



Image denotes ACBS Junior Investigator Poster Award Recipients

## Thursday • June 16 • Poster Session #1 & #2, 5:30 – 7:15 PM

Location: Yosemite (Ballroom Level)

Poster Session #1, 5:30 – 6:30 PM

### **1. Retrospective time perception: The influence of heart rate on time estimation in anxiety and mindfulness**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Behavioral or contextual neuroscience, Anxiety, Mindfulness, Time perception

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According to the contextual change model, the duration of time is subjectively perceived longer if contextual change involves environmental and emotional changes. Thus, accelerating or slowing the inner rhythm in the body are thought to affect the retrospective time paradigm. Besides, mindfulness meditation reduced the level of anxiety of individuals, which increased time sensitivity. The aim of the study is to investigate whether time perception differs for individuals whose heart rate is accelerated/slowed under mindfulness and anxiety conditions.

A 2 (heartbeat: slow and fast) by 2 (stimulus: mindfulness and anxiety) factorial experimental design with sixty-one participants were conducted. Participants in slow and rapid heart rate conditions were shown videos of mindfulness and anxiety lasting 40 seconds. Then, participants were asked to estimate the duration of the video.

The participants whose heart rate was slow (Mdn=35) and fast (Mdn =20) perceived time significantly longer ( $U= 36.50$ ,  $z= -3.70$ ,  $p < .01$ ) in mindfulness condition. There was no significant difference in anxiety condition ( $p > .05$ ). Lastly, the duration estimates of participants in anxiety condition (Mdn = 20.00) was significantly shorter than the participants in mindfulness condition (Mdn = 35.00) ( $U= 64.00$ ,  $z= -2.29$ ,  $p < .05$ ).

In addition to previous findings showing that anxiety accelerates the prospective time estimation, this study has shown similar pattern for the retrospective time. When all the findings are evaluated together, the effect of emotions as well as changes in the body rhythm should be considered on the perception of time.

### **2. An Online Peer-Support Program to Improve Mental Health among University Students: A Randomized Controlled Trial**

Components: *Original data*

Categories: Academics or education, Supervision and training, ACT

Emma Cyr, McGill University  
Simon Grégoire, Université du Québec à Montréal  
Frédérique Beaulieu, Université du Québec à Montréal  
Carole Vezeau, Cégep régional de Lanaudière à Joliette  
Lise Lachance, Université du Québec à Montréal  
Thérèse Bouffard, Université du Québec à Montréal  
Michel Perreault, McGill University

Despite recent calls for more peer support initiatives aimed at promoting mental health in postsecondary institutions, those initiatives remain scarce.

In this study, a multisite randomized controlled trial was designed to assess the effect of an online peer support intervention based on acceptance and commitment therapy using mental health and school indicators.

Undergraduate students were recruited in three Canadian universities and randomly assigned to an intervention (n = 54) or a wait-list control group (n = 53).

Compared to control participants, those who took part in the program self-reported reduced psychological inflexibility, stress, anxiety and depression, and increased psychological flexibility and well-being. The intervention had no effect on academic satisfaction and engagement. These results were found both in completer and intent-to-treat samples.

The findings provide evidence that peer support may be a beneficial adjunct to mental health interventions offered to college and university students.



### **3. Educating during COVID-19: Psychological flexibility as a key process related to depression and social anxiety**

Components: *Literature review, Original data*

Categories: Academics or education, Other, Depression

Alyssa Schneider, MPH, University of Iowa

Zoe Sirotiak, University of Iowa

Felipe Herrmann, University of Iowa

Emily Thomas, University of Iowa

There have been numerous mental and physical health consequences of the COVID-19 pandemic. Research regarding the impact of the pandemic on educators is limited, though prior work indicates that educators are at risk for depression and anxiety. As such, it is important to investigate modifiable processes related to depression and anxiety among educators during the COVID-19 pandemic. Psychological flexibility is related to lower stress, depression, and anxiety.

The current study investigated psychological flexibility as related to depressive and anxiety symptoms among educators (November–December 2020). Participants included 853 U.S. educators. Participants completed the Comprehensive Assessment of Acceptance and Commitment Therapy processes (CompACT) and Inventory of Depression and Anxiety Symptoms (IDAS-II) via Qualtrics. A hierarchical linear regression examined age, gender, and county-level positive COVID-19 case rates as empirically derived covariates in addition to openness, behavioral awareness, and valued action, as predictors of depression and social anxiety.

Results indicated that behavioral awareness ( $b = -.974$ ,  $SE = .119$ ,  $\beta = -.329$ ,  $t(664) = -8.168$ ,  $p < .001$ ) and openness ( $b = -.454$ ,  $SE = .071$ ,  $\beta = -.263$ ,  $t(664) = -6.364$ ,  $p < .001$ ) associated with lower levels of depression. Age, gender, COVID-19-positivity rates, and valued action were not significant. Results demonstrated that behavioral awareness ( $b = -.669$ ,  $SE = .160$ ,  $\beta = -.179$ ,  $t(678) = -4.18$ ,  $p < .001$ ) and openness ( $b = -.627$ ,  $SE = .096$ ,  $\beta = -.287$ ,  $t(678) = -6.56$ ,  $p < .001$ ) associated with lower levels of social anxiety. Age was a significant covariate, and gender and COVID-19-positivity rates were not.

Results indicated that increased psychological flexibility, specifically openness and awareness, associated with lower depression and social anxiety. Future research should investigate psychological flexibility interventions with educators during the pandemic or other stressful events.

### **4. Trauma and Impacts on Early Concrete Operations in Childhood**

Components: *Literature review*

Categories: Behavioral or contextual neuroscience, Clinical intervention development or outcomes, Children, Trauma, Piagetian Stage Theory, Contextualism, Interpersonal Neurobiology and the Nuerosequential Model

Izaak Davison-Kerwood, M.A., Lyn Lake Psychotherapy and Wellness

Piaget theorized cognitive development in children developed as a contextual process between their environment and their development of schemata; in turn informing their behaviors in the context of these schemas. This poster sought to evaluate the existing research on the impact of trauma on children's development and compare these impacts to a current model of the functional impacts of trauma on children; the Nuerosequential Model of therapeutics.

Review of the available literature was performed along with theoretical comparisons between the Nuerosequential model of therapeutics (NMT) and Piagetian stage theory. Inclusion criteria was piagetian stage theory, schema development in child abuse, nuerosequential model and interpersonal neurobiology.

A total of 9 studies were identified related to the research topic; studies focused on primarily development of self-blame as primary negative schema to develop in ages of 6-8 (within concrete operations stage), and primarily through deductive reasoning associated with the cognitive processes in concrete operations.

The available research supports the alternative hypothesis in three main points (1) trauma in the age range of Piagetian concrete operations has an impact on the individuals deductive reasoning to develop a negatively biased self-schema (2) this schema is more fixed than other schemata seen (3) these cognitive shifts seen in these stages are correlated with the changes in neurosequential development for children and adults discussed in the NMT. Implications for treatment of children and adults imply the application of Acceptance and Commitment Therapy (ACT) combined with narrative therapy interventions.

### **5. An Insomnia Treatment Using Acceptance and Commitment Therapy Improves Sleep Health Among Caregivers with Insomnia: Aging in Context SIG Sponsored**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Health / behavioral medicine, Insomnia

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Sarah Kate McGowan, Ph.D., VA Greater Los Angeles Healthcare System  
Monica Kelly, Ph.D., UCLA  
Gwendolyn Carlson, Ph.D., VA Greater Los Angeles Healthcare System  
Diane Lee, MSW, VA Greater Los Angeles Healthcare System  
Cathy Alessi, M.D., VA Greater Los Angeles Healthcare System  
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Jennifer Martin, Ph.D., VA Greater Los Angeles Healthcare System  
McGowan Ph.D.

Insomnia is common among caregivers, leading to negative health outcomes. Adherence to traditional behavioral insomnia treatment is often challenging for this group. This pilot study tested whether a modified behavioral therapy for insomnia which incorporates strategies from Acceptance and Commitment Therapy (ACT) improves sleep health outcomes.

6 women veterans with insomnia (age range 25-57) who were caregivers (for a family member or friend) participated in a pilot trial of an ACT-focused behavioral insomnia treatment. Outcome measures included Pittsburgh Sleep Quality Index (PSQI), Insomnia Severity Index (ISI), actigraphy-measured sleep efficiency (SE), Patient Health Questionnaire (PHQ-9, depression), General Anxiety Disorder (GAD-7), 11 symptoms of sleep-related daytime impairment, and Acceptance and Action Questionnaire (AAQ). Student t-tests compared outcomes between baseline (T1), posttreatment (T2) and 3-month follow-up (T3).

After treatment, caregivers showed significant improvements between T1 and T2 (all p-values < 0.05) in ISI (14.3±5.4 vs. 3.8±3.2), PHQ-9 (9.8±7.2 vs. 2.8±3.8), GAD-7 (9.0±6.6 vs. 2.0±1.8), and number of symptoms of sleep-related daytime impairment (6.8±4.0 vs. 3.8±3.5). ISI (4.5±3.3) and daytime symptoms (3.2±3.6) remained significantly improved at T3, compared to T1 (p < 0.05). Caregivers also showed significant improvement in PSQI (10.0±4.1 vs. 4.3±2.2, p=0.02) and AAQ (24.0±12.7 vs. 17.5±9.2, p=0.01) at T3 compared to T1. SE was not significantly improved at either T2 or T3.

An ACT-focused behavioral approach for insomnia linking behavioral changes to the individual's core values and accepting their thoughts as a valid part of life experience is a promising new approach for caregivers with insomnia.

### **6. Mind Aut - A Mindfulness ACT oriented online program for high functioning autistic adults: Italy Chapter Sponsored**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Autism, Mindfulness, ACT

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Giovambattista Presti, M.D., Ph.D., University of Enna Kore  
Simona Ravera, Scuola Agraria Parco di Monza  
Giuseppe Betti, Accademia delle Scienze Comportamentali e Cognitive (ASCCO) - Parma, Italia  
Francesca Pergolizzi, Ph.D., IESCUM

Paolo Moderato, Ph.D., IULM University, Milan

During COVID pandemic, stress, anxious and depressive traits are increased especially among already vulnerable individuals: High functioning autistic adults are often characterised by inflexibility, mood disorders, behavioural disorders, anxiety and depression. -Acceptance and Commitment Therapy (ACT) has been shown to be effective in treating anxiety and mood disorders across several studies. -MBSR protocol has been shown to be effective among neurotypical population in decreasing chronic pain and anxious and depressive traits.

Participants: 9 adults with Diagnosis of Level 1 Autism between 25 and 42 years -Measure: BDI-II, STAI, M.A.A.S., CompACT, PRE-POST-FOLLOW UP.-The program is based on MBSR protocol with some adjustments studied specifically for autistic individuals and ACT oriented. MIND AUT included 8 online group sessions, one per week of one hour each.-Iphotesys: increasing of flexibility and mindful abilities, decreasing of anxious and depressive traits.

Results show a tendency to improvement in depressive and anxious traits and an increase in the general tendency to be careful and aware of what happens in the present moment. In addition, there is a general tendency to improve psychological flexibility abilities, related to the six processes: present moment, values, committed action, self-as-context, defusion and acceptance.

Considering the neuro-functioning differences of the autistic population compared to the neurotypical one, the general improvement in psychological flexibility abilities and awareness skills is a very important result. There is not enough literature about the effectiveness of mindfulness programs among autistic population and the results of this pilot study encourage in future studies a more frequent use of interventions based on meditative practices ACT oriented.

## **7. Psychometric Evaluation of the Swedish Multidimensional Psychological Flexibility Inventory (MPFI)**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Processes of change, Psychometric evaluation

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Andreas Larsson, Ph.D., Leg. Psykolog, Mittuniversitetet, Institutionen för Psykologi och Socialt Arbete  
Marie-France Champoux-Larsson, Mid Sweden University  
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Ellen Hallén, Mid Sweden University  
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Tobias Lundgren, Karolinska Institutet  
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Amani Lavefjord, Uppsala University  
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Örjan Sundin, Mid Sweden University  
Lance McCracken, Uppsala University  
Fredrik Åhs, Mid Sweden University  
Billy Jansson, Mid Sweden University

Psychiatric disorders are common, and reliable measures are crucial for research and clinical practice. A cross-diagnostic construct that can be used to index treatment outcomes as well as prevalence of psychological ill health is psychological flexibility. The aim of this study was to validate a Swedish version of the Multidimensional Psychological Flexibility Inventory (MPFI).

The original MPFI was translated to Swedish. Participants recruited through both social media and Qualtrics' participant recruitment. All questionnaires were answered using Qualtrics.

Measures used were, beside the Multidimensional Psychological Flexibility Inventory (MPFI), the Swedish version of the Acceptance and Action Questionnaire-II (AAQ-2), Avoidance and Fusion Questionnaire-Y (AFQ-Y8), Difficulties in Emotion Regulation Scale (DERS-16), Satisfaction with Life Scale (SWLS), and The General Health Questionnaire (GHQ-12).

Analysis was carried out using Confirmatory Factor Analysis. For the model with the best fit, Composite reliability was calculated. Discriminant and Convergent validity was calculated.

Using confirmatory factor analysis in a community sample of 670 participants, we found that a model with 12 factors had the best fit to the data (CFI = .955). All 12 subscales showed adequate reliability (CRs = .803 -.933) and the factor structure was similar across age groups and gender.

Findings suggest that the Swedish version of the MPFI is a reliable instrument that can be used to index psychological flexibility. Theoretical inconsistencies in item content is discussed.

## **8. Acceptance and Commitment Therapy in college students with ADHD tendencies**

Components: *Original data*

Categories: Clinical intervention development or outcomes, ADHD tendency, ACT, Mindfulness, College student

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Anju Matsui, Doshisha University  
Seunghun Han, Doshisha University  
Aiko Ohya, Doshisha University

Attention-Deficit/Hyperactivity Disorder (ADHD) is a developmental disorder characterized by inattention, hyperactivity, and impulsive behavior. It is needed to suggest and evaluate psychological ways to cope with ADHD tendencies. The present study investigated the effects of an intervention based on Acceptance & Commitment Therapy (ACT) on college students with ADHD tendencies.

One male and twelve female college students with ADHD tendencies were randomly divided into two groups. One group participated in an intervention based on ACT to control ADHD tendencies, and the other participated in discussions about it. The interventions continued online over three weeks for both groups. Experimenters followed up one month after the end of the intervention.

Experimenters asked participants to respond to two questionnaires. One assessed the severity of ADHD tendencies, and the other evaluated their degree of mindfulness. Participants completed them three times, before and after the intervention and one month after the end of the experiment. Moreover, experimenters asked participants to count and report the number of awareness to their distractions every day during the intervention.

The present study showed the improvement of ADHD tendencies in both groups through the intervention and follow-up. Moreover, as for the group that participated in the intervention based on ACT, experimenters observed increasing numbers of awareness during the intervention. However, we could not confirm the enhancement of mindfulness.

Overall, these results suggest that discussions about ADHD tendency have therapeutic effects. Finally, experimenters discuss the implications of these findings for developing better interventions.

## **9. Efficacy of Acceptance and Commitment Therapy in Daily Life in early psychosis: Results from the INTERACT RCT**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Mobile or digital technology, Early psychosis

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This study aimed to investigate efficacy of Acceptance and Commitment Therapy in Daily Life (ACT-DL), combining face-to-face therapy with an Ecological Momentary Intervention (EMI), in addition to treatment as usual (TAU) for psychotic distress, in comparison to TAU.

Individuals aged 15-65 years with clinically established Ultra-high risk (UHR) or First Episode of Psychosis (FEP) were randomly assigned to TAU or ACT-DL+TAU. ACT-DL+TAU consisted of 8 ACT-sessions augmented with an EMI-app. The primary outcome was psychotic distress assessed with the Comprehensive Assessment scale of At Risk Mental State (CAARMS) at post-intervention, 6- and 12-month follow-up. Secondary outcomes were functioning, symptom severity, and momentary psychotic distress. We performed multivariate mixed models according to intent-to-treat principles.

Between June 1, 2015 and December 31, 2018, 668 participants were referred, of whom 148 were randomized to ACT-DL+TAU (n=71) or TAU (n=77). 115 (78%) provided primary outcome data at least at one follow-up assessment. There was no evidence of greater reduction in the primary outcome measure CAARMS distress in ACT-DL+TAU compared to TAU ( $\chi^2(3)=2.36$ ;  $p=0.50$ ). However, out of the tested secondary outcomes, global functioning ( $\chi^2(3)=9.05$ ;  $p=0.033$ ), and negative symptoms ( $\chi^2(3)=19.91$ ;  $p<.001$ ) improved in ACT-DL+TAU compared to TAU, as did momentary psychotic distress ( $\chi^2(3)=21.56$ ;  $p<.001$ ).

INTERACT did not support a significant effect of ACT-DL over TAU on the primary outcome measure of psychotic distress as assessed with the CAARMS. Although significant improvements were found for some secondary outcome measures, further replication studies are needed to confirm the strength and specificity of these effects.

## **10. Mighty Children: A psychoeducational support group for caregivers of children living with disability in Afghanistan**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Dissemination or global health strategies, Children, Disability, Humanitarian setting

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Humanitarian action needs to be disability-inclusive, but there is little evidence on what works for children living with disability in these settings. Acceptance and Commitment therapy (ACT) has shown promise in other contexts as an adjunct to parenting support interventions for children with disability, improving caregiver wellbeing and quality of life (QOL). This study aimed to pilot a psychoeducational support group program incorporating ACT skills called "Mighty Children" (the program) for caregivers of children living with disability in Kabul province, Afghanistan.

We conducted a mixed-methods evaluation with before-after measurement of quantitative QOL outcomes and concurrent triangulation with qualitative data. QOL was measured using the Paediatric Quality of Life inventory. Qualitative data was collected through facilitator and participant focus groups post-program.

