of anger. Mindfulness training could enhance anger management in people with SUD, a subject/field to be explored in future studies.

Poster Number: P062

Applicant Name: Viviam Barros

University/Institution: Departamento de Psicobiologia, Universidade Federal de São Paulo

Title: *A Randomized Trial on the Effects of Mindfulness-Based Relapse Prevention (MBRP) on the Pattern of Chronic Use of Hypnotics and Insomnia Among Women Who Seek Treatment*

Authors: VV Barros, ES Opaleye, M Demarzo, S Bowen, H Hachul, AR Noto

Abstract: Hypnotics are one of the most prescribed drugs worldwide especially for women and its chronic use may lead to tolerance, dose escalation, dependence, abstinence syndrome and motor and cognitive impairments. Evidence is lacking about the effects of mindfulness for the reduction of hypnotic chronic use among insomniac women. This trial evaluated the efficacy of the Mindfulness-Based Relapse Prevention (MBRP) (n=34) against weekly phone monitoring (n=36) on the dosage of hypnotics and the insomnia in this population, over six months postintervention. Findings showed that after the intervention the MBRP group reduced the dosage while the control group increased. Also, the MBRP group had a greater reduction of insomnia severity after four and six months of the end of the intervention. This study shows evidence on the MBRP for the chronic hypnotic's use and insomnia, paving the way for a new therapeutic possibility to the reduction of inappropriate consumption of these medicines.

Poster Number: P063

Applicant Name: Aaron Bergman

University/Institution: Pacific University

Title: *Using Mobile Technology to Enhance Engagement and Enactment of Mindfulness-Based Relapse Prevention in Rural Communities*

Authors: AL Bergman

Abstract: A growing body of evidence suggests that Mindfulness-Based Interventions (MBIs) are effective for addressing a wide variety of clinical concerns. These approaches remain limited, however, in their reach. Innovative strategies are needed to introduce

MBIs to isolated populations, such as rural residents. These individuals are often underserved, despite high clinical need, in areas including addiction. Preliminary research has suggested that technology may be useful in overcoming traditional barriers faced by rural populations in accessing care. The current study explores feasibility and impact of a smartphone app on treatment engagement in Mindfulness-Based Relapse Prevention (MBRP) in a rural setting. Participants in a rural community addictions treatment center will be randomized to standard MBRP or the mobile app condition (MBRP-Mobile). Treatment engagement will be measured by comparing session attendance, satisfaction surveys, and a meditation practice questionnaire between standard MBRP and MBRP-Mobile groups. Self-reported substance use, craving, and affect will also be compared.

Poster Number: P064

Applicant Name: Jennifer Daubenmier

University/Institution: San Francisco State University

Title: *Can Mindfulness-based Approaches Reduce Disparities in Weight Loss Interventions?*

Authors: J Daubenmier, PJ Moran, ES Epel, FM Hecht, MT Chao

Abstract: Socially disadvantaged groups have higher prevalence of obesity and traditional weight loss interventions are less effective for underserved populations. We examined whether mindfulness-based approaches can reduce racial/ethnic and educational disparities in weight loss interventions. We analyzed data from a randomized clinical trial comparing 5.5-month diet/exercise weight loss interventions with or without mindfulness training among 194 adults with obesity. We assessed racial/ethnic and educational differences in weight change at 6, 12, and 18 months. Racial/ethnic minorities in the mindfulness group maintained weight loss at 18 months whereas minorities in the control group returned to baseline weight. Participants without a college degree had significantly more weight loss in the mindfulness group compared to the control group at 6, 12, and 18 months. The integration of mindfulness training into

diet/exercise weight loss programs may minimize racial/ethnic and educational differences in weight loss compared to traditional diet/exercise interventions and deserves further research.

Poster Number: P065

Applicant Name: Zoe Berman

University/Institution: Colorado State University

Title: *Experimental Effects of a Mindfulness Induction on Stress-Eating in Adolescents At-Risk for Obesity*

Authors: Z Berman, B Pivarunas, S Annameier, N Sanchez, M Burke, C Melby, S Johnson, R Lucas-Thompson, L Shomaker

Abstract: Mindfulness-based interventions may offer a unique approach to weight management, particularly for individuals prone to stress-eating. However, limited research has directly tested if increasing mindfulness reduces stress-eating. We conducted a randomized crossover study in which 30 adolescents at-risk for obesity received either a 10-minute mindfulness or neutral audio-recording in random order, followed by a modified version of Trier's Social Stress Test (TSST-M), a social-evaluative stress challenge. After the TSST-M, stress-eating was measured as energy intake from a multi-item laboratory test meal. State measures of mindfulness and anxiety were repeated throughout the paradigm and summarized as area-under-the-curve with respect to increase. Adolescents demonstrated increased mindfulness and decreased anxiety in response to the mindfulness induction versus control. Accounting for BMI-z, age, and sex, adolescents consumed less in response to stress after the mindfulness induction versus the control. Results support the notion that increasing mindfulness may mitigate stress-eating in adolescents at-risk for obesity.

Poster Number: P066

Applicant Name: Shelly Annameier

University/Institution: Colorado State University

Title: *A Focus Group Study of Mindfulness-Based Practices for the Prevention of Type 2 Diabetes (T2D) in Hispanic/Latino Adolescents*

Authors: SK Annameier, N Sanchez, V Jimenez, L Hanson, L Schwartz, M Haemer, LB Shomaker

Abstract: Hispanic/Latino adolescents are disproportionately at-risk for youth- and adult-onset T2D. Traditional eating/exercise programs lack effectiveness in preventing T2D in Hispanics/Latinos, partially because they fail to address culturally-relevant psycho-social stressors that undermine healthy living. Researchers conducted a focus group study to determine Hispanic/Latino adolescents' and parents' views of stress, T2D, and mindfulness-based practices. Thirty-two adolescents and 31 parents participated in a 2.5-hour adolescent or parent discussion. Mixed-methods data were collected, and qualitative data analyzed for constructed themes. Participants indicated a desire for T2D prevention programming and expressed preference for sessions incorporating (1) combination of family and peer time, (2) Spanish-language sessions for parents/caregivers, and (3) mindfulness techniques to address mental stress. Participants noted limited exposure to contemplative practices (e.g., breathing and stress reduction) and communicated an interest in mindfulness for health and wellness. The incremental value of adding mindfulness-based practices to traditional T2D prevention programs for Hispanic/Latino adolescents should be determined.

Poster Number: P067

Applicant Name: Alejandro Chaoul

University/Institution: University of Texas, The Jung Center's Mind Body Spirit Institute

Title: *Meditation for Post Stroke Depression*

Authors: A Chaoul, J Sanner, A Sharrief, A Prossin, S Savitz

Abstract: Stroke is a leading cause of severe chronic disability in the U.S. Interventions directed at improving prevailing symptoms of mood disorders, including post-stroke depression (PSD), may improve associated stroke recurrence, mortality, disability, pain, diminished quality of life (QOL), and cognitive impairment as well as significant reductions in QOL and enhanced risk of burden and symptoms of mood disorders in the informal caregiver. Novel mechanisms of mind-body interactions offer a mechanistic framework into the co-morbidity of mood disorder-associated illness and pathological states in which potent interleukin-1 (IL-1) family pro-inflammatory cytokines are implicated. The purpose of this RCT is to establish feasibility and preliminary efficacy on a mind-body intervention in people with PSD and their caregiver. Patients with PSD and their caregiver participate in a 4-session weekly program learning simple meditation practices inspired on The Three Doors approach by Tenzin Wangyal Rinpoche. Participants receive a handout and audio link to continue to practice at home what was learnt that week and keep a log of their practice. Through this intervention we propose to establish the feasibility of this meditation RCT in stroke survivors with PSD and their informal caregivers and test the effects of the Three Doors meditation on depressive symptoms, anxiety symptoms, and plasma IL-1 family pro-inflammatory cytokines. We plan to conclude this study in August 2018 and have the data available for the ISCR 2018 in November.

Poster Number: P068

Applicant Name: Weeranan Yaemrattanakul

University/Institution: University of Essex

Title: *The Effect of a Mindfulness Movement Therapy Programme on Arm and Hand Function in Patients With Stroke: A Preliminary Study*

Authors: W Yaemrattanakul, J Jackson, H Gillmeister, P Rungrit, S Tipchatyotin

Abstract: In the last decade, mindfulness-based interventions have been applied more in stroke patients. However, no studies have investigated the effect of mindfulness

meditation-related directly to the recovery of motor function in stroke patients. Therefore, a Mindfulness Movement Therapy Programme (MMTP) was proposed with a study to examine its feasibility and effects on arm and hand function in stroke patients. Seven patients (1 female and 6 male) aged 44–68 completed the study. They did not have any other neurological illness or severe mental health disorders. Patients received the usual physical therapy programme for 30 minutes, 3 times a week, for 4 weeks. After that, they received the usual physical therapy programme for 30 minutes combined with the MMTP which consisted of 1) body scan technique (by focusing on the affected upper limb); 2) sitting meditation; and 3) mindful-movement of the affected upper limb integrated with physical therapy exercise, for 30 minutes, 3 times a week, for 8 weeks. All outcomes were measured at week 0 (pre-test 1), week 4 (pre-test 2), and week 12 (post-test). The results showed improvements in upper extremity impairment and quality of life after they received the usual physical therapy programme. After MMTP was combined with the programme, improvements in spasticity, mindfulness, perceived stroke recovery, and quality of life were noted. MMTP also tended to improve arm and hand function. Findings encourage further investigations of the MMTP as a new intervention to improve motor function in stroke patients.

Poster Number: P069

Applicant Name: Kinjal Doshi

University/Institution: Singapore General Hospital

Title: *Investigating the Impact of Mindfulness on the Psychosocial Well-being of Stroke Survivors and Their Family Caregivers*

Authors: SL Henderson, L Sugumar, AY Low, S Thilarajah, DA De Silva, K Doshi

Abstract: Stroke impacts the psychosocial well-being of stroke survivors and their family caregivers, which further impedes their physical recovery and ability to reintegrate into society. This randomized wait-list controlled study evaluates a four-weekly session mindfulness-based program, and its influence on reported levels of depression, stress and perceived quality of life among stroke survivors and caregivers. 26 participants also

provided feedback upon completion of the program. At the end of the program, caregivers reported significantly lower levels of self-reported depression. Stress levels were also lower for all participants, though the decline was not significant. Participant feedback highlighted that: (1) the group setting provided social and emotional support; (2) incorporating mindful physiotherapy movement into daily activities aided the practice of mindfulness; (3) the inclusions of alternative resources would further facilitate practice. This program alleviates psychosocial distress among survivors and caregivers in addition to providing an opportunity for interaction and post-stroke supportive care.

Poster Number: P070

Applicant Name: Elisa Kosaza

University/Institution: Hospital Israelita Albert Einstein

Title: *Using fNIRS and Gait Parameters to Evaluate the Impact of Yoga in Multiple Sclerosis Patients: A Pilot Study*

Authors: MA Aratanha, C Amaral, J Balardin, D Specialli, H Rodrigues, R Thomaz, EH Kozasa

Abstract: Multiple sclerosis (MS) is a neurological disorder that affects mostly young adults. On the other hand, practicing yoga has been associated with cognitive and movement improvements in patients with neurological disorders. Objectives: To assess whether the practice of yoga impacts in cortical activity and gait parameters of patients with MS. Methods: We used portable functional near infrared spectroscopy (fNIRS) and VICON® motion capture system to characterize cortical and motor activity during a dual task (with operational memory and motor components) in two patients with MS who practiced yoga and two healthy controls. Results: All participants showed greater cortical activation during the dual task compared to only walking on the track, and patients with MS showed larger activation around the motor area. After practicing yoga,

MS patients also presented improvements in gait parameters. Conclusions: Yoga may be an interesting complementary intervention on the treatment of MS.

Poster Number: P071

Applicant Name: Brittney Schirda

University/Institution: The Ohio State University

Title: *Mindfulness Training and Impact on Emotion Dysregulation and Strategy Use in Multiple Sclerosis: A Pilot, Placebo-controlled, Randomized Controlled Trial*

Authors: B Schirda, RS Prakash

Abstract: Multiple sclerosis is a neurodegenerative disease associated with increased emotion dysregulation. Mindfulness-based training is associated with robust improvements in affective functioning. The present study examined the effect of a brief, 4-week mindfulness-based training program on measures of emotion dysregulation and strategy use relative to an active computerized-training control group, as well as a waitlist control group. Emotion dysregulation and strategy use were assessed using a combination of self-report, behavioral, and psychophysiological measures. We employed a novel ideographic worry and rumination induction paradigm, to examine changes in self-reported emotion, strategy use, and heart rate variability. Participants in the mindfulness group showed significantly greater reductions on a self-report measure of emotion dysregulation compared with participants in the waitlist control group only. No significant changes were observed between groups on the behavioral worry and rumination task. Future analyses will examine the impact of mindfulness training on heart rate variability within this sample.

Poster Number: P072

Applicant Name: Nadja Igarashi

University/Institution: Israelita Albert Einstein Hospital

Title: *The Practice of Meditation During the Hemodialysis Session Reduces Depressive Symptoms by Increasing Mindfulness and Self-Compassion*

Authors: NS Igarashi, CH Karam, SS Lacerda, FD Carneiro, RF Afonso, BFC Santos, EH Kozasa, EB Rangel

Abstract: Practices that promote health and prevent comorbidities are fundamental, mainly in chronic diseases, such as chronic kidney disease (CKD). A randomized design and waiting list control study was set up (ClinicalTrials.gov NCT03162770). A convenience sample of CKD patients under hemodialysis was enrolled to a meditation protocol, at Hospital Israelita Albert Einstein, Sao Paulo, Brazil. Self-Compassion Scale and Beck Depression Inventory were applied before and after the protocol which consisted of meditation practice, every week, lasting 10 to 20 minutes during each hemodialysis session, for 12 weeks. After the meditation protocol, patients presented a better control of serum phosphorus, a 23% decrease in depressive symptoms, they became more compassionate with themselves (7%), an increase in 13% of mindfulness and Self-Compassion scores. Our findings suggest that meditation practice lead ultimately to healthier behaviours and to a better adherence to medical recommendations in a hemodialysis group of patients.

Poster Number: P073

Poster withdrawn by presenter

Poster Number: P074

Applicant Name: Peter Lin

University/Institution: St. Joseph's College

Title: *Examining MBSR: Perceptions From Minority HIV Clients Residing in a Low-Income Housing Neighborhood*

Authors: P Lin, A Carballo-Diéguez, J Chang

Abstract: Stress related to HIV/AIDS is an important public health concern because it may accelerate HIV disease progression by increasing viral replication and suppressing the immune response. Mindfulness meditation has been shown to effectively reduce stress related to medical illnesses such as cancer. However, the effects of mindfulness meditation on stress related to HIV/AIDS among ethnic minorities has rarely been investigated systematically. Since mindfulness meditation can be effective in reducing stress and it has minimal cost, the effect of mindfulness meditation on stress levels and quality of life related to HIV/AIDS should be explored. The goal of this study is to collect pilot data on which to build a more comprehensive study. The specific aims of this study are to obtain a preliminary quantitative and process evaluation of Mindfulness-Based Stress Reduction (MBSR).

Poster Number: P075

Applicant Name: Utkarsh Subnis

University/Institution: University of Calgary

Title: *The ONE-MIND Study Protocol: Evaluating the Efficacy of ONlinE MINDfulness-Based Cancer Recovery (MBCR) During Chemotherapy Treatment (CT) to Impact Fatigue, Side Effects and Quality of Life (QL) in a Randomized Waitlist*

Authors: U Subnis, LE Carlson, M Specca, S Lupichuk, P Tang, P Faris

Abstract: Background: Chemotherapy treatment (CT) can have burdensome side effects such as fatigue, nausea-vomiting, and sleep problems that can significantly affect patients' quality of life. Fatigue is the most common, lasting and bothersome of these, which prevents people from working and carrying out daily activities. Mindfulness-Based Cancer Recovery (MBCR) is an evidence-based group training program in the

contemplative practice of mindfulness meditation and gentle yoga which has shown to help treat negative symptoms in cancer patients. We propose to evaluate a pilot-tested online-MBCR program for people undergoing CT who may be low on energy, time or be immunocompromised. Objectives: To evaluate the impact of participation in online MBCR during CT on fatigue (primary outcome), sleep, pain, nausea/vomiting, mood disturbance, stress symptoms and quality of life (secondary outcomes) as well as cognitive function and return to work (exploratory outcomes) over the course of treatment. Methods: The study design is a randomized wait-list controlled trial, conducted during CT for patients with breast or colorectal cancer. Participants will take the 12-week online MBCR program at home within 2 weeks of randomization (immediate group) or after CT completion (waitlist group). Outcomes will be assessed online at, 1) Baseline, 2) Post-MBCR, 3) Post-CT (primary outcome) and 4) 12 months post-baseline. Significance: MBCR is a promising adjuvant program that could help patients prevent, delay or diminish aversive symptoms and side-effects associated with CT, particularly fatigue. If helpful, online-MBCR could be made easily available at cancer centers worldwide and significantly lessen the burden of cancer treatments.

Poster Number: P076

Applicant Name: Hassan Pirbhai

University/Institution: University of Calgary

Title: *Investigating Preliminary Enrollment and Treatment Preference Data Between Mindfulness-Based Cancer Recovery (MBCR) and Tai Chi/Qigong (TCQ) for Distressed Cancer Survivors in The MATCH Study (Mindfulness and Tai-Chi for*

Authors: H Pirbhai, L Carlson, J Jones, D Santa Mina, M Speca, U Subnis, D Oberoi

Abstract: Recruitment is consistently challenging in clinical studies involving cancer survivors; however, in the MATCH study, additional challenges exist due to design features including the ability for participants to choose between Mindfulness-Based Cancer Recovery (MBCR) and Tai Chi/Qigong (TCQ) interventions, while those without a preference are randomized into either treatment. Secondary randomization then occurs into immediate or delayed groups within both preference and non-preference arms. It is

hypothesized that patients who show preference are more likely to follow-through with study participation, thus maximizing recruitment and allowing comparison of the effects of preference on outcomes. A drawback of allowing preference-based assignment is that groups may also differ by demographic/disease characteristics and sample sizes may be uneven. Setting broad inclusion parameters has aided recruitment rates, however several exclusionary factors are still applied. This poster will explore recruitment barriers related to both screening and randomization in the first ~200 participants.

Poster Number: P077

Applicant Name: Katherine-Ann Piedalue

University/Institution: University of Calgary

Title: *Comparing the Effectiveness of Two Contemplative Practices in Distressed Cancer Survivors: Patient Preferences and Compliance in The MATCH (Mindfulness and Tai Chi for Cancer Health) Study*

Authors: KL Piedalue, D Oberoi, U Subnis, M Qureshi, M Speca, JM Jones, DS Mina, LE Carlson

Abstract: The MATCH study is an innovative, preference-based comparative effectiveness trial comparing Mindfulness-Based Cancer Recovery (MBCR) and Tai Chi/Quigong (TCQ) for distressed cancer survivors. Participants with no preference are randomized into either group, those with a preference will receive their choice of intervention. Further, by a 2:1 ratio participants are randomized to receive immediate intervention or are waitlisted. At the outset, we had no data concerning how many people would choose each intervention or have no preference. The purpose of this poster is to present data on participant preferences and intervention compliance, using data from the first nine cohorts of the MATCH study (six from Calgary and three from the Toronto; N~200). The analyses will include descriptions of missing data, participant adherence to home practices, and dropout rates across MBCR and TCQ comparing

participants who were randomized, those with a preference as well as comparing immediate intervention to waitlisted groups.