118 caregivers and 128 children participated in the program between November 2020 and February 2021. Implementers, facilitators, and caregivers reported the program was feasible and acceptable. Caregivers expressed a significant increase in their QOL at the conclusion of the program ( $t(125) = -10.6548$ ,  $p < 0.0001$ ). Exploration of qualitative data identified several key changes in caregivers: altered parenting

practices, disability inclusive behaviours, improved child functioning, and increased caregiver and child psychosocial wellbeing. Caregivers described using core ACT skills of living in the present moment and acceptance to help change their mindset, their behaviours and build hope for the future.

The changes described by caregivers demonstrate the powerful role that disability support groups can play in humanitarian settings. Incorporating ACT skills can give caregivers tools to open up and cultivate hope.

### **11. The Impact of Exposure to Heterosexist Bias on the Psychological Distress of Polish LGBTQ Individuals**

Components: *Conceptual analysis, Original data*

Categories: Clinical intervention development or outcomes, LGBTQ

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Joanna Dudek, SWPS University

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The present study aimed to examine mediating factors of the impact of exposure to heterosexist bias on the psychological distress of Polish LGBTQ individuals. It was predicted that psychological flexibility (Multidimensional Experiential Avoidance Questionnaire; MEAQ) and resilience (Brief Resilience Scale; BRS) would mediate the relationship between daily experiences of bias (Daily Heterosexist Experiences Questionnaire; DHEQ) and psychological symptoms as assessed by the Depression-Anxiety-Stress Scale (DASS-21), all scales previously established in Polish.

250 participants who both lived in Poland and spoke Polish were recruited via the Prolific data collection platform. 200 were screened for identifying with a minoritized sexual orientation, and 50 specifically among those who reported a minoritized gender identity. Data were analyzed using SPSS and the PROCESS Macro. Data collection occurred between November 2-8, 2021. By chance, this occurred following the first reading of the Stop LGBT Bill in the Sejm on October 30, 2021.

Preliminary analyses reveal that the BRS and MEAQ both mediated the relationship between daily exposure to bias and all scales of distress, when the full model was explored the significance of BRS mediation alone disappeared. Both the MEAQ and combined MEAQ/BRS pathways remained significant in mediating the relationship between daily bias and distress.

These findings emphasize the importance of psychological flexibility amongst Polish LGBTQ+ individuals, and the utility of exploring treatment approaches such as ACT that would increase psychological flexibility within a marginalized community experiencing a high degree of political bias.

### **12. On-line Delivered Acceptance and Commitment Therapy for Perinatal Mood and Anxiety Disorders**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Mobile or digital technology, Perinatal Mental Health

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Depression and anxiety during pregnancy and postpartum can affect approximately 1 in 5 women and if left untreated, and can lead to long-term adverse outcomes for women and children. Access to effective treatments for women experiencing moderate-severe perinatal depressive and/or anxiety disorders is limited. To address this problem, we developed an on-line group-delivered Acceptance and Commitment Therapy intervention for perinatal mental health (ACT-PNMH).

An open-label pilot study was conducted of an 8-week, group-based ACT intervention delivered on-line for women with moderate-to-severe mood and/or anxiety disorders during pregnancy and/or postpartum. The

women were accessing a specialist Perinatal Community Mental Health Service (PCMHS). Outcomes included session attendance rates, dropout rates, crisis/inpatient service use, and standardized symptom scales. Participant's responses to open-ended questions in an end of therapy questionnaire were analyzed using thematic analysis.

Fifty-seven women were referred to the intervention with 41 (72%) completing treatment. The median number of sessions attended was 6. No women required input from crisis/inpatient services. All reported finding the intervention helpful. The benefits of the ACT skills and techniques, the advantages and challenges of attending an on-line group-delivered intervention, and the impact of the COVID-19 were salient themes in the data. At post-treatment, there was a significant reduction in symptoms of global distress, depression, and anxiety, and an increase in psychological flexibility.

The group delivery of ACT on-line for women accessing a specialist PCMHS is feasible, safe, and effective. A randomized control trial (RCT) is needed to establish the efficacy and cost-effectiveness of this group-delivered ACT intervention.

### **13. Online Group Acceptance Commitment Therapy for Perinatal Mood and Anxiety Disorders: Facilitator Perspectives**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Mobile or digital technology, Perinatal Mental Health, Facilitator Views

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Victoria Samuel, DClInPsy, B.Sc., Cardiff University  
Evie Cunningham, B.Sc., Cardiff University  
CERITH WATERS, M.Sc., Ph.D., DClInPsy, Cardiff University

We aimed to examine, in depth, the perspectives of facilitators of an online Acceptance Commitment Therapy (ACT) group intervention, delivered within a specialist Perinatal Community Mental Health Service (PCMHS).

Qualitative methods were used. Thematic analysis was used to analyse semi-structured interviews with seven facilitators, and post-session reflections with six facilitators.

Four themes were generated. Firstly, there are barriers to accessing psychological therapies in the perinatal period and improvements are required. Secondly, COVID-19 has accelerated the provision of remote therapies, including online group therapy, enabling a continuity of service, and facilitating diversification of treatment access and choice. Thirdly, there are benefits of online group-delivered ACT in the perinatal period, with reservations. Attending a group online is perceived to be less exposing, and offers normalisation, social support, empowerment, and flexibility. Facilitators held reservations, perceiving online group therapy may not be prioritised by service users, concerns about limited non-verbal cues and therapeutic alliance, reporting a lack of an evidence base, and technology challenges when working online. Finally, facilitators offered recommendations for online group therapy best practice in the perinatal period, including the provision of equipment and data, contracts for engagement and suggestions to maximise engagement and group cohesion.

This study raises important considerations regarding the use of online group ACT in the perinatal context. There are opportunities afforded by online group therapies, which is important and timely given the increased drive towards improving access to psychological therapies and the need for 'COVID-proof' therapies. Recommendations for best practice are offered.

### **14. Using Single Subject and Group Analyses in Pilot Studies to Enhance Internal Validity**

Components: *Literature review, Original data*

Categories: Clinical intervention development or outcomes, Pilot Studies, ACT, Single subject, Group analyses

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Tabitha DiBacco, M.A., Western Michigan University  
Payton Brabant, Western Michigan University  
Amy Naugle, Ph.D., Western Michigan University



Pilot studies allow researchers to examine the acceptability, feasibility, and efficacy of a proposed larger study. Given the typically small sample sizes in pilot studies, it is imperative that researchers use the most effective research designs and analyses available in order to enhance internal validity. To our knowledge, most Acceptance and Commitment Therapy (ACT) pilot studies have used group designs with pre-post analyses only and some have not included control groups (Browning et al., 2022, Davison et al., 2016; Fiorillo et al., 2017; Weidlich & Ugarriza, 2015). These methodological considerations present a limitation to internal validity and confidence the intervention led to the pre-post change. Some ACT pilot studies have used single subject analyses, but the use of them has been limited (Duenas, 2016; Johnson, 2014).

The present ACT intervention study used single subject analyses in a non-concurrent, multiple baseline design combined with pre-post analyses. Participants included 17 Michigan healthcare workers employed during the COVID-19 pandemic. Depressive, anxious, and trauma-related symptom change was tracked during the study.

Dependent samples t-test analyses were significant for pre-post scores on measures of depressive, anxious, and trauma-related symptoms. Visual analysis at the single subject level indicates some participants were more clearly treatment responders than others.

Using both group and single subject analyses with small sample sizes can increase confidence that symptom change occurred only after the treatment phase, helping to distinguish treatment responders versus non-responders. Implications for pilot study research will be discussed.

## **15. Empathy Fatigue: Examining Healthcare Worker Values During the COVID-19 Pandemic**

Components: *Original data*

Categories: Clinical intervention development or outcomes, ACT

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Nikki Davis, Western Michigan University  
Amy Naugle, Ph.D., Western Michigan University

Increased empathy is associated with adverse outcomes such as vicarious anxiety and empathy fatigue, also known as compassion fatigue (Shu et al., 2017). The compassion fatigue resilience (CFR) model conceptualizes capacity for empathy facilitates compassionate behaviors and, without sufficient protective factors, can lead to compassion fatigue in the context of vicarious trauma (Ludick & Figley, 2017). Healthcare workers may be particularly susceptible to compassion fatigue (Cocker & Joss, 2016). This risk may be increased during COVID-19, especially with limited resources contributing to healthcare workers feeling they are betraying their values (Amsalem et al., 2021; Ruiz-Fernandez et al., 2020). Limited research has examined what values healthcare workers find most important and which values have been most difficult to pursue during the pandemic (Moyo et al., 2015).

Participants included 28 Michigan healthcare workers employed during the pandemic. During an Acceptance and Commitment Therapy intervention, participants were asked to identify three values that were most important to them related to their healthcare work. They were then asked to select the value that felt most difficult to pursue during the pandemic to use in the two sides of the same coin exercise.

Values were largely clustered within three groups consisting of being hardworking, honest, and empathetic. Empathy was selected by the majority of participants as the value that had been most difficult to pursue during the pandemic.

The role of empathy, compassion fatigue, and compassion satisfaction in healthcare workers will be discussed as well as the use of ACT techniques related to these topics.

## **16. Homework Adherence and Symptom Change in a Brief ACT Intervention with Healthcare Workers**

Components: *Original data*

Categories: Clinical intervention development or outcomes, ACT

Tabitha DiBacco, M.A., Western Michigan University  
Payton Brabant, Western Michigan University  
Nikki Davis, Western Michigan University  
Sanela Kalakovic, M.A., Western Michigan University  
Amy Naugle, Ph.D., Western Michigan University

Therapists identifying as cognitive behavioral tend to view homework adherence in therapy as highly important (Kazantzis & Dattilio, 2010). Assigning homework to clients is a common practice, even in brief cognitive behavioral therapies, to facilitate therapeutic change (Bennet-Levy et al., 2010). Homework adherence does appear to have a relationship with therapeutic change across treatment, but varies in effect size based on how it is measured (Kazantzis et al., 2016; Mausbach et al., 2010). Acceptance and Commitment Therapy (ACT) also falls within cognitive behavioral therapies; however, research evaluating homework adherence and its relationship to therapeutic change within ACT has been limited.

During the course of a non-concurrent, multiple baseline design, weekly homework self-reports were collected from participants during the intervention phase. Participants included 28 Michigan healthcare workers employed during the COVID-19 pandemic. The self-report asked participants to state how many days they had practiced their skills within the prior week. The intervention consisted of two sessions of Acceptance and Commitment Therapy and asked about homework engagement in mindfulness, defusion, feeling connected to values, and committed action. Depressive, anxious, and trauma-related symptom change was tracked during the study.

Overall study results indicated significant reductions in depressive, anxious, and trauma-related symptoms. Quantity of symptom change for depressive and anxious symptoms had a significant relationship with self-reported homework completion for defusion in the week prior to the post test evaluation. No significant relationships were found for mindfulness, values, or committed action.

Implications for tracking, evaluating, and encouraging homework adherence will be discussed.

### **17. Measuring Psychological Flexibility: Comparing the BEAQ and CompACT**

Components: *Original data*

Categories: Methods/approaches for individual variation, Psychometrics

Jenna Royle, B.S., Western Michigan University  
Tabitha DiBacco, M.A., Western Michigan University  
Sanela Kalakovic, M.A., Western Michigan University  
Amy Naugle, Ph.D., Western Michigan University

A variety of self-report measures exist for assessing psychological flexibility (Cherry et al., 2021; Francis et al., 2016; Gamez et al., 2011; Gamez et al., 2014). Research on the differential validity and reliability of these measures has not yielded a clear answer regarding the best measure of psychological flexibility (Ong et al., 2020). Additionally, treatment research often only includes one measure of psychological flexibility when assessing change during an intervention so limited information is done about how these measures may compare in assessing changes in psychological flexibility during treatment.

Participants included 28 Michigan healthcare workers employed during the pandemic. In addition to the mental health measures in the study, pre-post measurements were taken for factors hypothesized to be mechanisms of therapeutic change. The openness to experience subscale (i.e., acceptance and defusion) on the Comprehensive Assessment of ACT processes (CompACT) and the Brief Experiential Avoidance Questionnaire (BEAQ) were both used to experiential avoidance versus psychological flexibility.

Pre-Post analyses using a dependent samples t-test indicated there was a significant increase on the CompACT overall, the openness subscale, and the awareness subscale. Analyses for the BEAQ and the Values subscale were insignificant.

Hypotheses for the discrepant results between the openness subscale and the BEAQ will be discussed. This will include a discussion of the constructs assessed and the methods by which these measures evaluate them. Considerations for future psychometric and treatment research will be discussed.

### **18. Experiential Avoidance and Emotion Regulation as Mediators in the LGBT Minority Stress Model**

Components: *Original data*

Categories: Theory and philosophical foundations, Social justice / equity / diversity, Minority Stress

Allie Mann, M.A., Western Michigan University  
Amy Naugle, Ph.D., Western Michigan University

The minority stress model has been proposed to explain the increased risk for negative mental health outcomes (e.g. anxiety, depression, substance abuse) in individuals who identify as a gender or sexual minority compared to the general population. This model posits that minority stress factors (e.g. discrimination, internalized homophobia) create a unique social stress which creates psychological distress for gender or sexual minorities. While support for the general model has been established, attention has turned to investigating how minority stress impacts mental health by identifying potential mediators in the model.

The present study utilized a cross-sectional design to investigate experiential avoidance and emotion dysregulation as mediators in the minority stress model.

A parallel multiple mediation model was constructed which supported that both experiential avoidance and emotion dysregulation partially mediated relationship between minority stress and psychological distress.

The final model supports that psychological distress in gender and sexual minorities is significantly influenced by minority stress, experiential avoidance, and emotion dysregulation. These variables accounted for 54% of the observed variation in psychological distress. Implications of these findings are discussed.

### **19. The Relationship Between Internalized Homophobia and Experiential Avoidance in a Gender and Sexual Minority Sample**

Components: *Original data*

Categories: Processes of change, Social justice / equity / diversity, Gender and Sexual Minority

Allie Mann, M.A., Western Michigan University  
Amy Naugle, Ph.D., Western Michigan University

Experiential avoidance has been posited to be a fundamental component of psychopathology. Gender and sexual minority adults have been shown to have disproportionately high rates of psychopathology compared to the general population, and it is important to understand the psychological factors that contribute to this phenomenon. Internalized homophobia is one psychological factor that has been found to be associated with increased psychological distress but has not been thoroughly investigated in its relationship to experiential avoidance.

The relationship between internalized homophobia and experiential avoidance were explored in a sample of 189 adults who identified as either a gender or sexual minority.

Results indicated that that internalized homophobia did predict experiential avoidance.

When thinking about reducing mental health disparities in gender and sexual minority populations, both internalized homophobia and experiential avoidance may be important therapeutic targets.

### **20. How inter- and intrapersonal variables affect dating stability**

Components: *Original data*

Categories: Processes of change, Couples

Geraldine Granados Todd, Western Michigan University  
Kyra Katte, M.A., Western Michigan University  
Amy Naugle, Ph.D., Western Michigan University

The current study examined potential intra- and interpersonal variables that predict measures of relationship satisfaction and outcomes over a 6 month period. Investigators collected data on self-reported closeness, relationship satisfaction, emotional intimacy, and passionate love among members of dyads across multiple points in time.

At Time 1, dyads completed a pre-intervention survey, the FFP, and post-intervention survey. At Time 2, participants completed the same battery of instruments to evaluate outcomes at the 6 month follow-up.

At Time 1, each participant was asked to complete five outcome questionnaires (e.g., the inter- and intrapersonal variable questionnaires). During the FFP, each member of the couple took turns answering

questions that gradually increased level of self-disclosure. Participants then completed the inter- and intrapersonal variable questionnaires.

The follow-up assessment conducted 6 months post intervention included the inter- and intrapersonal variables questionnaires and the Dating Stability Questionnaire. For the purposes of this study, dating stability is defined as being together 6 months after participation in the study.

The relationship between inter- and intra- personal factors and relationship outcomes among couples will be presented. Lower levels of experiential avoidance were related to better relationship outcomes. Findings explore whether this pattern was maintained over time and what variables are most strongly related to dating stability and relationship outcomes.

The FFP procedure is designed to enhance levels of intimacy among dyads that complete the procedure. The lasting effects of this exercise are not well known. The implications of using this brief, cost-effective procedure with new relationships will be discussed.

## **21. Acceptance and Commitment Therapy processes associated with distress in cancer– systematic review and meta-analysis: CBS and Cancer SIG Sponsored**

Components: *Literature review*

Categories: Health / behavioral medicine, Processes of change, Cancer

Sophie Fawson, King's College London and NIHR Maudsley Biomedical Research Centre

Zoe Moon, University College London

Katherine Novogradsky, King's College London

Katie Forster, King's College London

Insun Tribe, King's College London

Rona Moss-Morris, King's College London

Caroline Johnson, Imperial College Healthcare NHS Trust

Lyndsay Hughes, King's College London

Approximately 11-42% of individuals with cancer experience distress. Some evidence suggests Acceptance and Commitment Therapy (ACT) reduces distress, but the mechanism is unclear. This review aimed to identify which ACT processes are associated with distress in cancer to inform intervention and theory development.

Search terms included cancer, distress outcomes, ACT processes and self-compassion. Six online databases and grey literature were searched. Of 5236 papers screened, 91 manuscripts (90 observational studies) were included; total n=13487. Forty-six were included in various meta-analyses of processes and distress outcomes.

Meta-analyses revealed higher scores on flexible processes (acceptance, present moment awareness, self-compassion) were associated with lower distress (r<sub>pooled</sub> -0.18 to -0.55); whilst higher scores on inflexible processes (experiential avoidance) were associated with increased distress (r<sub>pooled</sub> 0.65 to 0.73).

Data suggest increasing flexible skills and decreasing use of inflexible processes may reduce distress for individuals with cancer, providing support for an ACT-based approach. However, to develop effective interventions, longitudinal studies and mediation analyses of ACT interventions are needed to establish the process mechanisms to reduce distress.

## **22. Providing Care in Pediatric Integrated Behavioral Health during COVID-19: Challenges and Opportunities**

Components: *Original data*

Categories: Health / behavioral medicine, Integrated Behavioral Health

Anne Roche, Ph.D., Mayo Clinic Rochester

Sydney Kelpin, Ph.D., Mayo Clinic Rochester

Olivia Bogucki, Ph.D., Mass General Hospital

Sarah Trane, Mayo Clinic

Jocelyn Lebow, Ph.D., Mayo Clinic Rochester

Craig Sawchuk, Ph.D., Mayo Clinic Rochester

Since the onset of COVID-19, youth have faced numerous psychosocial stressors (remote learning, social isolation, uncertainty) that impact emotional well-being. The pandemic has been associated with an increase

in mental health problems in children and adolescents (Racine et al., 2021), highlighting the need for mental health services. Concurrently, social distancing guidelines have significantly impacted mental healthcare delivery throughout the pandemic (Pierce et al., 2021). Healthcare systems and providers were required to make rapid and creative adjustments to deliver functionally similar, though topographically different, mental health services to meet patient needs. Children and families often seek services in primary care, making this a valuable context for increasing access to behavioral health.

Mayo Clinic's multi-state, multi-site Pediatric Integrated Behavioral Health (IBH) program has continued to make flexible, context-dependent adjustments to service delivery modality (in-person, telehealth, self-help) and collaboration with primary care providers (in-person and telephone-based huddles, electronic chat-based curbside consultations) to provide care to patients.

Examination of service utilization data prior to and during the early stages of the pandemic (through October 2020) revealed substantial shifts in how mental health services were delivered across time (e.g., less in-person and more telehealth visits at the onset of COVID) but little changes in terms of total appointments and cancellations (aside from a cancellation spike at the beginning of the pandemic).

This poster will present best practice recommendations for pediatric IBH services during the pandemic as well as updated service utilization data, highlighting changes in the modality of care delivery options, through February 2022.

### **23. ACT Framing for BDSM and Consent**

Components: *Conceptual analysis, Literature review, Original data*

Categories: Theory and philosophical foundations, Social justice / equity / diversity, Consent, Sex Therapy, BDSM

Kate Morrissey Stahl, Ph.D., LCSW, CST, University of Georgia  
Jennie Pless, LMSW, University of Georgia

Consent functions differently in different types of relationships. We set out to understand consent in BDSM communities, where questions of consent would be quite explicit in these communities and due to the countercultural nature of BDSM practices could capture wisdom about consent overall.

We collected surveys online of 92 people who are part of BDSM communities. We analyzed the data quantitatively and qualitatively.

A negative relationship was found between the number of years someone had been involved in BDSM and their belief in the ability of their community to remove perpetrators. Those with the greatest belief in their community's ability to remove consent violators were those who also had the highest faith in their community's ability to educate new members and to prevent violations. Members of communities with someone designated to handle consent issues had greater belief in their community's ability to effectively educate new members about consent. The number of years someone had been a member of a BDSM community was predictive of a lower rating for how important they feel consent is to others in their community. A few of the themes that emerged were differing opinions about the role of community in relation to consent, differences in measures to ensure consent depending on the length of the relationship, and differing beliefs about what should be done to handle violations..

We consider the implications of what we learned about consent framed in terms of psychological flexibility and how clinicians might use these considerations of consent in clinical practice.

### **24. Dynamic networks of psychological flexibility processes to glucocorticoid toxicity in Rheumatologic conditions**

Components: *Conceptual analysis, Literature review, Original data*

Categories: Health / behavioral medicine, Clinical intervention development or outcomes, Chronic Illness

Vasilis Vasiliou, Ph.D., Oxford University, NDORMS  
Sarah Machie, M.D., University of Leeds  
Raashid Luqmani, M.D., University of Oxford

Lauren Floyd, Renal Department, Royal Preston Hospital, Lancashire Teaching Hospital NHS Foundation Trust  
Adam Morris, Renal Department, Royal Preston Hospital, Lancashire Teaching Hospital NHS Foundation Trust

Ajay Dhaygude, Renal Department, Royal Preston Hospital, Lancashire Teaching Hospital NHS Foundation Trust

Inflammatory rheumatic conditions are treated with oral glucocorticoids (GCs; steroids), but the treatment is associated with high GC toxicity, including diabetes, fractures, hypertension, and other body symptoms. There is also a salient multidimensional psychosocial effect on patients' daily functioning and quality of life that changes over time. Before any psychosocial intervention is proposed, a process-level analyses of the relationship between targeted coping responses, GC-toxicity, and functional outcomes can increase treatment effects. Psychological flexibility (PF) as a set comprising of transdiagnostic and malleable processes, would contribute greatly to an idiographic, personalized psychosocial intervention, to support patients with GC-toxicity, but there is no existing knowledge, to guide interventions.

We currently run an online longitudinal study of 254 patients with vasculitis that fill in questionnaires, assessing PF parameters (PsyFlex), the toxicity impact (BVAS), pain (BPI), distress (HADS), sleep (AIS), disability (HAQ), and QoL (SF-12).

Using network analysis, we will explore the centrality of GC-toxicity and its relation with PF coping processes and patient outcomes.

Findings will illustrate which PF processes might help patients cope with GC-toxicity and in which functional outcomes.

## **25. Racial microaggressions and distress: The mediating roles of psychological flexibility and inflexibility**

Components: *Original data*

Categories: Social justice / equity / diversity, Impact of Microaggressions

Akshay Trisal, BAS, University of Massachusetts, Dartmouth  
Morgan Browning, B.A./B.S., University of Massachusetts, Dartmouth  
Elizabeth Lloyd-Richardson, Ph.D., University of Massachusetts, Dartmouth

Microaggressions against racial and ethnic minorities in the United States relate to negative psychological effects, such as increased distress. Research suggests psychological resilience buffers the impact of negative life events on mental health. Psychological flexibility and inflexibility are different dimensions of resilience that could mediate the relationship between microaggressions and distress.

41 students who were non-white, biracial, or multiracial ( $M_{age} = 21.6, SD = 5.2$ ) from a New England public university completed a cross-sectional mental health survey including validated measures of racial microaggressions, psychological flexibility and inflexibility (i.e., flexible mindfulness and inflexible mindlessness), and negative emotions.

After regression confirmed that all variables were significantly related in the directions consistent with literature, mediation analysis found that inflexible mindlessness mediated the relationship between microaggressions and negative emotions. The direct effect of microaggressions to negative emotions was not significant ( $b = 0.24, 95\% CI [-0.09, 0.57]$ ) but the indirect effect through inflexible mindlessness was significant ( $b = .31, 95\% CI = [0.04, 0.67]$ ). Flexible mindfulness was not a significant mediator.

Inflexible mindlessness fully mediated the relationship between racial microaggressions and negative emotions, suggesting that microaggressions only influenced negative emotions through increased inflexible mindlessness. Future research should explore flexibility and inflexibility in longitudinal designs. Also, the use of targeted acceptance and mindfulness interventions like ACT or DBT should be addressed in regard to how they can be tailored to foster individual-level adaptability while also considering a need for individual- and societal-level change strategies when faced with microaggressions impacting negative emotions.

Poster Session #2, 6:30 – 7:15 PM

## **1. The Impact of Offering Undergraduates an Incentive for Attending to the Debriefing on Educational Benefits**

Components: *Original data*

Categories: Academics or education, Methods/approaches for individual variation, Research

Jenny Valadez Fraire, B.S, Metropolitan State University of Denver

Cassy Malnar, Metropolitan State University of Denver  
Elise Alde, B.S., Metropolitan State University of Denver  
Maureen Flynn, Ph.D., Metropolitan State University of Denver

In the past three years, 35% of empirical studies published in the Journal of Contextual Behavioral science used an undergraduate sample. Undergraduates often are required to participate in research for course credit, with the assumption that students receive educational benefits in return (Zanella et al., 2007). There is a lack of research demonstrating students gain knowledge through research participation beyond self-reported accounts (e.g., Zanella et al., 2007). The current study aimed to examine whether an extended video debriefing impacted actual learning and perceptions of research and whether having an incentive to attend to the debriefing further impacted these outcomes.

Undergraduate students (n = 379) were randomly assigned to one of three conditions, a video debriefing with an incentive, a video debriefing without incentive, or a short/control debrief. First, participants completed four values-identifying tasks to simulate a study. The participants received the debriefing associated with their condition and then completed a series of questionnaires related to their perceptions of research and a quiz on the debriefing.

Results showed that participants in the video debriefing plus incentive condition scored significantly higher on the debriefing quiz than those in the video only and control conditions. Participants in the video debriefing with an incentive condition also reported significantly more benefits related to research participation than those in the control condition.

Future research should examine what types of incentives are most effective.

## **2. Undergraduate Research Pools in Psychology Departments: Prevalence and Practices**

Components: *Original data*

Categories: Academics or education, Methods/approaches for individual variation, Research

Cassy Malnar, Metropolitan State University of Denver  
Elise Alde, B.S., Metropolitan State University of Denver  
Jenny Valadez Fraire, B.S, Metropolitan State University of Denver  
Maureen Flynn, Ph.D., Metropolitan State University of Denver

Studies on the prevalence of undergraduate research pools (URPs) in the United States are dated. In 1989, Sieber and Saks found that 74% of graduate-degree-granting programs used URPs and in 1999, Landrum and Chastain found that 32.7% of undergraduate-only departments used URPs. The contextual behavioral science community often publishes work using undergraduate samples. For example, over the past three years, 35% of empirical articles published in the Journal of Contextual Behavioral Science used an undergraduate sample. The common ethical justification for using undergraduates as participants is that the experience is educational (Cromer et al., 2013). The limited published data on the educational value of research participation is based on student perception of learning (e.g., VanWormer et al., 2014).

The current study's purpose was to update information on prevalence and usage of undergraduate research pools and to examine if and how institutions evaluate educational benefit of research participation. Psychology department chairs were recruited via email and a listserv posting and 604 completed the online survey.

Results show that 67.7% of 4-year institutions surveyed have a URP, with 83.7% of those institutions having a research requirement for students enrolled in introduction to psychology courses. Public institutions and those with a psychology graduate program were more likely to have a URP. Only 16% of the institutions reported assessing the educational value of research participation.

The results indicate that despite the high prevalence of URPs, very few institutions evaluate the educational value of research participation. Directions for future research are discussed.

## **3. The Impact of Extended Debriefings on Knowledge and Perceptions of Research among Undergraduate Participants**

Components: *Original data*

Categories: Academics or education, Methods/approaches for individual variation, Research

Elise Alde, B.S., Metropolitan State University of Denver  
Jenny Valadez Fraire, B.S, Metropolitan State University of Denver

Cassy Malnar, Metropolitan State University of Denver  
Maureen Flynn, Ph.D., Metropolitan State University of Denver

Researchers commonly use undergraduates as participants, using education benefits as a justification (Zanella et al., 2019). In the past three years, 35% of empirical articles published in the Journal of Contextual Behavioral Science used undergraduate samples. There is a scarcity of data demonstrating that research participation impacts actual learning or ways to enhance the educational experience. The aim of the Study 1 was to examine the impact debriefing type on perceptions of research and knowledge. The aim of Study 2 was to conceptually replicate Study 1.

Study 1's sample comprised on 254 undergraduates and Study 2 contained 310 undergraduates. In both studies, participants were randomly assigned to one of three conditions: extended video, extended written, short written debriefing. Participants in both studies first completed measures simulating a study. Then, participants were provided with the debriefing specific to their condition related to the "study" they just completed. After the debriefing, participants completed measures assessing their perceptions of research and a quiz on the information in the debriefing.

In Study 1, participants in the video debriefing condition earned higher scores on the quiz than those in the other two conditions. In Study 2, participants in the extended video and written debriefing conditions scored higher on the quiz than those in the short debriefing condition. Results from Study 2 also showed that participants in the video condition reported higher levels of educational benefits and rated the debriefing as more informative than participants in the short debriefing condition.

Future directions will be discussed.

#### **4. Improving the Acceptability and Utility of Acceptance and Commitment Training (ACT) Amongst Medical Students**

Components: *Original data*

Categories: Academics or education, Professional development, Medical Education

Irene Li, B.A., University of Nevada, Reno School of Medicine  
Roland Watson, University of Nevada, Reno School of Medicine  
Vincent DiMassa, University of Nevada, Reno School of Medicine  
Donna West, University of Nevada, Reno  
Kian Assemi, University of Nevada, Reno  
Alison Szarko, University of Nevada, Reno  
Nicole Jacobs, University of Nevada, Reno School of Medicine  
Ramona Hومانfar, University of Nevada, Reno

Medical students are at increased risk of burnout due to time restrictions, academic and social stressors, and the simultaneous demands of training with life events. Acceptance and Commitment Training (ACT) has proven to be an effective approach for managing burnout. However, to determine the acceptability, utility, and potential barriers for implementing ACT within medical education, it is crucial to assess the attitudes of the medical students receiving ACT. Therefore, this study's primary goal was to investigate medical students' perceptions of ACT and to use this information to tailor ACT metaphors towards their unique psychological experiences.

70 first-year medical students (MS1) completed online ACT modules and in person follow-up sessions during Fall 2021. Students filled out a voluntary post-training survey assessing areas of improvement and attitudes towards ACT skills.

22 out of 70 MS1s completed the survey. "Present Moment Contact" and "Values Clarification" exercises were reported to be most useful, while "Defusion" exercises were reported to be least useful. Students reported a preference to focus on "Defusion" exercises in future sessions. In specific feedback, students reported dissatisfaction with the "Defusion" word repetition exercise and an increased desire for broadening ACT exercises beyond medical school content.

Medical students may benefit from ACT metaphors specifically designed to relate to their unique schooling experiences. Additionally, medical students desire ACT metaphors that acknowledge their personal, familial, and societal roles outside of their medical student identity. Finally, additional research is needed to further enhance the vitality of ACT within medical education.



## **5. Psychological flexibility adds to the prediction of suicidality among transgender and non-binary adults**

Components: *Original data*

Categories: Social justice / equity / diversity, Clinical intervention development or outcomes, Transgender, Non-Binary, Psychological flexibility, Suicidality

Lucia Vallez, Metropolitan State University Of Denver  
Maureen Flynn, Ph.D., Metropolitan State University of Denver

The prevalence of suicidal ideation, suicide attempts, and deaths by suicide is much higher among transgender and non-binary (TGNB) individuals than the general population (e.g., Adams et al., 2017, Marshall et al., 2015, McNeil et al., 2017). It is important to identify variables associated with suicidality among TGNB individuals to help with this issue. For example, gender-related discrimination, gender-related victimization, and internalized transphobia are positively associated with both attempted suicide and suicidal ideation among this population (e.g. Perez et al., 2015; Scandurra, Amodeo, & Valerio, 2017; Wolford-Clevenger, Frantell, Smith, Flores, & Stuart, 2018). The aim of the current study was to examine whether psychological flexibility and inflexibility adds to the prediction of suicidality among TGNB individuals above and beyond known predictors (i.e., demographic, gender-related violence, gender-related discrimination, gender-related discrimination, and internalized transphobia).

We recruited individuals who are TGNB from social media websites, Reddit, and TGNB-related organizations. Participants completed a series of questionnaires online. The final sample included 402 participants.

Results showed that psychological flexibility was moderately and negatively correlated with suicidality and psychological inflexibility was moderately and positively correlated with suicidality. Additionally, both psychological flexibility and psychological inflexibility added to the prediction of suicide risk.

Future studies need to continue to examine the efficacy and effectiveness of interventions targeting psychological flexibility on suicidality among this population.

## **6. Social Validity of ACT-based Therapy and Training: A Brief Review of its Prevalence and Impact**

Components: *Conceptual analysis, Literature review*

Categories: Methods/approaches for individual variation, Behavior analysis, Social Validity, ACT

Donna West, University of Nevada, Reno  
Annelise Dankworth, University of Nevada, Reno  
Ramona Housmanfar, University of Nevada, Reno

Research studies in various fields of psychology measure consumer feedback pertaining to the goals, procedures, and effects of intervention. In behavior science, the assessment of social importance and acceptability of treatment goals, procedures, and outcomes is called social validity (Bear et al., 1968; Hawkins, 1991). Social validity is a crucial, yet often underutilized, component of interventions across psychology.

The primary aim of this study was to review the prevalence and utility of social validity in studies pertaining to Acceptance and Commitment Therapy/Training (ACT).

While ACT has been shown to be efficacious in numerous settings and populations, there is still a need to ensure those receiving ACT find it socially valid. However, several literature reviews have found that social validity is not commonly assessed in ACT-based therapy or training.

This poster will provide an overview of examples describing how social validity has been used to improve the viability of ACT and discuss recommendations regarding the practice and publication of social validity in ACT-based therapy and training.

## **7. Stepping Up to the Challenges of Hybrid Services: Stepped-Care as a Framework for Offering Telehealth Services**

Components: *Conceptual analysis*

Categories: Methods/approaches for individual variation, Mobile or digital technology, Telehealth, Stepped-Care Model

Caroline Lucy, M.A., Eastern Michigan University

Jasmine Dhuga, B.S., Eastern Michigan University

Since the start of the COVID-19 pandemic, the number of individuals experiencing mental health concerns has increased, and roughly 40% of adults in the U.S. report symptoms of a mental health condition (Czeisler et al., 2020). As a result of the restrictions on in-person contacts, telehealth became an especially important tool for ensuring clients received quality care in a safe and timely manner. Research has demonstrated the benefits of telehealth in treating concerns like depression and anxiety, with improvement comparable to that of in-person services (Fernandez et al., 2021). Looking to the future, many providers intend to continue offering telehealth services in addition to traditional in-person care in a hybrid model, with the recognition that telehealth is not ideal in all situations (APA, 2021; Lipschitz et al., 2022). The stepped-care model, in which the intensity or level of involvement in an intervention is matched to the severity of an individual's presenting concerns, can provide a valuable framework in considering how to offer telehealth services going forward.