Poster Number: P078

Applicant Name: Jamie Whiteley

University/Institution: University of Seattle

Title: *Self-Compassion, Subjective Health Status, and Willingness to Seek Medical Care*

Authors: J Whiteley, S Kim, RE Goldsmith Turow, GH Montgomery, M Dillon, JB Schnur

Abstract: Few studies have explored relationships among self-compassion and physical health behaviors. Our IRB-approved research investigated the hypothesis that self-compassion would be positively related to subjective health status and willingness to attend doctor visits. Community members (N = 241; 118 female), ages 18-80 (M=33.14, SD=10.86), completed the Self-Compassion Scale (Neff, 2003), items from the SF-36 survey (Ware & Sherbourne, 1992), and a question about their avoidance of visiting doctors. Lower levels of self-compassion were associated with poorer perceptions of overall health ($r=-.29$, $p<.001$), yet with increased avoidance of doctor visits ($r=.16$, $p=.03$). Although individuals with less self-compassion consider themselves to be in worse physical health, they counterintuitively are more likely to avoid medical visits than people with greater self-compassion. Individuals with lower self-compassion may not consider their health difficulties to be worthy of care. The current data highlight connections among individuals' self-compassion, subjective health status, and willingness to seek medical care.

Poster Number: P079

Applicant Name: Adrienne Chang

University/Institution: Miami University

Title: *Healthy Aging and Mindfulness Meditation Retreats: Spiritual Development, Meaning Making, and Resiliency in Later Life*

Authors: A Chang

Abstract: Meditation retreats within the context of established traditions provide opportunities for novice and experienced meditation practitioners to deepen their practice, as well as serve as socio-environmental contexts for learning and improved well-being and community, including older adults. This study examines results of the effects of meditation retreats on measures of physical and psychological health and analyzes content from open survey responses from older retreat participants (age sixty plus) from multiple meditation retreat centers in the U.S. and Europe. The majority of the Western participants saw meditation retreats not only as an important resource for improved well-being, but as a context for continual spiritual development, healthy aging, and personal growth. Meditation retreats were seen as particularly important milestone events accompanying mid-to-later life transitions, such as divorce and retirement, as well as important socio-religious contexts of elderhood within a spiritual community.

Poster Number: P080

Applicant Name: BriAnne Hutchinson

University/Institution: Lewis and Clark Graduate School of Education and Counseling

Title: *Call for a Mind/Body ACA Division*

Authors: B Hutchinson, A Simmons

Abstract: The subject of mind body practice is a contentious subject in the world of mental health counseling because of ethical issues that arise in the ACA regulations with the use of touch and energetics, suggesting such notions place the client at risk. The aim of this poster is to propose a division of the ACA that supports counselors who incorporate mind/body modalities into their practice (e.g., mindfulness meditation techniques, yoga, Hakomi method, therapeutic touch and more). This division would

function as a network of therapists who support each other in pursuing these types of techniques within the ethical understandings of the ACA. Such a division would offer tangible recourses including; focused peer reviewed research examining these methods, current practitioners working in the field, and seminars/workshops/discussion groups. Such a division could also create a rubric/working evidence based guidelines for the implementation of mind/body therapy within the professional mental health counseling environment.

Poster Number: P081

Applicant Name: Susan Hall

University/Institution: Pepperdine University Graduate School of Psychology

Title: *Does Graduate School Cultivate Self- and Other-Compassion in Counselor Trainees? Examining Student and Supervisor Reports*

Authors: S Hall, J Tully

Abstract: Numerous legal and ethical bodies call for clinical training programs (e.g., clinical social work, clinical counseling, clinical psychology) to include self-care strategies and develop specific characteristics and behaviors that influence the helping process, such as empathy, presence and flexibility. Recent research demonstrates that contemplative practices such as mindfulness training show promise for improving personal wellbeing as well as developing essential helping qualities. Yet, research is lacking regarding how training programs cultivate or measure these positive qualities in trainee mental health professionals. After providing an overview of the rationale for incorporating contemplative practices into clinical training programs, initial results are presented from a longitudinal program of research examining the development of such qualities in master's students in a counseling and marriage and family therapy program; this poster focuses on compassion. This program of research uniquely gathers quantitative data from different stakeholders (student, faculty, counseling supervisors) to measure various helping qualities.

Poster Number: P082

Applicant Name: Courtney McCluney

University/Institution: University of Virginia Darden School of Business

Title: *Creating Opportunities for Compassionate Care in Interprofessional Healthcare Teams*

Authors: C McCluney, E Cayir, J Haizlip, T Cunningham, E Anderson, V Brashers, J Owen, M Norling

Abstract: Can compassion be taught? We explore this question in the training of medical professionals. Developing compassionate care for interprofessional healthcare teams (e.g., nurses, doctors, and allied health professionals) is critical for improving quality in patient care. Additionally, increasing compassion in collaborative practice may improve workplace culture and decrease the risk of professional burnout. In this study, we used participatory action research to create a Collaborative Care Best Practices Model (CCBPM)TM of compassion. Using this method, we devised an assessment tool to objectively observe and measure collaborative behaviors and compassionate responses in a medical simulation. Our iterative, participatory model consisted of expert panelists' creation of a compassionate care scenario using successive rounds of focus-group interviews, which were followed by a Delphi methodology to refine key elements of a compassionate response. Finally, we used a participatory ranking model to: (1) rank the most important elements of a compassionate response situation (e.g., eye contact), (2) create medical simulations to evoke a compassionate response, (3) pilot the scenarios with medical professionals and actors, and (4) observe the scenarios. Further refinement occurred until there was consensus on the simulation. As a result of this process, we developed two medical simulations to observe collaborative compassionate care. First, we assessed whether participants displayed compassion to team members during a "code" situation (e.g., patient dies). Second, we assessed how participants demonstrated compassion while delivering bad news to the spouse of the

deceased patient. Collectively, the CCBPM helped create an assessment tool to measure compassionate behaviors in interprofessional teams.

Poster Number: P083

Applicant Name: Ebru Cayir

University/Institution: University of Virginia

Title: *Measuring Effects of Mindfulness-based Interventions on a Stressful Simulated Medical Encounter*

Authors: E Cayir, C McCluney, E Williams Anderson, T Cunningham

Abstract: This research aims to measure the effect of two contemplative interventions, body scan and “The Pause”, on the physiological and emotional responses of health care professionals and students (n=280) in simulated patient encounters. The participants will be randomized to four intervention groups: 1) Control; 2) Body Scan; 3) Body Scan and the Pause; 4) The Pause. Pre-post intervention assessments include the measurement of vital signs, heart rate variability, and the application of psychometric scales that assess perceived stress, anxiety, and perceived compassion. Individual and team-level responses to the stressful patient encounter will be videotaped and assessed using a Collaborative Behaviors Observational Assessment Tool that was developed and validated by the research team as an objective measure of compassionate response. The participants who have been exposed to either or both of the contemplative interventions are expected to show a lower stress response compared to the control group.

Poster Number: P084

Applicant Name: Dallas Ducar

University/Institution: The University of Virginia

Title: *The Pause: Building a Real-Time Definition of an Expanding Contemplative Practice*

Authors: D Ducar, J Keim-Malpass, T Cunningham

Abstract: In 2009, an emergency department nurse devised a contemplative intervention called, “The Pause.” This practice occurs when a patient dies in a hospital or pre-hospital setting. A member of the care team, any member (nurse, physician, pharmacist, technician, custodial services), asks for the entire group to pause in silence and reflect on the life that has just ended. “The Pause” also honors the contributions of the care team that tried to save the patient’s life. “The Pause” has spread internationally. We employed a Delphi methodology to build a working definition of how “The Pause” is being used in hospitals and academic settings. Content analyses show language used to teach and describe “The Pause,” while our thematic analyses show how the use of “The Pause” has adapted to various hospital and cultural settings. These data map how use of “The Pause” is changing hospital culture at the end of life.

Poster Number: P085

Applicant Name: Marcelo Demarzo

University/Institution: Universidade Federal de São Paulo - Mente Aberta Brazilian Center for Mindfulness and Health Promotion

Title: *Preliminary Efficacy of Different Mindfulness-based Interventions for Burnout Symptoms in Primary Care Providers: Results from Two Brazilian Trials*

Authors: M Demarzo, AC Mafra, D Sopezki, S Andreoni, V D’Almeida, E Dias de Castro Filho, S Fortes, J Montero-Marin, J Garcia-Campayo

Abstract: The prevalence of the Burnout Syndrome (BS) or symptoms among Primary Health Care (PHC) providers is high and can affect their quality of life and clinical results. Mindfulness-based interventions (MBI) have been tested as promising interventions to manage chronic stress and BS in PHC providers. The main goal of these 2 studies was

to compare the feasibility and preliminary efficacy of different MBI on burnout symptoms in Brazilian PHC providers. The first was a non-randomized controlled study comparing an 8-week MBI to a 4-week-relaxation-based intervention and to a wait list control group. Results partially confirmed the hypothesis of superiority of MBI, suggesting that mindfulness and relaxation interventions may be efficacious to address burnout symptoms in PHC providers. The second study was a randomized controlled trial comparing the efficacy of an 8-week MBI to a 2-week abbreviated version of the same program and to a wait list control group. To our knowledge, this is the first study to directly investigate the efficacy of a standard 8-week MBI and a 2-week abbreviated protocol in a population of PHC providers. Based on our findings and like previous studies, both programs performed better than controls regarding mindfulness and self-compassion. Overall, the efficacy of abbreviated mindfulness programs may be similar to standard 8-session MBI programs applied to non-clinical populations, making them potentially more accessible for a larger number of people. Nevertheless, further studies with more powerful designs are warranted to compare the non-inferiority of the abbreviated protocol and address clinical populations.

Poster Number: P086

Applicant Name: Michael Gawrysiak

University/Institution: West Chester University of Pennsylvania

Title: *3-DOORS Compassion Project: Examining the Longitudinal Effects of a 9-Month Tibetan Bön Meditation Training Program*

Authors: M Gawrysiak

Abstract: Although numerous meditation techniques exist within Buddhist traditions, the majority of scientific publications to date have focused on mindfulness meditation. The present study examines changes associated with the 3-Doors Compassion Project (3DCP), a 9-month long secularized meditation-program developed by Tenzin Wangyal Rinpoche, based in the teachings of Tibetan Bon Buddhism. Participants (n=27) were medical or mental health care professionals experiencing work-related stress. The 3DCP

program entailed attendance to 10 group meditation sessions, divided across 9 months, where guided meditations and teachings were provided. A battery of validated assessment questionnaires was completed by participants in monthly intervals: before enrollment, during the program, and for one year following the program. A General Linear Mixed Model was used to estimate changes in outcomes across time. Statistically significant changes occurred through monthly improvements in work-related burnout, perceived stress, depression, and mindfulness. Additionally, participants' month-by-month meditation practice (measured in days of practice and total minutes practiced) associated with observed changes in monthly outcome measures. Implications for expanding research beyond mindfulness meditation will be discussed.