This poster will review the strengths and challenges of a stepped approach to telehealth.

Potential benefits include addressing the growing unmet need for services, expanding services to underserved populations, and tailoring treatment to the individual. Challenges involve inadequate provider training in both stepped care and telehealth, lack of guidance for stepping up care, and inequitable access to technology.

Despite these challenges, we propose that the stepped-care model can provide needed structure for the continued use of telehealth services.

### **8. What do you like about it? Examining perceptions and preference for ACT and CBT interventions**

Components: *Original data*

Categories: Methods/approaches for individual variation, Clinical intervention development or outcomes, Preference

Grace Lyons, B.A., Wichita State University  
Melissa Miller, M.S., Wichita State University  
Huan Quan, M.A., Wichita State University  
Rachel Petts Santer, Ph.D., Farleigh Dickinson University  
Robert Zettle, Ph.D., Wichita State University

Comparisons suggest little difference in the relative efficacy of ACT and CBT, and their components. Consequently, variables like client preference may be relevant to consider in making treatment decisions as receiving preferred treatments produces increased outcomes. The purpose of this analogue study was to first determine if there was a clear preference based on brief descriptions of treatment components representative of ACT and CBT, and if so, to identify possible moderating variables.

Descriptions of a cognitive defusion, mindful noticing, and cognitive restructuring intervention to address negative, self-referential thoughts were presented to 54 undergraduates within a partial Latin square design. Participants rated each intervention on acceptability and perceived practicality before indicating overall preference. Measures of cognitive fusion, experiential avoidance, and distress were also administered.

Restructuring (79%) was rated as the preferred and most acceptable option, but least practical. Defusion (5% preference) was rated least acceptable, but most practical. Noticing (17% preference) fell in the mid-range for acceptability and practicality. Distress predicted lower acceptability for both ACT interventions, while experiential avoidance predicted higher acceptability for restructuring. Practicality was not predicted by any psychological variables.

Findings suggest ACT-related interventions are perceived as more practical, but less acceptable and preferable than restructuring, especially among more distressed individuals. This supports previous research showing ACT interventions are perceived as easier to learn and apply than CBT interventions. Such information may be used in presenting ACT interventions to clients in ways that directly increase their acceptability and preferability, and by extension, their relative efficacy.

### **9. Comparison of Cognitive Defusion and Restructuring of Metacognitive Beliefs about Worry**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Processes of change, Generalized Anxiety, Worry

Huan Quan, M.A., Wichita State University  
Jonathan Larson, M.S., Wichita State University

Robert Zettle, Ph.D., Wichita State University  
Richard Sun, B.A., Wichita State University

Laboratory comparisons of cognitive defusion (DF) and restructuring (CR) have been limited thus far to targeting automatic thoughts (e.g., Deacon et al., 2011). Among psychological inflexibility and metacognitive processes, cognitive fusion and beliefs about negative consequences of worry were found to be the two best predictors of generalized anxiety (Huan & Zettle, in press). This project explored the implications of these findings by experimentally comparing the effects of DF and CR in addressing metacognitive beliefs about worry in an analogue sample.

A screening survey that included demographic items, an adapted version of the Metacognitive Questionnaire (MCQ; Wells, 2009), and measures of distress and anxiety was administered to a college sample. Participants meeting selection criteria were randomly assigned to one of two 20-min interventions, DF (N = 10) or CR (N = 10) as of this writing, in which a specific metacognitive belief identified by the MCQ was targeted. Pre and post outcome ratings of believability and distress of the target as well as untargeted beliefs were obtained.

Both interventions showed significant, but equivalent, reductions in believability and distress for both targeted and untargeted beliefs. However, medium effect sizes for reduced distress in targeted ( $r = .27$ ) and untargeted beliefs ( $r = .25$ ) favored DF.

Preliminary findings suggest that the benefits of defusion techniques extend to metacognitive beliefs and may provide a preferred alternative to metacognitive restructuring strategies as typically implemented within metacognitive therapy (Wells, 2009).

## **10. Effects of Acceptance and Commitment Therapy on trauma-related symptoms: A systematic review & meta-analysis**

Components: *Literature review, Original data*

Categories: Clinical intervention development or outcomes, Health / behavioral medicine, Trauma

Meaghan Rowe-Johnson, Ph.D., Drake University  
Bridgette Browning, Drake University  
Brittany Scott, Drake University

National estimates suggest that up to 89.7% of individuals have been exposed to at least one traumatic event in their lifetime (Kilpatrick et al., 2013). Exposure to traumatic events can contribute to significant psychological distress and severe functional impairment. However, multiple studies have demonstrated that acceptance and commitment therapy (ACT; Hayes, Strosahl, & Wilson, 1999) has been an effective treatment at reducing trauma-related symptoms. While there have been systematic reviews on the clinical effectiveness of ACT for PTSD in veterans (Pohar & Arguez, 2017), there is no known meta-analysis published on the impact of ACT in adult populations with trauma-related symptoms. Hence, the purpose of this meta-analysis and systematic review was to assess the effectiveness of ACT interventions for decreasing trauma-related distress in adults who have developed trauma symptoms following exposure to one or more traumatic events.

A systematic review of the literature was conducted using the following databases: PsychINFO, PubMed, PsycARTICLES, ScienceDirect, Web of Science, Wiley Online, Springer Journals, PTSDpubs, and EBSCOhost. Additional studies were identified by searching bibliographies. Between-group random effects meta-analysis will be conducted on symptom-reduction outcomes.

A total of 22 studies met inclusion criteria. It is expected that meta-analysis of the 22 studies will reveal a large effect of ACT interventions on symptom reduction at the posttest compared to control groups.

Preliminary results from the current systematic review and meta-analysis provide evidence for the effectiveness of ACT interventions at reducing trauma-related symptoms. Additional RCTs are necessary to provide stronger conclusions about the effectiveness of ACT interventions.

## **11. Coping Strategies Predict Mental Health Outcomes During COVID-19 Pandemic**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Health / behavioral medicine, COVID-19, Coping Skills, Depression, Anxiety, Stress

Thomas Fisher, B.A., Western Michigan University  
Crystal Yuet Wen Lim, Western Michigan University

Brooke Smith, Ph.D., Western Michigan University

COVID-19 continues to pose a significant threat to public health. Additionally, recent work has demonstrated the increasing rate of psychological distress during the pandemic, calling attention to the need to understand how the pandemic has impacted mental health outcomes. Coping strategies utilized by individuals are helpful in predicting mental health outcomes. However, limited studies have examined coping strategies predicting mental health outcomes longitudinally.

The current study collected data regarding mental health and coping strategies from participants in the community using social media platforms and from university students from the period of April to June 2020 via an online survey. A series of linear mixed models examined the relationship between coping strategies and psychological distress during the pandemic.

Results found that denial, substance use, behavioral disengagement, venting, humor, and self-blame were maladaptive coping strategies during the COVID-19 pandemic ( $p < .001$ ). No coping strategies associated with decreased psychological distress were found. However, exploratory results showed that acceptance, active coping, and positive reframing had different positive predictions on depression, anxiety, and stress.

These findings provide support that coping strategies other than denial, substance use, behavioral disengagement, venting, humor, and self-blame, should be further explored as adaptive coping strategies during the COVID-19 pandemic. Understanding which coping strategies may be most effective at reducing psychological distress provides an opportunity to inform public health interventions to aid community members in coping psychologically with stressors during the COVID-19 pandemic as well as future public health crises.

## **12. Feasibility and acceptability of a hospital-based ACT intervention to improve retention in care for people with HIV**

Components: *Literature review, Original data*

Categories: Clinical intervention development or outcomes, Health / behavioral medicine, HIV, ACT, Hospital-based intervention, Open-trial

Mayte Forte, Ph.D., Michael E. Debakey VA Medical Center/Baylor College of Medicine

Ethan Moitra, Ph.D., Ph.D., Brown University

Lilian Dindo, Ph.D., Ph.D., Baylor College of Medicine

About 40% of people with HIV (PWH) are not regularly engaged in HIV primary care in the United States (1-3). Finding PWH who are out of care is difficult, but hospitalization is relatively common and presents an opportunity to re-engage PWH in outpatient care. Furthermore, attention to psychosocial barriers that might undermine retention in care (e.g., stigma, depression) is needed. The purpose of this study was to evaluate the feasibility and acceptability of a hospital-based ACT intervention to improve retention in care for PWH.

Hospitalized patients with uncontrolled HIV were enrolled in this open trial and were assigned to a 4-session, ACT-based intervention. The intervention was designed to be implemented individually and flexibly to PWH in hospital settings. Patients completed assessments of stigma, coping, and distress at baseline, and provided qualitative feedback about the sessions post-intervention.

Of the 15 patients enrolled, 8 (53 %) completed all 4 ACT sessions and 7 provided qualitative feedback. The remaining 7 completed 1-3 sessions. Within this sample, a third were homeless, the majority were disabled and not working, and three quarters of the sample reported clinically significant depression, anxiety, or stress. The intervention feedback was positive with patients particularly appreciating that the intervention provided a holistic approach to their health. Six patients attended a scheduled follow-up visit with primary care, two with viral loads  $< 1000$ .

These preliminary data support the continued refinement and investigation of this treatment approach for hospitalized PWH, a complex and underserved population that is in significant need of help.

## **13. Feasibility of a Mindful Prehabilitation Training: An ACT-based, App-delivered Intervention for Presurgical Anxiety**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Mobile or digital technology, Mindfulness

Gage Chu, VA San Diego

Byron Fergerson, VA San Diego  
Matthew Herbert, VA San Diego

Preoperative anxiety is associated with surgical risk (e.g., increased need for anesthesia) and poorer postoperative recovery (e.g., increased pain, longer recovery). Cognitive-behavioral “prehabilitation” interventions improve preoperative anxiety and postsurgical outcomes, but the accessibility of current offerings is limited. In this study, we present preliminary data for Mindful Prehabilitation Training (MPT), an ACT-based, app-delivered intervention for preoperative anxiety. MPT spans seven days before the surgery to three days after and consists of twice-daily notifications (AM and PM). Content consists of psychoeducation, metaphors, exercises and mindfulness practices consistent with the psychological flexibility model.

To date, 10 Veterans (Mean age= 55.9 (16.82), range = 26-78) with an upcoming operation in the general surgery clinic at the VA San Diego Healthcare System have been enrolled. We examined program feasibility and patient perspectives of MPT and explored changes in preoperative anxiety and posttreatment mental health, mindfulness, and quality of life (QoL).

Adherence to MPT (calculated as percentage of opened notifications) ranged from 25-97%. Posttreatment qualitative interviews indicated good accessibility and comprehension of content, but substantial variation in perceptions of mobile treatment, self-directed mindfulness practice, and overall impact. Preliminary findings include increased mindfulness and mental health-related QoL as well as decreased surgical fear. Physical health-related QoL worsened at posttreatment with mixed findings for changes in depression, stress, and anxiety.

Preliminary data support MPT’s feasibility. However, variable applicability suggests modification of treatment components and inclusion criteria. This app-delivered intervention may help refine and extend the reach of prehabilitation programs for presurgical anxiety.

#### **14. Evaluation of an online training program for parents to implement a naturalistic language intervention**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Behavior analysis, Children, Parents, Language

Lívia Balog, Master of Psychology, Universidade Federal de São Carlos  
Camila Domeniconi, Ph.D., Universidade Federal de São Carlos

Considering that parents are important in children's language development and that teaching parents to interact in a way that stimulates this language through remote teaching is effective, the present study aimed to develop and evaluate an online training program for parents to stimulate their children's language in routine interactions.

Five mothers and one father of children with and without language delay between two and three years old participated. The program consists of six teaching modules with videos that taught these strategies: Follow the Child's Lead, Be Responsive, Arrange the Environment, Expand Communication, Ask questions and Provide Delay. The use of strategies by parents and the number of communicative initiations of the children were measured through video interactions between the participating adults and children in everyday situations before the beginning of the program and after each module. The Program Impact Scale (P.I.S) was applied after all stages.

Compared to pre-intervention measures, parents used the strategy taught immediately after teaching more often. There were no significant changes in the child's communicative initiations that could be related to the teaching of strategies to parents. The results of the P.I.S indicated parents' satisfaction, who reported that they were using the strategies taught more in their daily life. The least used strategy used by the parents was “Arrange the environment.”

The program was effective in increasing the frequency of use of strategies by parents and some changes are suggested for future studies, such as increasing its duration, as well as promoting greater interaction between participants.

#### **15. A web/mobile application tool oriented to Acceptance and Commitment Therapy (ACT).**

Components: *Literature review*

Categories: Clinical intervention development or outcomes, Mobile or digital technology, Psychological Flexibility; Web/Mobile Application; ACT Metaphors & Exercises.

Emanuele Rossi, Scuole di Specializzazione in Psicoterapia Cognitiva (APC, SPC, AIPC, SICC, IGB); Università degli Studi Guglielmo Marconi  
Francesco Mancini, M.D., Scuole di Specializzazione in Psicoterapia Cognitiva (APC, SPC, AIPC, SICC, IGB); Università degli Studi Guglielmo Marconi, Rome, Italy

The poster introduces a research project that offers an outline of a web/mobile application tool oriented to Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999, 2012) a psychotherapy grounded on solid scientific foundations and based on Relational Frame Theory (RFT; Hayes, Barnes-Holmes, & Roche, 2001) a modern contextual behavioral approach to human language and cognition.

In this project an Italian language tool was designed intended to support clinical activity with the aim to increase psychological flexibility and well-being of the client and the clinician. This web/mobile application project wasn't directed toward a stand-alone tool substituting the therapeutic process, instead it was conceived as an integration tool to it, with the aim of enhancing the clinical practice with experiential exercises and effective practices related to ACT processes of psychological flexibility that could be trained outside the therapy room.

In this poster a Version 1.0 of a web/mobile application tool oriented to ACT is presented and defined in core clinical aspects, and tries to describe a potential logical and operational structure of the tool. Therefore, with an explanatory aim, a graphic hypothesis was planned over an original series of exemplificative images and screenshots that were designed for the intended purpose.

This work was carried out to provide the client and the clinician an universally accessible, clear and intuitive web/mobile application for the practice of ACT processes and is related to a broader project, organized in several phases introduced in previous ACBS World Conferences, which entailed all the psychological flexibility processes.



### **16. One-day Acceptance and Commitment Training Workshop for Veterans and their romantic partners**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Processes of change, ACT Intervention

Namrata Nanavaty, M.S., Michael E. DeBakey Veterans Affairs Medical Center in Houston  
Lilian Dindo, Ph.D., Baylor College of Medicine

Relationship distress impacts 75% of Veterans seeking mental health services and is associated with negative outcomes (e.g., hopelessness, suicide), while stable relationships are a source of resilience. ACT is a transdiagnostic behavioral intervention for various mental and physical health conditions, and ACT for couples has been associated with enhanced marital satisfaction and reduced distress. ACT has been successfully implemented in various delivery formats, including 1-day workshops which are less stigmatizing than "therapy" and improve treatment access, adherence, functioning and distress among rural Veterans. Veterans requested expansion of the 1-day ACT workshops to 2-day workshops for Veterans and their partners. The aim of the current study was to develop a couples-based ACT workshop focused on improving relationship intimacy and communication.

A virtual ACT-based couples' workshop was developed and piloted with a group of Veterans and their partners, who provided feedback on the experience, materials, and perceived takeaways.

Five Veterans completed a 1-day Veteran-only ACT workshop and later attended the 1-day ACT couples-focused workshop with their partners. Participants provided feedback via structured interview and reported great satisfaction with the intervention and format. They reported implementing skills taught and noted improved communication and understanding of their partners' perspectives. Suggestions for improvements included: a) assessment of relationship strengths and weaknesses; b) more experiential exercises; and c) an in-person workshop option.

One-day ACT workshops for couples is well-received by Veterans and their partners and can increase access to under-served Veterans. It will be important to assess mental health and functional outcomes.

### **17. A Principal Components Analysis of the Five Factor Mindfulness Questionnaire Among a Sample of Complex Patients**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Methods/approaches for individual variation, Mindfulness

Troy Thisler, M.S., Institute for Life Renovation and Nova Southeastern University  
Lori Eickleberry, Ph.D. and ABPP, Institute for Life Renovation and Nova Southeastern University

The 39-item Five Factor Mindfulness Questionnaire (FFMQ; Baer et al., 2006) is one of the most widely used inventories to assess for trait mindfulness, which has been shown to be positively correlated with psychological health (Pallozzi et al., 2017). A 24-item version of the FFMQ has been validated in a Dutch sample (Bohlmeijer et al., 2011) a 23-item version with a German sample (Burzler et al., 2019), and a 15-item version had been developed but not validated (Baer et al., 2011). Despite the frequent use of the FFMQ and its shorter versions, the literature supporting its five-factor structure among clinical samples is mixed (Diehl et al., 2021).

The present study subjected the FFMQ data from 122 patients to principal components analysis (PCA) using IBM SPSS Statistics version 28. This data comes from patients' initial FFMQ scores at the start of their treatment at an intensive outpatient program. A majority of these patients (n = 116) meet the criteria for multiple psychological disorders.

The suitability of data for factor analysis was addressed and the Kaiser-Meyer-Olkin value and results on Bartlett's Test of Sphericity demonstrated suitability of the data for PCA prior to analysis. An initial analysis revealed nine components, but more analyses with a scree plot and with a parallel analysis of expected values supported a five-factor solution.

This poster reviews these findings, along with item-level recommendations for the construction of a short form most suitable for complex patients.

### **18. Measuring the Role of Transdiagnostic Mechanisms in the Development and Treatment of PTSD**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Theory and philosophical foundations, PTSD

Anastacia Anishchenko, Psy.D., Bay Area Trauma Recovery Clinic  
Matthew McKay, Ph.D., Bay Area Trauma Recovery Clinic

Post-Traumatic Stress Disorder (PTSD) has been traditionally treated by focusing on symptom reduction, but success has been elusive. Further, current diagnostic guidelines do not address the mechanisms responsible for the development of PTSD and frequently co-occurring depression and anxiety disorders that may be precipitated by a traumatic event. A transdiagnostic approach to trauma treatment targets the drivers of symptomology rather than the symptoms. Emerging evidence suggests that the resulting individualized treatment can then be more precisely targeted, more acceptable to trauma survivors, and more effective than diagnosis-specific therapies.

This study used archival data from the Bay Area Trauma Recovery Clinic in Berkeley, California. Trauma survivors (N=340) were provided at least eight transdiagnostic treatment sessions that included ACT, CBT, exposure therapy, and EMDR. Pre- and post-treatment measures included the Comprehensive Coping Inventory-Revised (CCI-R) and the Modified PTSD Symptom Scale (MPSS). Data were analyzed using paired t-tests and correlation statistics at the  $p < .05$  statistical significance threshold.

Transdiagnostic therapy significantly reduced PTSD symptoms and the utilization of maladaptive coping strategies that may drive PTSD symptoms. Further, six maladaptive coping strategies – situational avoidance, worry, threat focus, internalizing, rumination, and post-event processing – were correlated with PTSD symptoms before therapy and in pre-to-post treatment improvements.

Present results suggest the potential of targeting specific maladaptive coping strategies when treating trauma survivors, including those with concurrent diagnoses of other disorders. This study supports the transdiagnostic paradigm that allows for individualized treatment targeting the drivers that may generate and maintain symptoms across a range of trauma-related psychopathologies.

### **19. Psychological Flexibility Processes and Associations with Stigma for People with Skin Conditions: Network Analyses**

Components: *Original data*

Categories: Applied research

Andrew Thompson, DCLinPsy., C.Psychol. (Clinical)., C.Psychol. (Health)., AFBPsS., DipCAT., FHEA, Cardiff University  
Hellen Russell, Psy.D., Sheffield Children's NHS Foundation Trust  
Vasilis S. Vasiliou, Ph.D., Oxford University, NDORMS

Interventions addressing stigma in people living with skin conditions are only modestly effective. The transdiagnostic model of Psychological flexibility (PF), including its six processes, might be relevant to stigma reduction, yet, studies have not examined the processes together. This can create confusion as to which processes should be targeted, to support these individuals. To refine existing intervention approaches, we recruited 105 individuals with skin conditions from a dermatology clinic, to examine whether higher psychological flexibility (CompACT; as dyads "open", "aware", and "active") would moderate the impact of stigma on psychological wellbeing, including anxiety (GAD-7), depression (PHQ-9), and health state (EQ5D5L). PF processes did not moderate this relationship, indicating that the directions of influences, underlying these relations, may not be static, but dynamic and bidirectional. To examine this, we conducted a network analysis. Findings indicated the "Open" and "Aware" as the strongest process dyads (edge-weight link), showing the expected negative connections with stigma, anxiety, depression, and positive with self-rated health. These dyads indicate targeted processes of change for stigma alleviation in people with skin conditions.

## **20. Does Affect Labelling give effect to the performance of Defusion?**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Word Repeating Technique, Affect Labelling, Defusion

Ayane Ito, Doshisha University  
Hiroha Miyazawa, Doshisha University  
Takashi Muto, Doshisha University

It has been shown in the previous study that the protocol of settling target words before using the Word Repeating Technique (WRT) is the cause of discomfort. That means clients will feel a dramatic decrease in discomfort after WRT usage. However, feeling a substantial reduction in the discomfort of negative self-relevant thoughts has some risks. Increasing the strain on clients might be one of them. It might also make clients misunderstand that WRT is just a coping technique to remove discomfort. To prevent these cases, interference that gives no effect before using WRT is needed. This study tried to assess if Affect Labelling is an effective measure to reach the goal.

Thirty-six participants were randomly sorted into two groups; the experimental group, which contains affect labelling protocol in the processes, and the control group, which doesn't. The following questionnaires were used; The Japanese version of the Hospital Anxiety and Depression Scale (HADS), Cognitive Fusion Questionnaire (CFQ), Acceptance and Action Questionnaire-II (AAQ-II), and the Visual Analog Scale (VAS) to measure discomfort and believability.

As for the HADS, CFQ, and the VAS scores, the main effect of groups and the interaction were not significant, while the main effect of periods was significant.

The findings cannot prove that Affect Labelling is the effective protocol for decreasing/stabilizing clients' discomfort. To fulfil the objective, more studies focusing on each protocol are needed.

## **21. Association Hoarding and related disease, and Psychological Flexibility among Japanese university students**

Components: *Original data*

Categories: Health / behavioral medicine, Hoarding, Depression, Anxiety, OCD, Psychological flexibility

Kyoshiro Aiki, Bachelors Degree, Doshisha University  
Taiki Shima, Doshisha University  
Takashi Muto, Doshisha University

Hoarding is characterized by the excessive acquisition and failure to discard a great number of possessions. Such behaviors can cause various other problems as a result. Many studies about the relationship between hoarding and the other related factors have been conducted in the United States, but very few in Japan.



Therefore, the present study examined the relationship between hoarding and the other related diseases, and psychological flexibility in Japanese university students.

Two hundred and thirteen Japanese university students (75% female) completed an online survey. Measures included in the survey are the Japanese version of the Hoarding Rating Scale Self-Report (HRS-SR-J), Saving Cognitions Inventory (SCI), Acceptance and Action Questionnaire- II (AAQ- II), Cognitive Fusion Questionnaire (CFQ), Valuing Questionnaire (VQ), the Hospital Anxiety and Depression Scale (HADS), the Self-Report Yale-Brown Obsessive Compulsive Scale (Y-BOCS).

The results indicated that positive correlations were found between SCI and anxiety, AAQ- II, and CFQ. Specifically, the results found that anxiety and CFQ significantly predicted SCI total score at the 1% level. Furthermore, anxiety was partially mediated between CFQ and SCI total score. However, CFQ did not mediate SCI total score and HRS-SR-J total score.

These findings suggest that hoarding is unique to Japanese university students. In particular, the cognitive aspects of hoarding may be an important factor in interventions for Japanese university students.

## **22. Associations between psychological flexibility and functioning in participants with endometriosis-related pain**

Components: *Original data*

Categories: Health / behavioral medicine, Chronic pain

Felicia Sundström, M.Sc., Department of Psychology, Uppsala University  
Amani Lavefjord, M.Sc., Uppsala University  
Monica Buhrman, Ph.D., Uppsala University  
Lance McCracken, Ph.D., Uppsala University

Psychological flexibility (PF) is a general model of well-being. PF is positively associated with functioning in several chronic pain disorders. However, it has not been investigated in endometriosis, a chronic pain disorder affecting 5-10% of women worldwide. This is the first preliminary investigation of the associations between PF or psychological inflexibility (PI) and daily functioning in participants with a primary diagnosis of endometriosis.

This study is based on a secondary analysis of survey data from Swedish speaking adult participants with chronic pain recruited online. All participants completed the Multidimensional Psychological Flexibility Inventory (MPFI), other measures of PF, and measures of pain and daily functioning. T-tests were performed to check for differences between participants indicating chronic pain ( $\geq 15$  days of pain per month) and not. Correlations between the process and outcome variables, and hierarchical multiple regressions (HMR) with the measures of functioning as dependent variables, and PF/PI processes as independent variables, were performed.

Mean participant age was 36.37 years (SD = 10.06). Participants experiencing chronic pain (86.0 %), a subgroup of endometriosis patients, differed from those who did not experience chronic pain on functioning. HRMs showed that PF/PI contributed significantly to explained variance in all dependent variables. PI from the MPFI processes explained more variance ( $\Delta R^2 = .101-.406$ ) than PF processes.

In this first exploration of PF and PI in participants with chronic endometriosis pain, PI was negatively associated with daily function. This indicates that people with chronic endometriosis pain might benefit from treatments targeting PF/PI, however, more research is needed.

## **23. Moral Injury Among Civilians: A Review of the Literature and Directions for Future Research**

Components: *Conceptual analysis, Literature review*

Categories: Dissemination or global health strategies, Academics or education, Moral Injury

Jacob Johnson, B.A., Department of Veterans Affairs  
Sean Barnes, Ph.D., Department of Veterans Affairs  
Lauren Borges, Ph.D., Department of Veterans Affairs

Exposure to potentially morally injurious events (PMIEs; events that represent a violation of one's moral code and could give rise to moral injury) have been studied in military and veteran populations (e.g., warzone experiences) but understudied in civilian groups (e.g., healthcare providers, police officers, sex offenders).

We offer a contextual behavioral framework for understanding moral injury among civilian groups, review the literature on moral injury in civilians, and discuss future directions for research.

First, we present a contextual behavioral model of moral injury and apply it to civilian populations (Borges et al., 2021; Farnsworth et al., 2017). We describe how exposure to PMIEs can cause moral pain (e.g., guilt, shame, disgust, anger, and contempt) and how efforts to avoid and control moral pain can result in moral injury among civilians. Next, we review studies of PMIEs and moral injury in civilian populations. We describe the types of PMIEs these individuals report experiencing and how moral injury manifests in civilian groups. We discuss future directions for research in these groups and identify additional groups for which PMIE exposure and moral injury could be relevant but have not been studied (e.g., perpetrators of sex trafficking and perpetrators of child abuse).

Finally, we discuss assessment and treatment considerations for different civilian groups experiencing moral injury. We describe how contextual behavioral interventions like Acceptance and Commitment Therapy for Moral Injury (ACT-MI) (Borges, 2019; Farnsworth et al., 2017) can be used to empower civilians to respond flexibly to their moral pain while living their values.

#### **24. Exploring the Relationship between Complex Verbal Behavior, Delay Discounting, and Psychological Flexibility**

Components: *Original data*

Categories: RFT / RGB / language, Behavior analysis, Psychological Flexibility, Complex Verbal Behavior, Delay Discounting

Amanda Chastain, M.A., BCBA, University of Illinois, Chicago  
Mark Dixon, Ph.D., BCBA-D, University of Illinois, Chicago

Prior research has indicated correlations between monetary delay discounting tasks and measures of psychological flexibility, with some researchers proposing that measures of delay discounting may be a transdiagnostic tool to assess and predict self-reported mental health disorders. Recent research has further indicated a possible relationship between an individual's ability to engage in derived relational responding and their overall psychological flexibility. Thus, the current study aimed to explore the relationships between derived relational responding, psychological flexibility, and delay discounting in adults.

Individuals over the age of 18 were administered an online test of relational abilities using the Peak Comprehensive Assessment-Transformation Expressive submodule, the Acceptance and Action Questionnaire (AAQ-II), the Mindfulness whatever (MAAS), the Values Questionnaire (VQ), and a hypothetical monetary discounting task.

Results to date replicate prior data suggesting a statistically significant correlation between delay discounting and psychological flexibility. Results also indicate statistically significant correlations between psychological flexibility and the MAAS questionnaire, psychological flexibility and the Values Questionnaire (VQ), and the MAAS and VQ. Results for the relationship between relational abilities, delay discounting, and psychological flexibility are presented.

The current study addresses the need for empirical data evaluating the relationship between complex language abilities and psychological flexibility. Results of the current study may guide future research and practice in functional contextualist approaches to targeting psychological flexibility, such as Acceptance and Commitment Therapy.

#### **25. Delivering ACT with Fidelity: Results from a Randomized Pilot Employing Bachelor's-Prepared Interventionists**

Components: *Original data*

Categories: Supervision and training, Health / behavioral medicine, Dementia Caregiving

Taylor Gowan, B.S., CCRP, Regenstrief Institute, Inc.  
Tommy Parry, Richard L. Roudebush VA Medical Center  
Evan Myers, M.S., Indiana University-Purdue University Indianapolis  
Shelley Johns, Psy.D., HSPP, ABPP, Regenstrief Institute, Inc., Indiana University-Purdue University Indianapolis, Indiana University

This pilot randomized controlled trial used treatment fidelity (TF) strategies to ensure treatment integrity of an Acceptance and Commitment Therapy (ACT) phone intervention delivered by Bachelors-prepared interventionists to 30 clinically anxious caregivers of adults with dementia. TF is critical for making conclusive statements about treatment effects yet is often under-reported in behavioral trials.

National Institutes of Health Behavioral Change Consortium TF guidelines were used to evaluate fidelity across three parameters: (1) Design fidelity - rated with the number and average length of sessions completed, (2) Training fidelity - session role plays were rated with seven questions from the ACT Core Competency Rating Form (Luoma, et al., 2017), and (3) Delivery fidelity - rated with an adherence form containing manualized session components. TF elements were defined before implementation and monitored throughout the study.

Regarding design, ACT participants attended a mean of 4.43 (SD = 2.30) of the 6 planned sessions, with average session length of 65.71 minutes (SD = 9.52; intended duration 60 minutes). For training, interventionists achieved a mean ACT skills competency score of 4.14 (1-6 scale; SD = 0.21). For delivery, 22.56% of sessions were rated for adherence to the manual, with mean adherence of 98.39% (SD = 3.75) and mean ACT competency of 4.65 (SD = 0.31).

Bachelors-prepared interventionists can deliver an ACT intervention with high fidelity to the intervention manual and with reasonably high ACT competency. Additional training is recommended to promote participant engagement and adherence to defined session length to reduce participant burden.

## VIRTUAL Posters

### **A call for ACTION: A systematic review of evidence for Acceptance and Commitment Therapy with LGBTQI+ individuals: Gender and Sexual Diversity SIG Sponsored**

Components: *Literature review*

Categories: Clinical intervention development or outcomes, Social justice / equity / diversity, ACT, LGBTQI+, Interventions

James Fowler, BPsySc, University of Queensland  
Shelley Viskovich, University of Queensland  
Lisa Buckley, University of Queensland  
Judith Dean, University of Queensland

LGBTQI+ (lesbian, gay, bisexual, transgender, queer, intersex and additional gender, sexual and romantic minority groups not listed) individuals often experience stress due to their minority identity. Stress that can be a driving force behind commonly reported mental health problems. The cultivation of psychological flexibility (PF) may buffer the minority stress experience. This systematic review describes how Acceptance and Commitment therapy (ACT) – which cultivates PF - has been used to help LGBTQI+ individuals improve wellbeing, and how approaches were tailored to suit LGBTQI+ individuals' needs.

Six databases were searched (PubMed, PsycINFO, Scopus, PubMed, Web of Science, CINAHL, PsycINFO, Scopus and Medline) combining strings of term related to a) ACT and b) LGBTQI+ terminology. Papers were accepted that were published in English in peer reviewed journals, thesis dissertations, and full-text conference papers. Papers were excluded if they did not contain an ACT therapeutic approach and did not describe comparisons over time or between groups.

Initial searches found 1430 papers which was refined down to 5 studies overall. Results suggested that ACT can promote PF and wellbeing for LGBTQI+ individuals, that ACT was an engaging therapeutic experience, and can be tailored for LGBTQI+ individual's unique challenges. While results are promising, the small number of studies and overall methodological weaknesses limit interpretation.

This presentation serves as a call for action for researchers and practitioners to overcome methodological challenges to expand our knowledge of ACT with this vulnerable, under-served community. It also emphasises the importance of delivering LGBTQI+ tailored care.

### **A Meta-Analysis of the Efficacy of ACT-Based Treatments for Dysregulated Eating Behaviours**

Components: *Literature review*

Categories: Clinical intervention development or outcomes, Health / behavioral medicine, ACT

Jessica Di Sante, McGill University  
Amanda Gossack, B.A., McGill University  
Bianca Akeson, McGill University  
Bärbel Knäuper, Ph.D., McGill University

Previous studies have explored the efficacy of Acceptance and Commitment Therapy (ACT) for reducing dysregulated eating behaviours (e.g., binge eating, emotional eating). The aim of this meta-analysis was to quantify the short-term and long-term efficacy of these interventions. A secondary aim was to examine the potential mediating role of psychological flexibility.

A systematic review of the literature was conducted, and intra-and-inter-group effect sizes (Hedge's  $g$ ) were calculated. Further analyses were performed to explore the impact of different intervention characteristics (e.g., intervention modality, intervention length) on eating outcomes.

Twenty publications ( $N = 1269$ ) were included. Results showed that ACT interventions were moderately effective in reducing binge eating and emotional eating behaviours, and in increasing psychological flexibility. Comparable effect sizes were found for face-to-face, virtual, and self-help interventions. Intervention length was positively associated with effect sizes. Small significant effects were found in support of ACT as opposed to inactive control groups (e.g., waitlists). Alternatively, the three studies that included active control groups (e.g., behavioural interventions) revealed no significant differences in outcomes between ACT and other types of interventions.

These findings indicate that ACT-based treatments are effective in reducing dysregulated eating behaviours and in increasing psychological flexibility. This study also suggests that interventions delivered virtually or via self-help can be equally as beneficial as face-to-face interventions for dysregulated eating. Future studies should aim to compare ACT interventions to other active treatments, and to provide further support for psychological flexibility as an underlying mechanism of change in eating behaviour.