Poster Number: P087

Applicant Name: Angie Chew

University/Institution: Brahm Centre

Title: *A 4-Week Mindfulness Program Reduces the Stress of Healthcare Professionals, Improve Their Sleep Quality and Improve their Mental Wellbeing*

Authors: K Pek, CN Tan, A Chew, E Lim, Z Laczi, D Kuladeva

Abstract: In recent years, occupational stress may be causing burnout among healthcare workers which might be a potential threat to patient safety and healthcare quality. Numerous studies have shown that mindfulness intervention can effectively help healthcare workers in managing physical and mental wellbeing. A 4-Week Mindfulness Program has shown to reduce the stress level of healthcare professionals, improve their sleep quality and mental wellbeing at Tan Tock Seng Hospital in Singapore. Majority were nurses (52.17%) with minority being doctors (8.7%) and allied health professionals (39.13%).

Poster Number: P088

Applicant Name: Kelly Trowbridge

University/Institution: University of Kansas Medical Center

Title: *Child Life Specialists' Tolerance of Uncertainty and Professional Quality of Life: Effects of a Two-Day Mindfulness Training in the Workplace*

Authors: K Trowbridge, S Andrews, S Ganey, M Abbott

Abstract: Child life specialists (CLS) are specially trained to work with children during high stress medical procedures (IV starts, MRIs, CTs) and difficult visits/admissions (presurgery, emergency care, forensic exams, long-term treatment). We investigated the role CLS intolerance of uncertainty might play in the stress CLS experience and what role mindfulness might play in reducing that stress. To date, there are no studies describing the use of mindfulness-based interventions with CLS. Paired t-tests were utilized to investigate the effects of a two-day mindfulness-based intervention based on MBSR provided in a pediatric medical center for twenty-two CLS. Compared to baseline, at both six and twelve weeks, we found the following: CLS significantly increased tolerance of uncertainty measured by the Intolerance of Uncertainty Scale; CLS demonstrated significant gains in all Professional Quality of Life Scale subscales; and over 50% of CLS maintained a formal meditation practice and over 85% maintained informal mindfulness practices.

Poster Number: P089

Poster withdrawn by presenter

Poster Number: P090

Applicant Name: Jocelyn Lai

University/Institution: University of California, Berkeley

Title: *Blood, Sweat, and Tears, but I Love What I Do: Emotional Experiences & Burnout in Medical Residents*

Authors: J Lai, E Ekman

Abstract: Chronic stress and burnout is an epidemic in the medical field. More fine-grained investigation is needed to understand the specific source of emotional distress that contribute to burnout among medical providers. The goals of this study were to assess the use of emotion-focused experience sampling in medical residents and inform future interventions to reduce burnout. Using Maslach Burnout Inventory and an ecological momentary assessment tool, we had medical residents (n=100) at the University of California, San Francisco complete pre- and post-burnout measures as well as daily assessments across multiple time-points throughout 14-days to capture their daily triggers, experiences, and responses to emotions. Results show that despite high levels of burnout, these medical residents experienced “enjoyment” 50% of the time compared to negative emotions such as “anger” (15%) and “fear” (17%). Further examination of day-to-day emotions and mindfulness of emotions is important for knowing its relationship to burnout in medical providers.

Poster Number: P091

Applicant Name: Jane Cha

University/Institution: The University of Auckland

Title: *Does Obliging Compassion in Medicine Actually Work? An Experimental Test*

Authors: J Cha, NS Consedine, A Fernando III

Abstract: Compassion is a professional obligation for medical professionals. This experiment tested whether priming obligation increases compassion among medical trainees and whether making obligation salient has comparable effects across groups with particular cultural characteristics. 88 East Asian or New Zealand European medical trainees completed an online survey assessing Individualism-Collectivism before attending a laboratory session in which they were randomised to receive obligation or

autonomy primes. Self-reported (patient vignette ratings) and behavioral (donation paradigm) measures assessed medical compassion. Mixed model MANCOVAs showed complex effects. Priming compassion led to greater donations and eliminated the effect in which trainees with greater vertical collectivism (VC) were less compassionate to negative patients. Enhancing the salience of professional obligations may reduce the tendency for those who value hierarchy, authoritarianism and in-group obligations (higher in VC) to respond more negatively and less compassionately to 'difficult' patients.

Poster Number: P092

Applicant Name: John Schorling

University/Institution: University of Virginia

Title: *Does Wisdom Protect Against Depersonalization Among Medical Students?*

Authors: J Schorling, M Plews-Ogan, R Kon, T Flickinger, J Owens

Abstract: Burnout among medical students is an important issue, especially the development of the depersonalization domain which has been associated with loss of empathy and unprofessional behavior. Wisdom has also received recent attention. Ardeli describes wisdom as: understanding deeper meanings, knowing the limits of knowledge, engaging in reflection, compassion, and being other-centered. The purpose of this study was to evaluate whether students who score higher in wisdom are less likely to develop depersonalization. An on-line survey was sent to all medical students at the UVA School of Medicine during two academic years that included Ardeli's 3-Dimensional Wisdom Scale (3-D WD) and the Maslach Burnout Inventory (MBI). Students who developed criteria for high depersonalization had wisdom scores which were significantly lower than those who never had high depersonalization. This suggests that having high wisdom as measured by the 3-D WS may be protective with regard to developing depersonalization in medical school.

Poster Number: P093

Applicant Name: Timothy Cunningham

University/Institution: University of Virginia

Title: *Self-Care Among Nurses at a Level One Trauma Center: Assessment, Support, and Culture Change*

Authors: T Cunningham, J Trail, E Çayir, K Kurotsuchi Inkelas

Abstract: Self-care practices improve attention, stress-relief, and they may decrease the risk of burnout in clinical settings. This study observed self-care practices among nurses so as to provide data that will improve self-care training and programming. A cross-sectional study design 1) queried clinical nurses about their self-care practices and 2) applied three questionnaires (Perceived Stress Scale 10; Awareness facet of the Five Facet Mindfulness Questionnaire; Self-Compassion Scale-Short Form). Chi-squared and multiple regression analyses were employed to determine nurse well-being and potential associations with self-care. Nurses from acute, critical care, emergency and surgical settings responded to the survey. Nurses with more years of experience reported lower levels of felt stress. Those with decreased perceived stress and a sense of control in life reported exercise as a primary form of self-care. Most commonly used forms of self-care were: Exercise, prayer, and music. Nurses who trained at a school of nursing that prioritized self-care training were more likely to practice meditation, exercise, writing, yoga, and breathing exercises more frequently than nurses who trained at other schools. Nurses practice various forms of self care. Health systems should assess what practices nurses employ and work with them to support them with non-additive assets-focused or "celebratory" models in which support focuses on already existent strengths. These preliminary data have been shared with leadership at the associated hospital which has welcomed a series of self-care retreats designed for hospital leaders. Plus, these findings have supported the roll-out of resilience retreats for individual and entire units at that hospital.

Poster Number: P094

Applicant Name: My Ngoc To

University/Institution: Cambridge Health Alliance

Title: *Effectiveness of Mindfulness Training on Health Behavior Change in Primary Care*

Authors: R Gawande, T Griswold, A Lozada, M To, E Pine, A Brunel, E Loucks, Z Schuman-Olivier

Abstract: Mindfulness training can increase self-management of chronic illness among primary care patients, but a feasible, insurance-reimbursable model for mindfulness implementation in healthcare is lacking and the mechanisms driving behavior change are largely unstudied. Among 136 primary care patients, we compared Mindfulness Training for Primary Care (MTPC), an 8-week, referral-based, insurance-reimbursable program integrated into patient-centered medical homes, with a Low-Dose Comparator (LDC), a 60-minute mindfulness introduction plus referral to community/digital resources, in a randomized controlled comparative effectiveness trial with primary outcome of chronic illness action plan initiation (9-weeks) and secondary outcomes (8-weeks and 6-months). MTPC incorporates self-compassion, and behavior change skills. Patients randomized to MTPC (n=92) had significantly higher action plan initiation rates and higher emotion regulation and interoceptive awareness scores than patients randomized to LDC (n=44). MTPC was successfully integrated across a multi-site health system, attracting 600+ referrals per year, and is feasible for dissemination within the US healthcare system.