### **A Single Subject Analysis of ACT With a Physician During the COVID-19 Pandemic**

Components: *Original data*

Categories: Clinical intervention development or outcomes, ACT

Nikki Davis, Western Michigan University  
Tabitha DiBacco, M.A., Western Michigan University  
Alissa McBride, Western Michigan University  
Jenna Royle, Western Michigan University  
Sanela Kalakovic, M.A., Western Michigan University  
Amy Naugle, Ph.D., Western Michigan University

Physicians may experience adverse mental health outcomes due to their role (Gold et al., 2013; Shanafelt et al. (2019). Aspects of their employment may also present barriers to seeking treatment (Gold et al., 2016). Despite this, physicians have been underrepresented in research with healthcare workers, especially during COVID-19 (Amanullah & Shankar, 2020; Regehr et al., 2014).

Within a larger pilot study, one participant was identified as needing additional ACT sessions. In contrast to other participants, this physician showed minimal to no ability to engage in defusion during the first session. Additionally, she displayed an initial resistance to applying therapeutic skills. During session one, she reported her motivation for joining the study was to represent the pain physicians were experiencing during the pandemic and that she did not believe any of the skills would help her. Given the single subject design of the study, four additional treatment sessions were added for a total of six sessions and the data were analyzed individually. Depressive, anxious, and trauma-related symptoms were tracked throughout the study as well as life functioning.

Visual analysis and Tau-U statistics yielded no significant change in symptoms between baseline and the first three sessions. However, change from baseline to the last three sessions did show significant reductions for depressive, anxious, and trauma-related symptoms. Assessment of life functioning indicated change was significant between baseline and the first three sessions, which preceded the changes in mental health symptoms.

Implications and considerations for working with physicians clinically and in research will be discussed.

### **A Study of the Clinical Effects of Metaphor: Changes in the Relational Frames Used in the Verbal Behavior.**

Components: *Case presentation*

Categories: RFT / RGB / language, Clinical intervention development or outcomes, ACT, Metaphor, RFT

Yuko Kikuchi, なし, 株式会社スタートライン CBS]ヒューマンサポート研究所  
Fumiki Haneda, M.A., Startline CO.,LTD.

ACT uses a variety of exercises designed to improve psychological flexibility. Especially, many of the word-based exercises include metaphors. It can be said that these exercises use metaphors as a source, and aims to change client's verbal behavior as a target.

In this presentation, we analyzed the metaphors and the client's verbal behavior from the perspective of RFT, and examine the changes in the relational frames used in the client's verbal behavior.

The client was anxiety disorder with depressive symptoms and strong fusion. We used several metaphor-based exercise for approaches.

First, we analyzed the relational frames used in the metaphors sentence by sentence.

Second, we also analyzed the relational frames used in the client's verbal behavior before and after listening to the metaphor.

Furthermore, by comparing those relational frames included in the metaphors and those relational frames used in the client's verbal behavior, the influence of the metaphors on the client's use of relational frames was examined.

The relational frames used in the verbal behavior before listening to the metaphor were mainly coordination, but after listening, were expanded to include coordination, distinction, hierarchical relations, deictic relations, and so on.

We found that the relational frames used before and after listening to the metaphor changed more diversely.

The results suggest that the effects of metaphor may be ascertained by the number of relational frames used in verbal behavior. In the future, we also would like to examine the correlation between the relational frames used in verbal behavior and psychological flexibility.

### **A study on the sense of value of subsidized students in University – Taking Peking University Students as an example**

Components: *Conceptual analysis, Original data*

Categories: Academics or education, Social justice / equity / diversity, Value, Subsidized students, VLS, VQ

Yuanjun Tao, M.A., Ritsumeikan University

Renjie Xu, M.A., Peking University, China

Guanyi Qiao, Ph.D., Peking University, China

Nowadays, subsidized students have become an important special group in colleges and universities that cannot be ignored.

The definition of sense of value has been changing and developing according to the development of the time and the region where it is located. The ability to identify and act in alignment with one's values can provide significant change in one's life, providing important motivation and direction to enable them to make changes to improve the quality of their lives. Empowering individuals to identify, utilize, and develop their own resources (Trindade, Ferreira, Pinto-Gouveia, & Nooren, 2016).

Studying the sense of value of subsidized students is the basis for providing accurate financial support to students. In this study, we used the Valued Life Scale (VLS), and the Valuing Questionnaire (VQ) to investigate students' sense of value

The current data from first stage received 57 Valid questionnaires from subsidized students. VQ reported reliability rates of 0.81 for the Progress scale and 0.71 for the Obstruction scale domains. VLS reported internal consistency estimates for all subscales (Health Productivity Confidence  $\alpha = 0.81$ , Health Productivity Success  $\alpha = 0.82$ , Social relations Confidence  $\alpha = 0.73$ , Social Relations Success  $\alpha = 0.75$ ).

The psychological condition of subsidized college students has attracted the attention of all walks of life, but the related research is still insufficient. There is no special research on the sense of value for subsidized student. This study focused on sense of value strengthen a new area, especially in China.

### **A systematic review of Acceptance and Commitment therapy in Paediatric Health Psychology**

Components: *Literature review*

Categories: Processes of change, Other, Children, Health Psychology

Chloe Geagan, Dr., Newcastle University NHS Foundation Trust

Katie Powers, Nottingham University Hospitals NHS Foundation Trust

Sophie Thomas Thomas, Nottingham University NHS Foundation Trust

Louise Hayes, Independent

A growing body of research supports the use Acceptance and Commitment Therapy (ACT) in physical health conditions. However, reviews of the use of ACT with paediatric health populations are lacking, and it is unclear how ACT is used in Paediatric settings and its efficacy. This review aimed to: 1) identify all ACT interventions delivered in a Paediatric Health setting 2) summarise research study findings and relevant measures being used; and 3)critically discuss the strengths, limitations and areas of further development.

MEDLINE, EMBASE, PsycINFO, CINAHL and the Cochrane Collaboration Library databases were searched using keywords related to ACT, physical health and paediatrics. Studies were included based on two main factors; target population (participants under the age of 18 with a health condition), and ACT or 'aspects of ACT' delivery as part of the intervention. Studies with solely mental health populations were excluded. Data were extracted independently by two reviewers.

Searches resulted in 828 titles. 72 full texts were screened yielding 34 studies that met eligibility criteria. A range of intervention aims were observed including reducing emotional distress, increasing psychological flexibility and coping with aspects of the physical health condition. The majority of studies (n=17) focussed on chronic pain. Other conditions included cancer, sickle cell disease and cystic fibrosis.

The majority of studies have been published in the past decade (n=29). Results suggest ACT might be useful for a range of health conditions. However, the wide variety of methodological designs might limit the reliability of results. Directions for future research are also considered.

### **Acceptance and Commitment Therapy (ACT) and Compassion Focused Therapy (CFT) in Borderline Personality Disorder**

Components: *Conceptual analysis, Literature review, Original data*

Categories: Clinical intervention development or outcomes, Other, Borderline Personality Disorder, Emotional Regulation

Sebastian Ortiz, Ph.D., Clinical Psychologist

Michel Reyes, Ph.D., Clinical Psychologist

Over the decades, a variety of psychological interventions for borderline personality disorder (BPD) have been developed. In its last review, Cochrane conducted systematic research on treatment effectiveness for BPD. The primary outcomes were BPD symptom severity, self-harm, suicide-related outcomes, and psychosocial functioning. There were 11 secondary outcomes, including individual BPD symptoms, as well as attrition and adverse effects. 75 randomized controlled trials, including 4507 participants, predominantly females with mean ages ranging from 14.8 to 45.7 years were included. Most documented treatments were Dialectical behavior therapy (DBT) and mentalization-based treatment (MBT), treatment duration ranged from one to 36 months.

New treatments are needed that can contribute to ameliorate targets like rumination, self-criticism and pervasive experiential avoidance, while developing better emotion regulation through developing a compassionate sense of self and flexible responding align with life values.

This poster will show the general characteristics of an individual treatment of 25 sessions of ACT. This treatment emphasis in the work with compassionate mind as a pivot for the use of other psychological flexibility enhancing strategies makes it different other ACT based proposals for BPD.

Research designed to assess treatment impacts is also described.

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### **Acceptance and Commitment Therapy (ACT)-based Intervention for Work Stress Recovery: A Poster Presentation**

Components: *Original data*

Categories: Organizational / Industrial psychology, Other, Organisational Behaviour

Elina Honkasalo, M.Sc., Turku School of Economics, University of Turku

Markku Jokisaari, Dr., Turku School of Economics, University of Turku

Change, stress, high intensity, and blurred work-life boundaries illustrate modern working life. Successful recovery, the opposite of the strain and stress process, can neutralise the negative effects of (work) stress and therefore, research has recognised the importance of recovery improving interventions and identified a few different effective work stress recovery intervention approaches. To the best of our knowledge, previous studies have, however, ignored the potential of Acceptance and Commitment Therapy (ACT) -based interventions for work stress recovery.

The first aim of this research was to examine to what extent ACT-based recovery intervention affects work stress recovery. The 58 participants of the present study were assigned either to an ACT-based recovery training group or a waitlist control group. The data was collected at pre-, post- and 6-month follow-up. We hypothesised that 12 hours of ACT-based training would show effects on recovery (i.e. need for recovery, recovery experience, work-related rumination, and sleep) and occupational wellbeing (i.e. work engagement, perceived stress, positive and negative affect and reflection) outcome variables. Secondly, we hypothesised that psychological flexibility (measured by AAQ-II and WAAQ) would mediate the intervention effect.

Therefore, it was expected that ACT-based recovery training would produce a change in the outcome variables as a function of the change in how participants relate to their unwanted inner experiences i.e. psychological flexibility. Lastly, this study also attempted to explore the potential moderators (e.g. occupational self-efficacy beliefs and job autonomy).

The study findings (pre–post effect) will be available at the end of Spring 2022.

Not available yet.

### **Acceptance and Commitment Therapy for a Patient Suffering from Panic Disorder & Depressive Symptoms: A Case Report**

Components: *Case presentation*

Categories: Clinical intervention development or outcomes, Depression and Panic Disorder

Doaa Hussein

FEMALE PATIENT, 22 YEARS OLD, FROM EGYPT STUDENT AT COLLEGE OF SCIENCE SHE HAS A 3-YEAR HISTORY OF PANIC ATTACKS POSITIVE FAMILY HISTORY OF ANXIETY DISORDERS

WE DID 10 SESSIONS, TWO SESSIONS PER WEEK, THE DURATION OF THE SESSION IS ABOUT 45 MINUTES- ONLINE METHODS SUCH AS ZOOM COMMUNICATIONS FOR THE SCHEDULED SESSION

ACCEPTANCE AND COMMITMENT THERAPY SHOWED STRONG EFFECTIVENESS WITH THIS PATIENT AND QUICK RESULTS COMPARED TO OTHER TYPES OF TREATMENTS THE PATIENT SHOWED AN ACTUAL AND REAL IMPROVEMENT AFTER THE END OF THE TEN SESSIONS, AND SHE DID NOT NEED ANY OTHER SESSIONS.

AND HER COMMENT ON THE TREATMENT WAS AS FOLLOWS: I WAS NOT REALLY CONFIDENT THAT THIS TREATMENT WOULD BENEFIT ME IN ANY WAY, EVEN THE EXERCISES WERE SOMEWHAT STRANGE TO ME, AND I DID NOT EXPECT TO GET A RESULT FROM THEM, BUT I APPLIED IT ANYWAY AND MY FAMILY NOTICED THIS CHANGE CLEARLY. I FEEL SO MUCH BETTER.

### **Acceptance and commitment therapy for sleep: A systematic review and meta-analysis**

Components: *Literature review, Original data*

Categories: Health / behavioral medicine, Dissemination or global health strategies, ACT, Sleep, Insomnia, Systematic review, Meta-analysis, Depression, Anxiety, Pain, Quality of life

Jiayin Ruan, Ph.D. Candidate, The Hong Kong Polytechnic University

Shu-Cheng Chen, The Hong Kong Polytechnic University

Jia-Gui Liang, The Hong Kong Polytechnic University

Yim-Wah Mak, The Hong Kong Polytechnic University

Wing-Fai Yeung, Ph.D., The Hong Kong Polytechnic University

Acceptance and commitment therapy (ACT) has been used increasingly for sleep disturbances, but the evidence of its efficacy is still limited.

We conducted a systematic review and meta-analysis to summarize related evidence. Seventeen studies with 1610 participants were included after searching fourteen databases since their inception to 30 November 2021. Differences are shown as standardized mean deviations (SMD) and 95% confidence intervals (CI).

Compared to waitlist control, ACT significantly improved sleep at post-treatment (SMD=-0.54, 95% CI: -0.73 to -0.35,  $p < 0.00001$ ) and at 1 to < 3-month follow-up (SMD =-0.70, 95% CI: -1.06 to -0.34,  $p=0.0001$ ), alleviated pain (SMD = -0.96, 95% CI: -1.28 to -0.65,  $p < 0.00001$ ), reduced anxiety symptoms (SMD = -0.52, 95% CI = -0.81 to -0.23,  $p =0.0004$ ) and depressive symptoms (SMD =-0.50, 95% CI = -0.71 to -0.28,  $p < 0.00001$ ) at post-treatment. Besides, the efficacy of ACT for sleep at post-treatment and 3-month follow up have been confirmed when contrasted to education and discussion group, but ACT seems less effective than cognitive behavioural therapy for sleep and anxiety at 12-month follow up.

In sum, ACT is a potentially effective option for improving sleep and other health-related outcomes.

### **ACT combined with virtual reality is as effective as ACT combined with in vivo exposure for public speaking anxiety**

Components: *Original data*



Categories: Clinical intervention development or outcomes, Anxiety

Francisco Montesinos, Ph.D., Universidad Europea de Madrid  
Alberto Bellido, Universidad Europea de Madrid  
Christian Calderón, Universidad Europea de Madrid  
Marta Santacreu, Universidad Europea de Madrid

This study is aimed at comparing the efficacy of ACT-based virtual reality (VR) versus ACT-based in vivo (IV) exposure to cope with public speaking anxiety.

This is a randomized clinical trial. Thirty-seven university students with significant social anxiety and public speaking anxiety were assigned to a waiting list, IV exposure and VR. Treatment included an ACT-based abridged protocol (five individual sessions). Efficacy was measured through standardized questionnaires (LSAS, AAQ-II, CFQ, PRCS) after the intervention and at 3-month follow-up. One-way repeated measures ANOVA was used.

Results showed a significant reduction in public speaking anxiety, social anxiety, psychological inflexibility and cognitive fusion after intervention in both conditions. Improvements were maintained 3 months later. Both treatments were equally effective in reducing social anxiety, psychological inflexibility and cognitive fusion. Nevertheless, reduction in public speaking fear was significantly higher in IV condition after intervention ( $t=2.446$ ;  $p<.05$ ).

Our results support VR combined with ACT can be effective and virtually as useful as IV exposure combined with ACT.

### **ACT Interventions in Higher Education to Influence Academic Performance: A Scoping Review of the Literature: Ontario Chapter Sponsored**

Components: *Literature review*

Categories: Academics or education, Behavior analysis, ACT, Higher Education

Sarah Caimano, Western University  
Emily Erb, Western University  
Albert Malkin, M.A., BCBA, Western University  
Patricia Monroy, Western University  
Jina Kum, Western University

Students in higher education experience a wide range of ongoing stressors. High levels of stress have been found to be associated with poorer quality of life, well-being, and negative impacts on academic achievement & engagement. Acceptance and Commitment Therapy/Training (ACT) is a transdiagnostic intervention that holds promise in improving well-being across a variety of contexts and modalities of application, including support for students.

We conducted a scoping review to examine the literature on the use of ACT interventions with students registered in higher education settings. Such interventions target aspects of student well-being, academic outcomes, and knowledge of ACT processes. The review included English language, peer-reviewed empirical research, across multiple databases, that applied ACT with students in higher education settings to influence academic performance.

We found that online interventions are more common in this line of research. However, both in-person and online ACT interventions were found to be effective at increasing both academic and well-being outcomes. Though these outcomes are promising, nearly half of the articles reviewed provided insufficient detail to allow for replication.

Additional strengths, limitations, and directions for future research involving ACT interventions in higher education will be discussed.

### **ACTive supervision with the ACT Matrix: Coaching SIG Sponsored**

Components: *Case presentation, Original data*

Categories: Supervision and training, Professional development, Coaching, ACT matrix

Nadine Hemmer, Nadine Hemmer Coaching & Training  
Laura Villa, DClInPsy, City Living Psychology

Sunni Lampasso, Psy.D., Shaping Success

This project assumed that the ACT matrix that encompasses all ACT processes would provide useful support to the coach to increase their self-awareness, presence, and consciousness of action, thus creating the conditions for enhanced reflective practice. More globally, this project aimed at exploring how the multiple uses of the ACT matrix could enhance the supervision process.

Selected participants committed to six supervision group sessions: 1 for contracting and 5 working sessions, 1 every 4 to 6 weeks. Participants were invited to use the ACT matrix to prepare for their coaching sessions with their clients and afterwards to review their sessions. In addition to this, the supervisor also sent questions between supervision sessions to support the reflective process.

- 1/ Using the ACT matrix supports the contracting processes.
- 2/ Using the ACT matrix enhances awareness around the practice and the noticing of parallel processes.
- 3/ Using the ACT Matrix fosters the psychological flexibility of the coach.
- 4/ Using the ACT matrix fuels creativity.

Using the ACT matrix brings the observer perspective to the forefront. While practitioners enquire into their best self, they can let go of their conceptualized self and stories (their own and their clients'). They stay attuned to the whole of the experience to focus on the process.

The increased awareness helps the supervisee to evolve towards more maturity and benefits the internal supervisor. But to achieve this, the ACT Matrix needs regular practice. It also requires lightness in its application and constant movement to follow the changing experience.

### **Assessing Psychological Flexibility with the Musician's Acceptance and Action Questionnaire (MAAQ)**

Components: *Original data*

Categories: Sports or performance-enhancing, Academics or education, Assessment

David Juncos, LifeStance Health  
Joanna Roman, M.A., ACT with Music  
Margaret Osborne, Ph.D., University of Melbourne  
Dana Zenobi, DMA, Butler University School of Music

Performance anxiety, low motivation to practice, psychological distress, perfectionism, and having to endure adjudicated exams/auditions, are some of many stressors facing university musicians across the world. Existing research suggests that remaining psychologically flexible might enable students to cope more effectively with these challenges (Juncos et al., 2017). However, no specific measures of psychological flexibility (PF) exist for them yet, aside from general PF measures, i.e., AAQ-II (Bond et al., 2011). This study aimed to validate a self-report measure of PF for student musicians (Musician's Acceptance and Action Questionnaire), and to determine its ability to predict outcomes of interest within their performances and practice, in particular, scores on an adjudicated music exam, avoidance of performances/practice, and a history of psychotherapy/medication due to music performance, e.g., treating performance anxiety.

Two samples of university musicians were recruited from the Melbourne Conservatorium of Music (N=64) and Butler University (N=64). Students completed a pilot version of the MAAQ, along with measures of PF, music performance anxiety, perfectionism and flow. Demographic information about their training experiences were collected, and they were asked about a history of avoidance within their performances and practice.

Results of analyses to determine the MAAQ's factor structure, internal consistency, and construct/discriminant validity will be reported. Also, the results of analyses to determine its incremental predictive validity when compared to the AAQ-II in predicting outcomes of interest for university musicians will be reported.

The MAAQ's psychometric properties and overall ability to measure PF within music performance and practice settings will be discussed.

### **Associations between Psychological Flexibility & Values-Based Living with risk of Depression in GI Cancer Survivors**

Components: *Original data*

Categories: Health / behavioral medicine, Clinical intervention development or outcomes, Cancer Survivors

Anahat Singh, M.Sc., M.A., University of California, San Francisco

Lufan Wang, University of California San Francisco  
Katherine Van Loon, University of California San Francisco  
Angela Laffan, University of California San Francisco  
Dalila Stanfield, University of California San Francisco  
Irina Tolstyykh, University of California San Francisco  
Chloe Atreya, University of California San Francisco  
Mekhail Anwar, University of California San Francisco  
Alan Venook, University of California San Francisco  
Li Zhang, University of California San Francisco  
Julia Kasl-Godley, The Wright Institute  
Erin Van Blarigan, University of California San Francisco  
Dianne Shumay, University of California San Francisco

Cancer survivors face physical and psychosocial changes in their lives due to their illness and its treatment, which can lead to enhanced anxiety, depression, and poor quality of life.

This study examined if psychological flexibility and values-based living were associated with symptoms of depression among colon, rectal, and anal cancer survivors. A secondary analysis of a cohort study named Lifestyle and Outcomes after Gastro-Intestinal Cancer was conducted. The participants (N=234) completed the PROMIS Short Form v1.0 Depression 4a, Acceptance and Action Questionnaire-II, and Valuing Questionnaire at enrolment to measure depression, psychological flexibility, and values-based living, respectively. The results were adjusted for participants' demographic, social, and medical characteristics.

The participants include 130 colon, 69 rectal, and 35 anal cancer patients. 45% identified as male, and 82% identified as white race/ethnicity. A statistically significant inverse association was observed between psychological flexibility and symptoms of depression ( $\beta=0.280$ , confidence interval (CI)=0.216, 0.349,  $p<0.001$ ). Values obstruction and values progress were not associated with symptoms of depression. However, when a sensitivity analysis was conducted excluding patients with local recurrence or metastatic disease, values obstruction was significantly associated with symptoms of depression ( $\beta=0.102$ , CI=0.013,0.194,  $p=0.006$ ).

Psychological flexibility was inversely significantly associated with symptoms of depression in gastrointestinal cancer survivors. Values obstruction was also found to be statistically associated with symptoms of depression among participants who had not experienced recurrence or been diagnosed with metastatic disease. This observational study identified psychological flexibility and values based living as potential protective factors against symptoms of depression in cancer survivors.

### **Attachment styles and types of trauma impact on the effectiveness of a group version of ACT**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Trauma, Attachment, Group therapy

Alicia Spidel, Ph.D., Kwantlen University  
David Kealy, Ph.D., University of British Columbia  
Tania Lecomte, Ph.D., Université de Montréal

A great deal of research has shown that early traumatic experiences lead to serious psychopathology in adults (Barrigón et al., 2015). ACT has been shown to be effective with a variety of treatments (Hayes 2013) but has not looked at how attachment styles of severity or type of trauma impacts effectiveness. .

Participants were recruited from 3 mental health sites and randomly assigned. TAU (n=20) Treatment as usual and ACT group (n=30)

Measures - Childhood Trauma Questionnaire-short form (CTQ); Attachment Styles Questionnaire (ASQ); Cognitive Emotion Regulation Questionnaire (CERQ) – Acceptance scale only; The Brief Psychiatric Rating Scale-Expanded (BPRS-E); The Trauma Symptom Checklist-40 (TSC-40); The Generalized Anxiety Disorder Scale – 7 (GAD-7); and Service Engagement Scale (SES).

These profiles compared for severity of childhood trauma in each of the five CTQ subscales using Chi-square analyses and found no differences (Table 1). A multinomial logistic regression was used to predict cluster membership (total CTQ score, attachment, a measure of mindfulness, number of sessions attended and age) (Table 2).

ACT group showed improvement in overall symptom severity, better emotion regulation, decrease in anxiety symptoms, and increased treatment compliance. Three different outcome clusters or profiles emerged - more details will be presented. The severity of childhood trauma did not have an impact on the improvement variables. Number of sessions and an avoidant attachment style - explain significant differences between the profiles.

o This treatment, which has different underlying assumptions may be better suited to this clientele- tx resistant? (see Harris, 2006 for more details).

### **Behavioral Support Training for Elementary School Teachers, and the Relationship with Psychological Flexibility**

Components: *Original data*

Categories: Supervision and training, Academics or education, Psychological Flexibility

Naoko Iwasawa, Graduate School of Human Sciences, Waseda University  
Tomu Ohtsuki, Faculty of Human Sciences, Waseda University

This study's objectives were two-fold. First, we examined the effectiveness of a support training program for elementary school teachers that incorporates the perspectives of applied behavior analysis. Secondly, we examined the influence of teacher-specific beliefs and psychological flexibility on the effectiveness of the support training.

Participants were teachers from two elementary schools. One school comprised the intervention group, and the other comprised the control group. Three hours of training were provided to the intervention group, and participants completed scales before, two weeks after, and three months after (follow-up) the training. The control group completed the scales simultaneously to the intervention group.

A two-factor analysis of variance was conducted to examine the training effects, with no significant differences observed. Correlation analysis of the difference between pre and post-test scores on the Behavioral Support Scale was performed in the intervention group to examine the relationship between each factor and the effectiveness of the training. Correlation analysis was also performed for the pre-test scores on each scale. Results showed correlations in some of the psychological flexibility scales. Valuing Questionnaire (VQ) Obstruction showed a significant moderate negative correlation. Cognitive Fusion Questionnaire (CFQ) Factor 1 (cognitive fusion) showed a moderate negative correlation with marginal significance. Environmental Reward Observation Scale (EROS) showed a moderate positive correlation with marginal significance.

These results suggest that psychological flexibility may be related to the effectiveness of behavioral support training. However, further investigation is required due to the small number of participants involved in the present study.

### **Benefits of ACT for improving parental psychological adjustment in the context of paediatric oncology**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Health / behavioral medicine, ACT, Parents, Children, Cancer

Xiaohuan Jin, The Chinese University of Hong Kong  
Huiyuan Li, The Chinese University of Hong Kong  
Wenyang Yao, Children's Hospital of Soochow University  
Cho Lee Wong, The Chinese University of Hong Kong

This trial aimed to assess the effects of Acceptance and Commitment Therapy (ACT) for improving psychological adjustment in parents of children with cancer.

142 parents were randomised into the intervention group, which received four consecutive weekly sessions of individual-based ACT, or the control group, which received usual care. Outcomes were assessed at baseline, postintervention (T1) and 3 months postintervention (T2).

Analysis of generalised estimating equation indicated significant group-by-time interaction effects in reducing guilt and worry ( $p < 0.001$ ;  $d = 0.92$  at T1;  $p < 0.001$ ;  $d = 1.29$  at T2), unresolved sorrow and anger ( $p < 0.001$ ;  $d = 0.64$  at T1;  $p < 0.001$ ;  $d = 0.71$  at T2), long-term uncertainty ( $p < 0.001$ ;  $d = 0.58$  at T1;  $p <$

0.001;  $d = 0.41$  at T2) and improving emotional resources ( $p = 0.006$ ;  $d = 0.42$  at T1;  $p = 0.018$ ;  $d = 0.53$  at T2).

The findings indicate brief ACT is efficacious for improving parental psychological adjustment. A long-term follow-up assessment is warranted to confirm its effect.

### **Case Formulation Based on Contextual Behavioral Science in Supporting Workplace Retention in Japan**

Components: *Case presentation*

Categories: Methods/approaches for individual variation, Processes of change, Case formulation, PBT, ACT, HDML, RFT, CBS

Kana Shimoyama, M.A., Startline CO.,LTD.

Fumiki Haneda, M.A., Startline Co.,Ltd

Our office supports people with disabilities in finding stable employment.

We analyze and deal with any problems that may arise during the course of their employment.

When problems occur that are difficult to handle in the workplace, our department is consulted.

In this report, we have categorized the cases that were consulted last year, what kind of analysis methods were used, and what kind of measures were taken to deal with the problems. We would also like to examine how these case formulations relate to PBT, a comprehensive process approach.

the 33 cases we handled last year, we were able to categorize 12 model cases that corresponded in terms of assessment and coping strategies.

We also examined how they could be organized in the EEMM grid of the PBT approach.

It showed how the 12 model cases were analyzed and proposed to be dealt with, and how they are organized on the EEMM grid.

Various methods will be considered as a way to conduct a comprehensive case formulation by many people, including people within the company, as well.

We would like to examine these methods in light of past efforts.

### **Change of adaptive behavior in children with intellectual disabilities by training based on RFT**

Components: *Case presentation, Original data*

Categories: Academics or education, Children, RFT, PEAK, Stimulus equivalence, PCA, Development

Hiroko Kagawa, Ph.D., Startline CO.,LTD.

Ken Iwamura, M.A., Startline CO.,LTD.

Kana Shimoyama, M.A., Startline CO.,LTD.

Fumiki Haneda, M.A., Startline CO.,LTD.

Training based on stimulus-equivalence and relational frame theory is an effective approach for people with disabilities to acquire and improve their verbal and cognitive skills. The PEAK Relational Training System (Dixon, 2014-2016) is a well-designed and structured training curriculum to assess and train people with autism and other language-learning disorders on their cognitive skills. We developed a training package that can be performed on a PC including hundreds of tasks based on PEAK to conduct training more easily and efficiently. In this study, we conducted these PC training for children with disabilities to examine the training effect on their cognitive skills and adaptive behavior before and after the training.

Four children with intellectual and developmental disabilities participated in this training. The 339 tasks were available in the training package. The package consisted of 4 modules (D: Direct Training, G: Generalization Training, E: Stimulus Equivalence Training, T: Transformation Training). The children performed tasks for approximately 30 minutes once per week. Before and after each module was completed, we evaluated their cognitive skills using PCA, PEAK assessment tools, and their adaptive behavior using Vineland-II.

Participants' post-training scores in PCA and Vineland-II increased compared to pre-training scores.

The results suggested that training could have influenced improvements in language and cognitive skills and adaptive behaviors.

### **Changes in Spatial Perspective Taking and Mental Rotation Through Self-as-Context**

Components: *Original data*

Categories: Processes of change, RFT / RGB / language, Self-as-context

Yasuhiro Ooshima, Psych, Faculty of Human Science in Ritsumeikan University  
Takashi Mitamura, Ritsumeikan University

Self-as-context (SAC) is one of key concepts in Acceptance and Commitment Therapy. Since, most SAC measures rely on self-report, there is a lack of behavioral measures. Therefore, to develop a behavioral measure, we examined changes in two spatial cognitions caused by SAC in this study: spatial perspective taking and mental rotation. We used these spatial cognitions because they may be related to SAC as they involve (a) viewing spaces and targets objectively, and (b) being associated with social perspective-taking.

For, this study, 55 participants were assigned to experimental group (n = 27) or control group (n = 28). They responded to indices related to spatial perspective taking, mental rotation, and SAC. Since SAC is a difficult concept, in addition to the main indicator (Three Senses of the Selves Questionnaire), an indicator that measures related concepts (Ex. Experimental Avoidance) was used as a secondary indicator (Acceptance and Action Questionnaire-II). The experimental group performed SAC exercises while the control group underwent cognitive restructuring. After one-week homework, the same indices were measured. Data were analyzed using two-way ANOVA.

On the main indices of SAC, interaction was not significant for any of the subscales. On the sub measure of SAC, interaction was significant, and the simple main effect was significant at hypothesis-supporting direction. However, for spatial perspective taking and mental rotation, interaction was not significant.

The results suggested that SAC training did not work, the explanations for which were discussed in terms of relational framing of "hierarchy" in relation to spatial cognition.

### **Compassion and fears of compassion during the COVID-19 pandemic: Preliminary analyses of a multinational study**

Components: *Original data*

Categories: Processes of change, Dissemination or global health strategies, Compassion

Marcela Matos, Ph.D., University of Coimbra, Portugal  
Nuno Ferreira, Ph.D., University of Nicosia  
Kirsten McEwan, University of Derby  
martin kanovsky, Comenius University  
Júlia Halamová, Comenius University  
Stanley Steindl, University of Queensland  
Mariana Linhares, University of Coimbra  
Daniel Rijo, University of Coimbra  
Kenichi Asano, Mejiro University  
Margarita Márquez, Universidad Europea de Madrid  
Sónia Gregório, University of Coimbra  
Sara Vilas, Universidad Europea de Madrid  
Gonzalo Brito-Pons, Pontificia Universidad Católica de Chile  
Paola Lucena-Santos, University of Coimbra  
Margareth Oliveira, Pontifical Catholic University of Rio Grande Do Sul  
Erika de Souza, Mindfulness & Compassion  
Lorena Llobenes, Motivación Compasiva  
Natali Gumiy, Motivación Compasiva  
Maria Costa, Motivación Compasiva  
Noor Habib, King Faisal Specialist Hospital and Research Centre  
Reham Hakem, King Faisal Specialist Hospital and Research Centre  
Hussain Khrad, King Faisal Specialist Hospital and Research Centre  
Ahmad Alzahrani, King Faisal Specialist Hospital and Research Centre  
Simone Cheli, University of Florence  
Nicola Petrocchi, John Cabot University  
Elli Tholouli, National and Kapodistrian University of Athens  
Philia Issari, National and Kapodistrian University of Athens  
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Cross-sectional data has shown that compassion for self and from others may be a protective factor for greater psychosocial wellbeing in the COVID-19 pandemic whilst fears of compassion act as a risk factor for experiencing mental health difficulties. The current study sought out to explore the natural fluctuation of compassion (for self, for others and from others) and of fears of compassion (for self, for others and from others) across time during the COVID-19 pandemic in a multinational community sample.

Data from 4057 participants from 21 countries was collected at 3 time points during the pandemic (baseline, 3 months and 6 months). Other than demographic variables, participants completed the Compassionate Engagement and Action Scales and the Fears of Compassion Scales. Multilevel latent growth modelling was used to investigate the main aims.

There was a significant increase in Compassion for self and from others, whilst compassion for others remained unchanged throughout the 3 time points [Chi square 349.30(df=50)  $p < .001$ ; RMSEA .035; CFI .93; TLI .91; SRMR (within) .043; SRMR (between) .70]. Fears of self-compassion and compassion for others significantly reduced throughout the pandemic whilst fears of compassion from others remained stable [Chi square 406.57(df=50)  $p < .001$ ; RMSEA .038; CFI .96; TLI .94; SRMR (within) .042; SRMR (between) .35].

The findings from this study seem to suggest that in a period of shared suffering people from multiple countries and nationalities tend to become more compassionate and less afraid of and resistant to compassion for and from others.

### **Couple schemas, psychological flexibility and behaviours in the romantic relationship**

Components: *Original data*

Categories: Theory and philosophical foundations, Clinical intervention development or outcomes, Couple schemas, Psychological flexibility, Partner's perception

Lidia Baran, Ph.D., University of Silesia in Katowice

Schema Therapy and Acceptance and Commitment Therapy have been used to describe and influence difficulties experienced in close relationships (McKay, Lev & Skeen, 2012). Couples often struggle when one partner's behaviour triggers schema of the other partner (McKay, Fanning, Lev, Skeen, 2013). Improving psychological flexibility and lowering psychological inflexibility seems to help partners recognize triggering elements and respond to them with value-based behaviours rather than schema coping behaviours (Lev & McKay, 2017).

The project aimed to analyze relations between schemas, psychological flexibility and inflexibility processes, and behaviours in romantic relationships. The survey was conducted online among people over 18 and in a romantic relationship. Participants (247 women and 163 men) completed the Couples Schema Questionnaire, the Multidimensional Psychological Flexibility Inventory, and the Partner Relations Questionnaire - assessing partner's behaviours and their behaviours related to communication, intimacy and conflict.

The strongest predictors of behaviours were unrelenting standards, acceptance (conflict), emotional deprivation, fusion (intimacy), emotional deprivation, committed action (communication) for women and failure, committed action, lack of contact with the present moment (conflict), abandonment/instability

(intimacy) and social isolation/alienation, lack of contact with the present moment (communication) for men. The strongest predictors of partner's behaviours were failure, committed action (conflict), emotional deprivation, values, fusion (intimacy), emotional deprivation, committed action, experiential avoidance (communication) for women and social isolation/alienation, committed action, conceptualized self (conflict), emotional deprivation (intimacy) and emotional deprivation, conceptualized self (communication) for men.