Poster Number: P095

Applicant Name: Marcelo Trombka

University/Institution: UFRGS

Title: *Multicenter Randomized Controlled Trial of Mindfulness Training to Reduce Burnout and Promote Quality of Life in Police Officers: The POLICE Study - Rationale, Feasibility and Preliminary Results*

Authors: M Trombka, MMP Demarzo, DC Bacas, SB Antonio, K Cicuto, V Salvo, F Claudino, L Ribeiro, MS Christopher, J Garcia-Campayo, ALG Walcher, B Carniel, NS Rocha

Abstract: Background: Police officers experience a high degree of chronic stress. Policing ranks among the highest professions in terms of disease and accident rates. Mental health is particularly impacted, evidenced by elevated rates of burnout, anxiety and depression, and poorer quality of life than the general public. Mindfulness training has been shown to reduce stress, anxiety, burnout and promote quality of life in a variety of settings, although its efficacy in this context has yet to be systematically evaluated. Therefore, this trial will investigate the efficacy of a mindfulness-based intervention versus a waitlist control in improving quality of life and reducing negative mental health symptoms in police officers. Methods: This multicenter randomized controlled trial has three assessment points: baseline, post-intervention, and six-month follow-up. Active police officers (n=160) will be randomized to Mindfulness-Based Health Promotion (MBHP) or waitlist control group at two Brazilian major cities: Porto Alegre and São Paulo. The primary outcomes are burnout symptoms and quality of life. Consistent with the MBHP conceptual model, assessed secondary outcomes include perceived stress, anxiety and depression symptoms, and the potential mechanisms of resilience, mindfulness, decentering, self-compassion, spirituality, and religiosity. Discussion: Findings from this study will inform and guide future research, practice, and policy regarding police officer health and quality of life globally. Trial Registration: ClinicalTrials.gov NCT03114605

Poster Number: P096

Applicant Name: Megan Per

University/Institution: McGill

Title: *The Effectiveness of Mindfulness-based Interventions on Forensic Inpatient Populations: A Meta-analysis*

Authors: M Per, C Spinelli, I Sadowski, L Anand , E Schmelefske, B Khoury

Abstract: In recent years, research has demonstrated support for mindfulness-based interventions (MBIs) in reducing criminogenic traits and improving mental health symptoms in forensic inpatients; however, the effectiveness of these treatments remains unclear. Further, forensic inpatients are often marginalized, emphasizing a need for effective rehabilitative treatments. The present study is a meta-analysis that aims to 1) quantify the efficacy of MBIs in forensic inpatient populations and 2) explore moderators of the effectiveness of MBIs in this population. A systematic review of studies published in PubMed, PsycInfo, and Medline was conducted using the keywords “meditation or mindfulness” and “prison or incarcerated or forensic or correctional”. Findings of the meta-analysis will be discussed. The study represents a significant contribution as it offers important findings for healthcare practitioners and help to inform future designs and applications of contemplative interventions in the forensic setting. This, in turn, will enhance the psychological wellbeing of forensic populations.

Poster Number: P097

Applicant Name: Nava Levit-Binnun

University/Institution: Interdisciplinary Center (IDC) Herzliya, Israel

Title: *Decrease in Naïve Realism in Ideological Conflict Following an Eight-Week Mindfulness Workshop*

Authors: N Levit Binnun, M Reifen-Tagar, E Halperin, A Alkoby

Abstract: Mindfulness training has been shown to have a beneficial impact on perceptions and emotions. However, little is known about the relationship between mindfulness and Naïve realism (the individual tendency to believe that one’s point of view of the world is objective and rational, and perceive people who disagree with one’s

point of view as irrational or biased) in the context of ideological conflicts. Our study examined whether mindfulness would decrease the tendency to manifest Naïve realism in the context of ideological conflict in Israel between Rightists (Hawks) and Leftists (Doves). Israeli students either participated in a Mindfulness-Based Stress Reduction (MBSR) workshop or were on a wait-list control group. Prior and following the MBSR, all participants completed a survey in which they were measured on bias attribution and mindfulness trait. The results showed that Naïve realism is significantly decreased among Rightists and Leftists following mindfulness training compared to the control group.

Poster Number: P098

Applicant Name: Otto Simonsson

University/Institution: University of Oxford

Title: *The Impact of Mindfulness on Political Attitudes*

Authors: O Simonsson

Abstract: Political attitudes are complex and multilayered, but there are basic traits that separate individuals along the political spectrum. These traits are malleable over time and mindfulness training can change many of them, but it is not yet known if regular practice of mindfulness can affect political attitudes. In the Spring of 2018, I am running a pilot study where I will assess participants' political attitudes with self-report measures before and after an eight-week course in Mindfulness-Based Cognitive Therapy. The objective of this study is, firstly, to determine the impact of mindfulness on political attitudes and, secondly, to identify the underlying mechanisms that mediate the potential changes in political attitudes. The hypothesis is that mindfulness training will make participants more liberal in their political attitudes and that the change will be mediated by increased compassion and trait mindfulness. The results of the study will be available by March of 2018.

Poster Number: P099

Applicant Name: Juan Santoyo

University/Institution: Brown University

Title: *Developing a Radical Dharma Community*

Authors: E Gathers, GM Jones, D Martin, JF Santoyo, JM Santoyo

Abstract: We present exploratory research of potential methods for counteracting inequity in contemplative institutions and improving modes of contemplative practice through a group-based first-person study on the development of the Radical Dharma Boston Collective (RD). RD was founded to create a space where contemplative practice could be used as a way to ground the work of challenging systems of oppression and hierarchy and to create a community for contemplative practice where people from marginalized communities could feel safe, seen, and celebrated. For this study, the authors (all RD members) provided first-person phenomenological reports of their experience in this community and in other contemplative spaces throughout a six month period. These reports were analyzed using Grounded Theory Methodology to identify the practices that helped RD meet its aims. We present these initial results as hypotheses describing methods for improving contemplative practice and counteracting systems of oppression in contemplative communities.

Poster Number: P100

Applicant Name: Wolfgang Lukas

University/Institution: Contemplative Collaboration / Yoga Science Foundation

Title: *Contemplative Collaboration: Practical Steps Towards a CERN-inspired Collaboration Model for Contemplative Science*

Authors: W Lukas

Abstract: Collaboration is found to be indispensable in nature and human culture. However, in contemporary research ecosystems including Contemplative Science, researchers face overly competitive environments, lack of collaboration, and apparent scarcity of resources, visibility and expertise. We explore practical steps for a transition to a more collaborative culture, in which the tension between competition and cooperation is harnessed such that both can serve a common purpose. This proposal includes that (1) studies be planned, performed and funded by larger collaborations, (2) data, technologies, and best practices be shared, (3) internal peer-review processes be followed prior to coordinated publication. Such practices, that are common for physics research communities at CERN, can significantly reduce overheads, facilitate rigorous “slow science”, and safeguard high-quality publications. We explore how the successful CERN model of collaboration might be complemented further with specific contemplative-collaborative practices on individual, interpersonal, and systemic levels, to benefit Contemplative Science over coming decades.

Poster Number: P101

Poster withdrawn by presenter

Poster Number: P102

Applicant Name: Kirsten Gelsdorf

University/Institution: University of Virginia

Title: *Contemplative Training for Humanitarian Leadership*

Authors: K Gelsdorf

Abstract: Various contemplative practices are known to produce benefits for effective leadership, including critical thinking and stress reduction. Nevertheless, many programs for leadership training do not include any contemplation component. New

initiatives have emerged in recent years but remain uncommon. This presentation adds to a small but growing body of knowledge on “what works” in contemplative leadership education. An experimental curriculum was implemented at the University of Virginia, focusing on practices of empathy, non-judgment, radical listening, and gratitude. The context for the course is the high-stress field of humanitarian affairs—an ideal environment to understand and practice mindfulness. Research presented here focuses on student and instructor perspectives, course curriculum design, and implications for professional leadership throughout social sector fields. What types of mindfulness training are most important for future crisis leaders? How can the international humanitarian system use mindfulness trainings to improve its practices? These and related questions are addressed.

Poster Number: P103

Applicant Name: Sandra Molendyk

University/Institution: Gonzaga University

Title: *The Phenomenology of Cultivating Compassion in Leaders - Utilizing Shamanic Methods*

Authors: S Molendyk

Abstract: Compassionate leaders improve employee health, well-being, and innovation while reducing cost and turnover. With compassion one can learn how to relate to oneself better, notice one's flaws, and act to be of greater service to oneself, community, organizations, and the world. Leaders who are compassionate tend to have less psychopathy, ruthlessness, and social dominance orientation. Leaders with higher levels of compassion tend toward better communication and commitment. They also foster better corporate social responsibility from employees, which acts as a driving force toward organizational compassion with a commitment towards compassionate outcomes. The scholarly study of Christian and Buddhist compassion in leadership is on the rise. Buddhist methods arose from shamanism. However, the study of developing compassion in leaders through shamanic methods is new. In this phenomenological

study, the essence of compassion is explored with six to ten leaders who have experienced shamanic compassion practices over six weeks. Questions of interest include: Can compassion be learned by leaders through this compassion intervention? Did leaders perceive growth in their compassion journey? How did compassion training manifest in their relationships as well as their leadership practices, thoughts, actions, and outcomes? Pre and post intervention self-compassion scale (SCS) and social dominance orientation (SDO) tests will be conducted. The participants will keep intervention journals to foster the understanding of the phenomenon of compassion in the participants own voice. Post-interviews will also be conducted based on findings from journal entries as well as pre and post SCS and SDO tests.

Poster Number: P104

Applicant Name: Viviane Giroto Guedes

University/Institution: Pontifícia Universidade Católica do Rio de Janeiro

Title: *A Mindfulness Program for Adolescents in a High Deprivation Area in Brazil*

Authors: V Guedes

Abstract: Adolescents residing in slums in Rio de Janeiro face conditions of severe social vulnerability. The purpose of this research was to apply meditation training to evaluate potential benefits for improving their well-being, a possible incorporation of this contemplative practice in their daily lives, and its impact as a personal and social tool in adverse contexts. The study was conducted with two randomized groups, intervention and control, composed of 15 students each. Socio-demographic questionnaires, recorded and transcribed interviews, and a logbook are being analyzed. Qualitative and quantitative findings are being used to review the intervention, with the purpose of improving it to implement as a program. Preliminary results indicate a satisfactory relationship between the practice of meditation and the emotional, mental, physical and psychosocial well-being of the adolescents. Findings show a greater capacity for emotional regulation and improved self-knowledge, besides the incorporation of this practice into their daily lives.

Poster Number: P105

Applicant Name: Sarah Argeropoulos

University/Institution: Inward Bound Mindfulness Education

Title: *Supporting Healthy Adolescent Development Through Intensive Mindfulness Retreats*

Authors: J Morey, BM Galla

Abstract: Two studies examined associations between a weeklong, intensive residential meditation retreat and beneficial outcomes in adolescents. In Study 1, 132 adolescents completed self-report questionnaires measuring mindfulness, self-compassion, and emotional well-being immediately before and after, and then three months after the retreat. Repeated measures ANOVA showed adolescents improved in mindfulness, self-compassion, and all indices of emotional well-being immediately following the retreat, and many improvements were maintained three months later. Further, multilevel growth curve analyses with time-varying covariates indicated within-person self-compassion predicted enhanced emotional well-being more consistently than within-person mindfulness. Study 2 (N=79) used a quasi-experimental, between-groups design to test the effectiveness of the retreat on psychological and cognitive functioning. Compared to a control condition, adolescents who participated in the retreat showed improvements in emotional functioning (e.g., depressive symptoms), self-control, and working memory. Consistent with Study 1, improvements in self-compassion mediated the associations between meditation training and enhanced emotional functioning.

Poster Number: P106

Applicant Name: Félix Veillette

University/Institution: Université Laval

Title: *Effects of Sitting Meditation and Hatha Yoga on Children's Mindfulness Skills*

Authors: F Veillette, N Rouleau

Abstract: MANDALAB (Mindfulness AND Attention LAB), School of Psychology, Laval University (Quebec, Canada) & CERVO Brain Research Center Mindfulness-based interventions (MBIs) studies in children rarely evaluate change on mindfulness skills (MF) themselves. Moreover, the specific impact of practices on MF has never been studied. Objectives: 1) To evaluate the effects of a MBI on MF, 2) to compare the effects of yoga- and meditation-based interventions on MF. Methods: 141 children (grades 3-4) were assigned to meditation, yoga or passive control group. For each of 8 weeks, classrooms practice once with a qualified MBSR or yoga teacher and 4 days with their teacher. MF is measured pre- and post- using the Child and Adolescent Mindfulness Measure and a mind-wandering task. The study is currently underway. A mixed ANOVA on MF measures will quantify the improvement for each group. Results will allow for a better understanding of the relations between yoga/meditation and MF.

Poster Number: P107

Applicant Name: Carlos García Rubio

University/Institution: Universidad Autonoma de Madrid

Title: *Enhancing Attention and Social-emotional Development in Elementary School Children Through the Practice of Mindfulness in the Classroom: A Randomized Controlled Trial*

Authors: C García-Rubio, C Andreu, M Herrero, T Luna, R Rodríguez-Carvajal

Abstract: There is an increasing interest in the application of mindfulness in the school context. However, the popularity of this practice is greater than the empirical evidence demonstrating its benefits. A cluster-randomized controlled trial was carried out to evaluate the impact of mindfulness practice on attention and social-emotional

development in 330 children (8-12 years; 8 classes were a waiting list control group) in two schools in Madrid (Spain). The results revealed that, compared to the children in the control group, the children in the mindfulness group showed significant improvements in a) attention (smaller reaction times in the Attention Network Task-Children), b) the level of mindfulness, emotional regulation and emotional involvement in the classroom, and c) a significant decrease in emotional distress, cognitive impulsivity and social relationship problems. The results obtained support the hypothesis that introducing the practice of mindfulness in the classroom can be beneficial.

Poster Number: P108

Applicant Name: Nikolas Lunny

University/Institution: University of Massachusetts, Dartmouth

Title: *Mindfulness Meditation in Two Middle School Samples*

Authors: N Lunny, S Cerrone, AJ O'Hare

Abstract: Mindfulness meditation is a promising new avenue for improving symptoms of psychopathology, (Zoogman, Goldberg, Hoyt & Miller, 2015) and attention abilities (Flook, et al., 2010) in children. Two mindfulness-based interventions were conducted in two schools: one an all-girls school for low socio-economic status families and the second a private school. Students received mindfulness training once per week for eight weeks or participated in a no-training control group (school 1: mindfulness n=14, control n=11; school 2: mindfulness n=14, control n=15). All students were in 5th-7th grade. All students completed pre- and post-training self-report measures of mood and anxiety, and assessments of attention. Significant reductions in self-reported negative affect were found in both mindfulness samples ($p < .05$). No between group effects were found for measures of attention. This suggest that in this age group, changes in mood occur prior to changes in cognition.

Poster Number: P109

Applicant Name: Grace Song

University/Institution: Yeongsan University of Seon Studies

Title: *The Relation of Mindfulness and Life Satisfaction: Mediating Role of Hope*

Authors: G Song, H Kim, Z Kang

Abstract: Korean adolescents encounter many challenging and distressing situations throughout their school and home life, which can lead to difficulties in both social and academic performance. A significant number of students have suicidal ideations, which is more prevalent among adolescents than any other age group in Korea. Given the low level of life satisfaction among Korean adolescents, it is vital to provide effective interventions to decrease the risk and occurrence of mental health problems. Over the decade, the interest in mindfulness with adolescents in educational settings has grown dramatically, as an intervention to improve life satisfaction of adolescents. Mindfulness for youth have also demonstrated positive correlations with life satisfaction. While the literature on mindfulness and life satisfaction is indeed promising, the mechanisms by which mindfulness may produce salutary effects are not yet well understood. This study examined the mediation effect of hope for the relationship between mindfulness and life satisfaction on a sample of Korean adolescents. Results of the present study suggested that hope serves as a potential mediator in the relationship between mindfulness and life satisfaction of Korean adolescents. The current study contributes to existing literature on life satisfaction given that there is currently a dearth of research related to these specific variables in the Korean context with this age group. Implication for strategies to improve Korean adolescents' mindfulness and hope are addressed.

Poster Number: P110

Applicant Name: Amrit Kasten-Daryanani

University/Institution: Wakefield School

Title: *Innerspace Lab: An Offering of Meditation to Our Upper School*

Authors: A Kasten-Daryanani

Abstract: In the midst of a high-pressure prep school we have created an oasis that provides meditation, contemplative reflection and a road map for a deep inner journey. All of these activities take place in the Introduction to Neuropsychology course offered to Juniors and Seniors at Wakefield School, where the "Innerspace Lab" begins each class with formal meditation practice and reflection on that practice. The most popular course in the Upper School (as evidenced by enrollment numbers), students receive credit for taking a deep inner journey of exploration, journaling about their experiences and applying contemplative thought to a project on Non-Violent Social Norms benefiting our Middle School students. Outcome data on measures of reflective capacity, self-acceptance, stress management, sense of self agency and tolerance is being tracked and will be presented. The curriculum for this class, which has been running for 8 years, will be shared with interested participants.

Poster Number: P111

Applicant Name: Blake Colaianne

University/Institution: Pennsylvania State University

Title: *Formative Evaluation of a Compassion Training for High School Teachers and Students*

Authors: B Colaianne, T Raspanti, B Lavelle, B Galla, R Roeser

Abstract: This study assessed the acceptability and feasibility of a Courage of Care compassion training for high school teachers and students. The one-semester training was offered to teachers (n=8) and students (n=50) at a large public high school. Teachers received four days of in-service training, and students were taught a compassion-based curriculum within a psychology class. Teachers and students both reported high acceptability of the program. Teachers reported increased self-care and closer relationships with colleagues as program benefits; questions of applicability and

sustainability were noted as challenges. Students reported gaining familiarity with emotional awareness, the concept of compassion, and practices for the cultivation of compassion. Students reported wanting less didactic instruction and more practice with the skills of compassion. These results will inform future iterations of both the teacher and student curricula.

Poster Number: P112

Applicant Name: Ann Ly

University/Institution: Education University of Hong Kong

Title: *Enhancing Hong Kong Teachers' Wellbeing by Mindfulness Intervention: A Mix Method Study*

Authors: A Ly

Abstract: The current research theorizes that mindfulness promotes wellbeing partially because it enhances the fulfillment of the three basic psychological needs (autonomy, connectedness and competency) proposed by the Self Determination Theory. This study hypothesizes that teachers' inner struggles created by implementing reforms borrowed from western ideals to an examination-oriented school system, dampened the fulfillment of their three basic psychological needs. A mindfulness-based intervention is designed to capitalize on the nurturing of the basic psychological needs. The effectiveness of such as well as the test of the relationships among mindfulness, fulfillment of the three basic psychological needs and teachers wellbeing would be examined by adopting a randomized controlled trial experimental design. Both quantitative and qualitative data will be gathered at pre-intervention, during intervention, post-intervention as well as delay post-intervention.

Poster Number: P113

Applicant Name: Emily McRobbie

University/Institution: Northern Arizona University

Title: *Mindfulness in the Professional Lives of K-12 Educators*

Authors: E McRobbie

Abstract: Current research with K-12 educators indicates that benefits from mindfulness practice include improvements in stress management, well-being, social-emotional regulation and relationships with students. Few studies explore participant voice, individual experiences, and meaning that educators make as they learn and begin to apply mindfulness practices. This interpretive case study explains how K-12 educators enrolled in two cohorts of an 8-week Stress Management and Relaxation Techniques (SMART) in Education mindfulness program experience, conceptualize and use mindfulness in their unique professional settings. The case study uncovers that participants believed the effects of mindfulness practice improved relational quality in both professional and personal lives. Participants with regular mindfulness practice experienced greater benefits and deeper understanding of mindfulness. Mindfulness as professional development supported praxis, created new ways to interact with others, and countered neoliberal forces present in schools. This study illuminates that mindfulness as professional development for K-12 educators provides opportunities for school transformation, although the degree of change may be influenced by systemic support and privilege. Findings from this study provide deeper understanding of the participant experience, insights for future research and program development, and a discussion of the role of mindfulness as a transformative force in education.

Poster Number: P114

Applicant Name: Aminda O'Hare

University/Institution: University of Massachusetts Dartmouth

Title: *The Impact of Mindfulness Meditation Training on First-Semester College Students*

Authors: AJ O'Hare, Z Gemelli, N Lunny, MP Hall, B Ayotte, E Lehr

Abstract: Learning mindfulness during the first semester of college may influence social relationships, psychological well-being, and academic success early in college. In this study, 100 first-semester college students completed measures of social networks and mood and anxiety levels during the first month of college (T1) and at the end of their first two semesters of college (T2 & T3). GPAs were also recorded following their third semester of college (T4). A control group (n=40) and a mindfulness group (n=49) who were financially compensated for completing 8 weeks of mindfulness training between T1 and T2 were compared. No differences were found between the groups at T2 or T3 on socio-emotional measures. The mindfulness training group unexpectedly had significantly lower college GPAs at T3 and T4 compared to the control group, $p < .05$. Method of recruitment and the nature of mindfulness interventions with college-aged students are discussed.

Poster Number: P115

Applicant Name: Rongxiang Tang

University/Institution: Washington University in St. Louis

Title: *A College Freshman Mindfulness Seminar to Enhance Psychological Well-being and Cognition*

Authors: R Tang, K Dvorakova, P Broderick, T Braver

Abstract: Integrating mindfulness training into an educational curriculum may be particularly beneficial in helping first-year students' transition to college. This study examined effects on psychological well-being and cognition of a weekly freshman seminar offered to entering university students. Across two different Fall semesters, a total of 40 students participated. The seminar (14 1-hr sessions) that taught core components of the Learning to BREATHE (L2B) curriculum, an evidence-based mindfulness program adapted for college-age students. Improvement in trait mindfulness, life satisfaction, and executive attention network were detected in one

class and replicated in the other class with small-to-medium effect sizes. Less negative affect and state anxiety were also observed, as well as decreases in mind wandering indexed by the Sustained Attention to Response Task (SART). Our preliminary results suggest that integrating mindfulness training within an educational context could be an effective avenue for promoting mental health and cognition in students transitioning to college.

Poster Number: P116

Applicant Name: Lanmiao He

University/Institution: Iowa State University

Title: *Mindfulness Enhances Undergraduates' Explicit Academic Self-concept Not Implicit Self-concept After an Academic Evaluation*

Authors: L He, D Sweet, D Gentile

Abstract: To examine whether meditation helps students to maintain a competent academic self-concept in an evaluative situation, 701 college students were randomly assigned to follow a meditation audio instruction, a relaxation audio instruction, or no audio instruction. Students completed a word association task, and half of the participants were led to think they did better than their peers and the other half were led to think they did poorly. Participants completed two tasks designed to measure their academic self-concept (an implicit association test and the Tennessee Self-Concept Scale) after receiving the feedback. A two-way analysis of covariance was conducted with academic self-concept score as the dependent variable, feedback type (i.e., success vs. failure) and audio type (i.e., meditation, relaxation, vs. no audio) as the factors, and trait mindfulness as a covariate. There was a significant main effect for feedback type and audio type. The interaction between audio type and feedback type was not significant, the interaction between audio type and trait mindfulness was marginally significant. Trait mindfulness was a significant covariate. The meditation audio group showed higher academic self-concept compared to the no audio group, but relaxation group didn't show such an effect. Another analysis of covariance was

conducted with implicit self-concept score as the dependent variable and with the same factors and covariate. No significant interactions nor main effects were found. It is not surprising that people's explicit academic self-concept can be changed by positive or negative feedback. Nonetheless, meditation can enhance undergraduates' explicit academic self-concept despite negative academic feedback.

Poster Number: P117

Applicant Name: Janna Rosales

University/Institution: Memorial University of Newfoundland

Title: *Mindfulness Training for University Students on Work Placements*

Authors: J Rosales, V Campbell, M Walsh, K Arnold

Abstract: Our project explores how workplace mindfulness training can support the well-being of university students and the ways that workplace mindfulness can help cultivate students' capacities for attention, awareness and reflection, both in their work environments and in their academic lives. We offered a Workplace Mindfulness Training Program once a week for 10 weeks (~16hrs total), to three different student cohorts who were enrolled in cooperative education work terms, internships, or practicums between 2017-2018. Through presentation, facilitated discussion and individual practice, participants were introduced to mindfulness techniques by a qualified mindfulness instructor. We gathered data on participant experiences through surveys and participants' written reflections, and through participant-observation. We hypothesized that work placement students can become more attentive and reflective learners and professionals through workplace mindfulness training. This poster reports on preliminary findings that demonstrate how mindfulness practices present valuable and integrative approaches to help students cultivate heightened professional self-awareness.

Poster Number: P118

Applicant Name: Brian Galla

University/Institution: University of Pittsburgh

Title: *Compared to Self-Immersion, Mindfulness Reduces Social Media Desire and Boosts Academic Self-Control in Undergraduates*

Authors: BM Galla, RN Baelen, H Fiore, S Hutt, A Shenhav

Abstract: Two laboratory experiments tested the hypothesis that mindfulness could reduce social media desire and improve self-control. Undergraduates first posted a status update on Facebook via a (simulated) app. Over a subsequent 15-minute waiting period, they heard sounds purportedly notifying them that friends were responding to their post, but they were not allowed to check those responses. During the same waiting period, participants were also randomly assigned to receive guided audio instructions on: (1) mindfulness, in which they observed thoughts about Facebook as temporary mental events; (2) self-immersion, in which they contemplated the personal benefits of Facebook, or (3) unfocused attention (Study 1 only). Participants who mindfully observed their experience reported less intense Facebook desire. Moreover, participants who practiced mindfulness spent more time working on a tedious math skill-building activity despite the option to watch entertaining videos (Study 2). Reductions in desire-related thoughts mediated the association between mindfulness and self-control.

Poster Number: P119

Applicant Name: Dara James

University/Institution: Arizona State University

Title: *Associations Between a Contemplative Curricula and Self-Compassion in University Students*

Authors: D James, J Szeszulski, R Bonifas, M Napoli, L Schmidt

Abstract: University students experience a myriad of psychosocial stressors. Studies have established that self-compassion can ameliorate negative psychological outcomes (i.e., stress, depression) while increasing positive psychological outcomes (i.e., well-being, academic performance). Self-compassion combines self-kindness, common humanity, and mindfulness; it's understood as treating oneself the way one would treat a suffering friend. Few studies have addressed the influence of academic courses on self-compassion; this study aimed to examine contemplative curricular effects (1. acknowledgement, 2. attention, 3. acceptance without judgment, and 4. choosing to respond) on self-compassion. A diverse group (36.0% Caucasians, 20.6% Latino, 21.9% Asian, 11.4% Multi-racial, 9.1% other) of students (N=175) aged 20.2±2.2 years, 49.1% female, completed the self-compassion scale online before and after the 16-week class. Differences in self-compassion by gender, race, and ethnicity were assessed as were pre/post differences. At baseline, no differences in self-compassion by race (p=.618) or age (p=.474) were noted, but significant differences by gender (males 37.2±6.1; females 32.9±7.6; p<.001) were present. Self-compassion increased 3.6±7.9 points at post-test; changes were higher among females (5.5±8.7 vs. 1.6±6.5; p=.001) and Caucasians (5.6±8.0), followed by Latino (5.3±8.3), multi-racial (1.7±9.7), and Asians (.4±6.0), but were not different by age (p=.716). Differences between Caucasians and Asians were significant (p=.026). Contemplative curricula may increase self-compassion and potentially help reduce psychosocial impacts of burdens commonly experienced among university students. Improved outcomes may have implications for reduced stress, enhanced well-being, and student success. Variables of culture and gender may moderate these associations and should be explored further.

Poster Number: P120

Applicant Name: Rebecca Acabchuk

University/Institution: University of Connecticut

Title: *Assisting University Students Self-Manage Stress: Comparison of Mindfulness Meditation Tools*

Authors: RL Acabchuk, M Simon, T Zhang, E Atkinson, EJ Cracco, CL Park, BT Johnson

Abstract: College students have been experiencing growing levels of stress, anxiety, and depression. Although meditation and mindfulness-based practices offer promise to address these mental health concerns, many people find it challenging to develop and sustain a regular meditation practice. Learning to meditate using meditation apps (e.g., 10% Happier) or EEG-based neurofeedback devices may assist college students in developing a lasting meditation practice, providing benefits for mental health. Currently underway, ClinicalTrials.gov trial H17-224 investigates which tools best assist university students develop an enduring, personal meditation practice to self-manage stress. Outcome measurements include pre/post changes in biological measures of stress and inflammation, self-report measures of stress, anxiety, depression; potential mediators include emotion regulation, mindfulness, decentering, and interoception. Follow-up questionnaires will follow meditation status for 12 months. Results of this study will inform university mental health clinics how to best assist students interested in developing a meditation practice to self-manage stress.

Poster Number: P121

Applicant Name: Lindsay Bicknell-Hentges

University/Institution: Chicago State University

Title: *The Development and Effectiveness of a Culturally-Tailored Mindfulness Course for Students Attending a Predominantly Black Institution*

Authors: S Seyfried, V Womack

Abstract: The application of mindfulness practice in higher education has resulted in positive academic, psychological and interpersonal outcomes among students. Mindfulness practices have a significant negative relationship with stress among college students. However, few if any studies have evaluated the effectiveness of mindfulness programs in reducing stress among students attending a Predominantly Black Institution (PBI). Several of the communities surrounding the PBI in this study are disproportionately impacted by stress induced health disorders, violence, poverty and unemployment.

Many of the students at this PBI live and work in these communities and are at risk for trauma. Given the health benefits of mindfulness practice, faculty of various disciplines from a PBI in a large Midwestern city developed an 8-week manualized, culturally relevant mindfulness course for Social Work and Psychology students (n=12) who attend this PBI. We modified the curriculum by incorporating the discussions on spirituality, religion, and the health benefits of mindfulness. Participants completed the Five Factor Mindfulness Questionnaire (FFMQ) before and after the mindfulness course. In a paired t-test analysis, participants reported higher 'mindful description', 'mindful non-reactance', and total mindfulness scores at the conclusion of the course. Results from the evaluation of this course and pilot study reveal mindfulness practice as a promising intervention to promote well-being among this population.

Poster Number: P122

Applicant Name: Angela Potes

University/Institution: McGill University

Title: *A Mixed Methods Study Comparing Mindfulness-based and Mindful Self-Compassion (MSC) Programs on University Students Experiencing Psychological Distress*

Authors: A Potes, D Groleau, S Escobar, S Chintia, R Tobin, A Alam, M Gauthier, L Lach, V Romano, C Armstrong, N Sasi, M Gautier, E Moody, J Cormier, S Rej

Abstract: Background: Rates of depression and anxiety are the most common in university students. University-based mindfulness interventions appear to be beneficial, but more novel interventions including Mindful Self-Compassion (MSC) may be more effective. This pilot will examine whether MSC is more effective than mindfulness and wait-list conditions. Methods: Pre-post assessments include depression and anxiety symptoms on 90 students participating in an 8-week mindfulness program, MSC and wait-list, including a 6-month follow-up. Assessments of change include stress, suicidality, perfectionism, substance use, general well-being and school performance, and a qualitative interview at program end. Expected Results: Students participating in

MSC will have greater reduction in depression and anxiety at 8-weeks and 6-months. All secondary outcome measures will improve. Qualitative methods will address student's experiences. Discussion: If students in MSC benefit compared to other conditions, it could represent a highly affordable, effective, and scalable venue to prevent depression and anxiety rates in university students.

Poster Number: P123

Applicant Name: Susan Johnson

University/Institution: University of North Carolina, Charlotte

Title: *Predictors of Adherence to an Online Mindfulness Program for College Students*

Authors: SK Johnson, D Gutierrez, L Forbes

Abstract: In the current study, we examined predictors of adherence to a 10-session online mindfulness program. Undergraduates naïve to meditation (n=169) were recruited from an Introductory Psychology subject pool. Participants completed assessments examining physical health, depression and anxiety measures, motivation and value. They were enrolled in a 10-session online mindfulness activity. Fifty-three percent of the sample was fully adherent to the program. Regression analyses found that better physical health and lower levels of anxiety predicted adherence. We present recommendations for the increasing adherence in the clinical use of mindfulness and future research.

Poster Number: P124

Applicant Name: Robyn Long

University/Institution: University of Washington, Center for Child & Family Well-Being

Title: *A Brief Mindfulness-Based Resilience Program Improves the Well-being of Undergraduate Students*

Authors: RB Long, MA Halvorson, LJ Lengua

Abstract: The transition to college presents significant challenges as students are often living away from home for the first time, navigating academic pressures and interpersonal challenges, and anxiety and depression are prevalent. This study evaluated a mindfulness- and compassion-based program, Be REAL (Resilient Attitudes and Living), to support students in cultivating stress management, coping, and emotion regulation skills. Undergraduate students (N=208) living on campus were recruited to participate in a 6-week program, 1.5 hours each week. Students were ethnically and economically diverse. Using a waitlist control design, participants were assigned to one of eight groups. Sessions included guided contemplative practices and discussions on cognitive-behavioral skills. Participants received weekly texts linking them to online resources and surveys regarding their home practice. Assessments included pre and post-test questionnaires. Measures included Brief COPE, Brief Resilience Scale (BRS), Difficulties in Emotion Regulation Scale, General Life Events and Stressfulness (GLES), Mindfulness Attention and Awareness Scale, Positive Relations with Others, and Self-Compassion Scale (SCS). Preliminary results based on a partial sample (N=68) showed significant improvements in BRS, GLES, and SCS, trend improvement in coping as well as high participant satisfaction scores. When the study is complete (May 2018), analyses will account for attendance, comparisons with the waitlist, and sustained effects at follow-up. Programs combining mindfulness with cognitive-behavior skills may increase students' resilience by strengthening key protective factors, such as perception of stress and self-kindness, and decreasing over-identification and self-judgement. Future research will explore models for scaling the program up on college campuses.

Poster Number: P125

Applicant Name: Julieta Galante

University/Institution: University of Cambridge

Title: *Mindfulness Training to Increase Resilience Among University Students: A Comprehensive Systematic Review and Meta-analysis of Randomised Controlled Trials*

Authors: A Dawson, W Brown, J Kosmala-Anderson, B Vallender, J Donald, K Hong, S Allan, TB Mole, PB Jones, J Galante

Abstract: The transition to university exposes young adults to new stressors. Students are expressing an increased need for support. Mindfulness-based interventions (MBIs) are being integrated into university health programs globally with the expectation of reducing psychological distress. Randomized controlled trials (RCTs) assessing this are accumulating, mostly small and underpowered. We conducted a systematic review and meta-analysis of these RCTs to provide a comprehensive picture for policy-makers. We examined MBI effects on mental and physical health outcomes, health services usage, and academic performance in university students. We searched nine databases, including grey literature and trial registries for unpublished studies. We followed a prospective public protocol, and assessed RCTs' risks of bias using the Cochrane Collaboration tool. Two reviewers extracted data independently. Meta-analyses distinguished between passive and active control groups. Sub-group and sensitivity analyses explored heterogeneity and methodological quality. Fifty-two RCTs were included in the review. Main results will be presented and discussed.

Poster Number: P126

Applicant Name: Alice Armstrong

University/Institution: Lesley University

Title: *Scope of Service of Mindfulness Master's Interns*

Authors: A Armstrong

Abstract: Since the addition of a full-term, 150 hour, academically-based Internship within the Lesley University Master's program, 35 students have completed or are in process of their internship. This requirement includes academic readings and weekly commentary on topics such as Right Livelihood, Meaningful Work, and Social Change. In addition, the students select approved community placements where their progress is monitored on site and also by the Instructor. Student placement selections typically fall

into four common areas, including homelessness, hospice, and education. Perhaps the true diversity and reach of Mindfulness training can be seen in the “Other” category, where students served in such areas as: sex trafficking awareness, Spanish language mindfulness outreach, and creative writing development. The growth in this program is indicated by the included charts. This poster affirms that rigorous academic training along with practical community-based experience can train Mindful professionals for a wide scope of contribution to society.

Poster Number: P127

Applicant Name: Muga Miyakawa

University/Institution: Simon Fraser University

Title: *Ethical Implications of Mainstreaming Mindfulness: A Perspective From Education*

Authors: M Miyakawa

Abstract: Mindfulness is proliferating in the Western mainstream, rapidly accelerating its growth over the last thirty years. There are now countless books, a plethora of interventions and programs that incorporate it in clinical contexts, and an increasing number of programs and apps designed to help one be mindful in a busy, stressful, modern world. Mindfulness is also gaining traction as a legitimate area of scientific research, demonstrated by the increase in journal articles that include mindfulness as a keyword. In light of these and other applications of mindfulness into evermore fields, consideration must be given to potential ideological and ethical contradictions between the original conceptualization of mindfulness in the Buddhist tradition and the modern, secular conceptualization of mindfulness that is in vogue today. As mindfulness is incorporated into education, these concerns become especially salient and require serious consideration to ensure the use of mindfulness in holistic and pedagogically sound ways.

Poster Number: P128

Applicant Name: Oren Ergas

University/Institution: Hebrew University and Beit Berl College

Title: *Education and Mindfulness: Bridging the Fields*

Authors: O Ergas

Abstract: Following the dialogue between science and Buddhism forged by Mind & Life, in this presentation I propose the need, and lay the foundations for a dialogue between education and mindfulness. Education and mindfulness can be viewed as two traditions, if we consider each as sets of ideas and practices focussed around human development. Both education and mindfulness share a history of entanglement with wisdom traditions and science, which constantly (re)shape them and provide them with justifications, interpretations and ways of implementation. Based on this claim, I will show how this dialogue enables us to understand the contribution of mindfulness practice to three common educational orientations: Education as acculturation, socialization, or acculturation (Biesta, 2009; Egan, 1997; Lamm, 1976). Each orientation suggests a different role for education and a framing for implementations of mindfulness within it. Research on mindfulness will be reviewed and discussed based on these three orientations.

Poster Number: P129

Applicant Name: Lisa Liang

University/Institution: Dharma Realm Buddhist University

Title: *Interpenetration of Essence and Function in the Contemplative Texts
“Zhongyong” and “Huayan Sanmei Men”*

Authors: L Liang, BK Morseth

Abstract: “Zhongyong” and “Huayan Sanmei Men” are core texts in the Confucian and Huayan Buddhist traditions, respectively. “Zhongyong” is variously translated as “doctrine of the mean,” “focusing the familiar,” and “proper action,” whereas “Huayan Sanmei Men” refers to the contemplative practice of “samadhi” or deep concentration that reveals the interconnected nature of phenomena and noumena, suggesting their potential trans-historical and trans-cultural relevance in the field of contemplative studies. Employing a hermeneutical approach to textual analysis, we investigate the interpenetration of “essence” and “function” in these texts. Both texts allude to the interdependent and interpenetrating nature of essence and function in both inter-personal and intra-personal dynamics. In the relationship between essence and function, we co-create a culture of consciousness. This consciousness or process of awareness allows us to understand the world more clearly and enables us to freely respond with empathy and integrity to others.

Poster Number: P130

Applicant Name: Aline Lindemann

University/Institution: Arizona State University

Title: *The Light of the World and the Children of the Sun: Christian Mysticism and Yezidism*

Authors: A Lindemann

Abstract: Mystical traditions are born of human beings' universal hunger for intimate union with the divine. In the language of Christian spirituality, this might be called the indwelling of the Holy Spirit, and a Yezidi person might simply know this as the light of creation residing in each human being. Both traditions thrive on contemplative, loving awareness and intuitive communion with natural beings. By illuminating these two mystical religions side-by-side via literary research and interviews with Christian mystics and Yezidi refugees, this author aims to celebrate each tradition's inherent uniqueness and integrity while informing readers of the common ground they share. Yezidis—the “children of the Sun”—are a persecuted people whose religion is ever closer to

extinction. It is this author's hope that commonalities revealed will inspire a greater sense of affection and respect, resulting in a propensity for active assistance and alleviation of suffering.

Poster Number: P131

Applicant Name: Cullan Joyce

University/Institution: University of Divinity

Title: *Interpreting Ancient Contemplative Traditions Today: Maximus the Confessor (580-662)*

Authors: C Joyce

Abstract: This paper describes three key contributions made to the history of the Christian contemplative tradition by Maximus. 1) The character of attention changes depending on the object is its examining (internal experiences or the causes of those experiences) and whether it is employed: a) analytically or b) ethically. 2) The attitudes that define how one encounters experiences in general and in meditation are that a person be: non-judgemental and receptive. 3) In relationship to internal experiences, these attitudes are defined by two contemplative dispositions: A) achieving apatheia (detachment) and B) love (loving self and others). After describing these points, I argue tentative conclusions that emerge from them about the Christian meditative tradition being: A) more concerned with attitudes than technique, B) having a 'discretionary' notion of observation rather than a scientific one, and its form C) approximates learner-led enquiry toward the goal of intimacy with self and God.