The study results broaden the knowledge about psychological dynamics in romantic relationships and might be helpful in clinical practice.

### **COVID-19-related Distress and Physical Health: Examining the Mediating Role of Psychological Flexibility**

Components: *Original data*

Categories: Health / behavioral medicine, Other, Physical Health, Psychological Flexibility

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The COVID-19 pandemic is associated with an increase in psychological distress (Li et al., 2021) and poor physical health outcomes (Shanbehzadeh et al., 2021). COVID-19-related distress is particularly relevant among university students (Wang & Zhao, 2020). While relevant, less is known regarding underlying factors, such as psychological flexibility, that may play a role in this relation (Kroska et al., 2020). To address limitations, the current study sought to examine the mediating role of psychological flexibility in the relation between COVID-19-related distress and poor physical health.

As part of a larger study, 253 university students (Mage = 19.1 years; 76.7% female) completed measures designed to assess COVID-19-related psychological distress and impairment (COVID-19 Adult Symptom & Psychological Experience Questionnaire; Ladouceur, 2020), physical health symptoms (Cohen-Hoberman Inventory of Physical Symptoms; Cohen & Hoberman, 1983), and psychological flexibility (Acceptance and Action Questionnaire-II; Bond et al., 2011).

Using the PROCESS macro, the total effect model predicting poor physical health symptoms was significant,  $R^2 = .29$ ,  $F(2, 250) = 50.98$ ,  $p < .001$ . The estimated indirect effect indicated that COVID-19-related psychological distress and impairment predicted greater levels of poor physical health symptoms through increased psychological inflexibility ( $b = .49$ ,  $SE = .13$ ; 95% CI [.249, .764]).

Findings demonstrate that psychological inflexibility mediates the relation between COVID-19-related psychological distress and impairment and poor physical health. Findings suggest that interventions designed to improve psychological flexibility may be particularly beneficial for individuals with comorbid COVID-19-related distress and physical health problems. Limitations and future research directions will be discussed.

### **Development of a novel ACT group and assessment measure for eating disorder treatment in a partial hospital program**

Components: *Literature review*

Categories: Clinical intervention development or outcomes, Eating Disorders

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Suzanne Straebler, Ph.D., New York-Presbyterian

Evidence based treatments for outpatient eating disorder care exist; however, little is known about effective treatments at higher levels of care (HLOC). Among the main challenges in treatment for acute eating disorders is the difficulty in engaging patients. ACT is being studied as a promising adjunctive treatment to improve engagement in behavioral treatments. In a similar way, ACT interventions may improve treatment engagement in individuals with eating disorders at HLOC. We describe the development of both an ACT based group curriculum and an assessment measure for use within a partial hospital eating disorder program.

Utilizing both experts in ACT and experts in eating disorders an initial curriculum was created. Multiple rounds of feedback allowed for refinement. ACT interventions most likely to impact treatment engagement were selected. Additionally, core interventions present in most ACT protocols were included to preserve fidelity to the model. A finalized version of the curriculum was then sent out to ACT trained and ACT naïve groups for further refinement. Following the same method, a knowledge based questionnaire was created.



A novel 16-session ACT group therapy curriculum was developed specifically for use in treatment of eating disorders at HLOC. A 16 item pre/post knowledge based questionnaire was created. Descriptions of the curriculum and questionnaire are presented.

Methods to improve treatment engagement of this vulnerable and complex population are critically needed. An ACT based curriculum may offer a solution. Future research on group outcomes and the psychometric properties of the assessment measure are needed.

### **Development of the Couple Satisfaction Index Japanese version (CSI-J)**

Components: *Original data*

Categories: Health / behavioral medicine, Couples therapy, Measurement, Japanese

Takashi Mitamura, Ph.D., Ritsumeikan University  
Hidefumi Hitokoto, Ph.D., Kwansei Gakuin University  
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Chisato Tani, M.A., Ritsumeikan University

In Japan, there is scarce empirical data on the effectiveness of couple therapies. As the first step in accumulating such evidence, we developed the Japanese version of the Couple Satisfaction Index (CSI; Funk & Rogge, 2007), the CSI-J.

We conducted two survey studies to develop the 16-item version (CSI-16-J) and 4-item short version (CSI-4-J) of the scale. In study 1, 400 Japanese participants rated the CSI-J and its validity criteria. In study 2, its test-retest reliability was evaluated with 50 participants.

In study 1, for internal consistency, Cronbach's alphas for the CSI-16-J and CSI-4-J were .96 and .92, respectively, which were acceptable. Criterion-related validity of the CSI-J was supported and both the CSI-16-J and CSI-4-J correlated positively with the marital satisfaction scales and negatively with Neuroticism. For construct validity, we conducted categorical confirmatory factor analyses for the CSI-16-J and CSI-4-J separately. The fit indices for the CSI-16-J were below the conventional level. However, those for the CSI-4-J were almost satisfactory; comparative fit index (CFI)=1.00, Tucker-Lewis Index (TLI)=0.99, root mean square error of approximation (RMSEA)=0.20, and standardized root mean square residual (SRMR)=0.02. In study 2, 50 participants from study 1 were re-sampled after a three-week interval. Test-retest reliability was acceptable for both the CSI-16-J (ICC= .89) and CSI-4-J (ICC= .78).

We developed the CSI-J as a reliable and valid measure of couple satisfaction in Japan, with room for factorial validity. Next, we aim to examine couples' responsiveness to the CSI-J used as a dependent variable in an intervention.

### **Effectiveness of CBIs for improving body image of breast cancer patients: A systematic review and meta-analysis**

Components: *Literature review*

Categories: Clinical intervention development or outcomes, Breast cancer, Body image, Cognitive-based interventions, Systematic review, Meta-analysis

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Yuen Yu Chong, Ph.D., The Chinese University of Hong Kong  
Wai Tong Chien, Ph.D., The Chinese University of Hong Kong

Breast cancer patients often suffer from body image disturbance due to body/appearance impairment resulting from cancer related surgeries and/or treatments. Cognitive-based interventions (CBIs) have recently been adopted for breast cancer patients on improving their perceived body image but having inconclusive evidence. This systematic review aimed to examine and synthesize the findings of the effects of CBIs on perceived body image (primary outcome), and identify the optimal therapeutic dose of CBIs for these patients.

Ten online databases were used for searching publications and grey literatures according to the PRISMA framework. Data collection and appraisal of the quality of the included studies and evidence were conducted by using RoB 2 and GRADE. SMDs with 95% confidence intervals (CIs) were used to calculate pooled effect size. I<sup>2</sup> value was used to evaluate the heterogeneity of the included studies. Leave-one-out analysis and subgroup analysis were used to manage the high heterogeneity.

Eleven RCTs included in this review adopted cognitive-behavioral, acceptance and commitment, mindfulness, and/or self-compassion therapies. Participants were mainly aged 40-60 years and underwent (radical) mastectomy. Results of meta-analysis showed that CBIs significantly greater improved body image [SMD= -0.49, 95%CI (-0.87, -0.11); 6 RCTs, 758 participants] at immediately post-intervention, when compared with usual care; in which, CBT-based [SMD= -0.37, 95%CI (-0.60, -0.13)] and group-based [SMD= -0.38, 95%CI (-0.62, -0.13)] programs indicated significant pooled effects.

In view of limited heterogeneous RCTs identified, multicenter RCTs of CBIs of these patients with diverse backgrounds and illness conditions are recommended.

### **Effects of a group-based ACT for patients with chronic heart failure: A quasi-experimental pilot study**

Components: *Case presentation*

Categories: Professional development, Health / behavioral medicine, Chronic heart failure, Patient-caregiver dyads, Health-related quality of life

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Yim Wah Mak, The Hong Kong Polytechnic University  
Grace WK Ho, The Hong Kong Polytechnic University

Chronic heart failure (CHF) requires strictly complying self-care regimen, which imposes extraordinary psychological challenges for patients and their family caregivers. Preliminary evidence implies that Acceptance and Commitment Therapy (ACT) can be helpful for patients and their family caregivers to promote CHF self-care behaviors by cultivating psychological flexibility and perspective-taking.

This uncontrolled quasi-experimental study with pre-test and post-test design assessed the acceptability and potential efficacy of a group-based dyad-orientated ACT in improving CHF self-care behaviors and other health outcomes for patients with CHF and their family caregivers.

Seven dyads were recruited and received a 4-week face-to-face training program using group-based dyad-oriented ACT. Findings revealed improvements in CHF self-care behaviors with a large effect size ( $d=1.013$ ), anxiety and depressive symptoms ( $d=0.431-0.542$ ), and psychological flexibility ( $d=0.324-0.655$ ) for dyads with small-to-moderate effect sizes after the intervention immediately.

The findings indicate the acceptability of the program and potential efficacy on CHF self-care behavior, anxiety and depressive symptoms, and psychological flexibility. A randomized controlled trial for dyads of patients and caregivers utilizing a group-based dyad-orientated ACT training program is warranted.

### **Effects of ACT on psychological flexibility, body image, binge eating and Body Mass Index in women**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Dissemination or global health strategies, Obesity, Women, Group intervention

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Mônica Valentim, Dr., Centro Brasileiro de Ciência Comportamental Contextual (CECONTE)  
Evellyn Barbosa, Pontifícia Universidade Católica de Goiás (PUC-GO)

ACT-based interventions offer a new approach to effecting weight management.

The present study has analyzed the effects of an ACT intervention using the Acceptance and Action Questionnaire (AAQ-II); Acceptance and Action Questionnaire for Weight (AAQ-W); Body Image-Acceptance and Action Questionnaire (BI-AAQ); Cognitive Fusion Questionnaire - 7 (CFQ-7); Cognitive Fusion Questionnaire - Body Image (CFQ-BI); Valued Living Questionnaire (VLQ); Binge Eating Scale (ECAP); Body Shape Questionnaire (BSQ) and Body Mass Index (BMI). The protocol's main source was the book "The diet trap: feed your psychological needs and end the weight loss struggle using Acceptance and Commitment Therapy", by Lillis, Dahl and Weineland (2016). Four women between 31 and 45 years old, with a history of diet failures and BMIs ranging from 29.4 to 40.8 participated in 13 group sessions, lasting 2 hours each.

Statistical analyses were performed using SPSS version 26. Spearman's Rho correlation coefficients indicated the relationship between the evolution of the variables. Body image flexibility was strongly associated with body image-related cognitive defusion, reduction in binge eating and body image distortion. A strong correlation was found between BMI and body image. The paired samples t-test revealed that the difference in mean VLQ scores between conditions was statistically significant. The other variables showed changes in the average scores in the expected directions, however, without statistical significance.

The results corroborate the data in the literature that shows improvements in valued actions and important increases in acceptance and defusion associated with reductions in anxiety related to body image and binge eating.

### **Emerging Media Use for Death Anxiety Management During the COVID-19 Pandemic**

Components: *Conceptual analysis, Literature review, Original data*

Categories: Mobile or digital technology, Evolutionary behavioral science, Terror Management, Death Anxiety, Mortality Saliency, Digital Media, Social Media

S. Venus Jin, Ph.D., Northwestern University in Qatar

According to terror management theory (TMT), fear of mortality can be experienced both at the contextual level and at the dispositional level. The COVID-19 pandemic is a relevant environmental context which reminds people of the inevitability of death, thus priming mortality saliency.

VR is increasingly used as a persuasive technology for attitudinal and behavioral change (Chittaro et al., 2017) and has a potential as a tool for ACT in contextual behavioral science research (Yuen et al., 2019). The current survey research is theoretically guided by (1) TMT that proposes "anxiety-buffering systems mitigate existential terror by imparting a sense that one is a person of value living in a meaningful world" (Pyszczynski et al., 2021, p. 175) and; (2) acceptance-based approaches that "promote value-based behaviors and psychological flexibility while deemphasizing symptom reduction" (Yuen et al., 2019, p. 48) as well as is empirically based on the preliminary evidence of the efficacy of ACT in death anxiety management (Davazdahemami et al., 2020).

Although a recent study surveyed VR adoption during the COVID-19 drawing from uses and gratification theory (UGT) (Ball et al., 2021), no research has examined VR/AR adoption and social media usage in light of death anxiety management.

Drawing from TMT and acceptance and commitment therapy (ACT) paradigm, this study examines the extent to which Virtual Reality (VR), Augmented Reality (AR), and social media are utilized during the COVID-19 pandemic. The current study attempts to examine emerging media use in response to mortality saliency, quarantine, and social-isolation amid the COVID-19 pandemic.

### **Evaluating Racial Prejudice through a Relational Density Framework**

Components: *Original data*

Categories: Social justice / equity / diversity, RFT / RGB / language, Racial Prejudice Against Black Individuals

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Jordan Belisle, Ph.D., Missouri State University

Lauren Hutchison, Missouri State University

Elana Sickman, Missouri State University

Ashley Payne, Ph.D., Missouri State University

Racism is a multi-faceted issue involving complex networks of relational frames. Without intervention, aversive functions of those relational networks may evoke behaviors negatively impacting individuals of various racial groups. Relational Density Theory (RDT) provides an account of higher-order properties of relational responding. We conducted a study utilizing principles of RDT to analyze the self-organization of racial prejudice and the complex system from which it stems that contributes to racist ideologies.

The purpose of this study is to evaluate the relationship between biased responding and verbally mediated behavior across relational classes containing different aspects of bias: names, descriptors, images, and context. Stimuli were collected from Implicit Relational Assessment Procedure (IRAP) and Implicit Association Test (IAT) studies assessing implicit racial bias and were combined to capture the interrelated dynamical connection within complex classes.

A relational assessment measure was conducted to provide an explicit quantitative measure of association strengths between the 30 stimuli. Through the Multidimensional Scaling Procedure, data were configured in a geometric structure to visually represent the network of relations and analyze similarities between the stimuli.

Relational networks separated into distinct classes along the dimensions of race and approach/avoidance functions. Results indicate a negatively biased pattern of responding with a strong aversive function toward Black individuals and the stimuli related to them.

Relations shown in the data represent real life implications for Black individuals. The relational content may predict certain actions within dire issues such as police brutality, restrictive policies, and various outcomes that result in adverse outcomes for Black individuals.

### **Examination of psychological flexibility components in Acceptance and Commitment Therapy using verbal data**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Processes of change, Verbal data, Textmining

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Moeko Imori, B.A., Doshisha University

Acceptance and commitment therapy (ACT) demonstrates the effects of intervention by increasing psychological flexibility, which consists of six processes. We examined if the methods used to enhance each of these six components were different or similar for verbal data of clinical interviews.

This study aimed to determine if the processes of the interviews can be classified using interview data derived from the example described in textbooks (e.g. Learning ACT). We conducted latent Dirichlet allocation (LDA) to divide the text into groups. We used the LDA packages to create a six-topic model.

The results demonstrated that the six-topic model was not suggested dividing into different processes.

In psychological flexibility, there are cases where the text can be divided into six topics, but the results of this study do not seem to reflect this concept of psychological flexibility. The strong connection between each element makes it difficult to discriminate them by vocabulary in the example interview.



### **Examination of the function of Self-meaning stimulus used for IRAP in Japanese**

Components: *Original data*

Categories: RFT / RGB / language, Processes of change, RFT, IRAP, DAARRE, Japanese, Function of stimulus

Pin Zhang, Ritsumeikan University  
Shinji TANI, Ph.D., RITSUMEIKAN University

Verbal self is an important topic for clinical and basic research, and a measurement method called IRAP has been used. In the IRAP study related to Verbal self (Self-IRAP), I or participant names have been used as stimulus. However, Yukio & Youko (2016) explained that the function of "watashi (means I)" and "name" are different for Japanese. In recent years, The IRAP have led to the development of "Differential Arbitrarily Applicable Relational Responding Effects (DAARRE)" model, which can use to analyze the function differences between the stimuli. Thus, the current study aimed to clarify the function differences of "watashi" and "name" used in IRAP.

Participants were Japanese native speaker. Two different labels ("watashi" or "name" and others), and the same targets (positive and negative words) of IRAP was used. Each participant completed the Japanese version of Rosenberg self-esteem scale (JRSES), and completed two IRAP.

Data of 30 participants were collected. A one way repeated measures ANOVAs yielded a significant main effect for trial type for two IRAPs, bonferroni post-hoc tests indicated that the effect for the "name-positive" and "I-positive" differed significantly from the three other trial types ( $p's < .05$ ). The remaining trial types did not differ significantly from each other ( $p's > .05$ ). The correlation analysis showed only for "Name-positive" of Name-IRAP that correlated Positively with JRSES ( $r = .40, p = .02$ ).

Through the functional analysis of DAARRE, the results suggested the function of "name" changed between low-self-esteem versus high-self-esteem, but the function of "watashi" did not.



## **Examining the Factors of the Yips in Baseball: From the Perspective of Psychological Flexibility and Social Factor**

Components: *Original data*

Categories: Sports or performance-enhancing, Health / behavioral medicine, Yips, Cognitive Fusion, ACT, Mindfulness Acceptance Commitment Approach.

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The yips is defined as a psycho-neuromuscular impairment affecting the execution of fine motor skills in sports performance (Clarke et al., 2015). A high prevalence rate of yips was observed among amateur athletes. A survey of 104 university students found that 47% of the baseball player had experienced the yips (Aoyama et al., 2021). However, no effective treatment method for the yips has been established so far (Kuribayashi et al., 2019). This study investigates the influence of experiential avoidance, cognitive fusion, values, and social factor on throwing yips in baseball.

Data were collected of 292 baseball players (Mean age = 23.15, SD = 7.53). The following indices were measured: yips symptom index (anxiety/fear regarding throwing; Kagawa and Fukae, 2013), degree of throwing mistakes, experiential avoidance (AAQ-II; Shima et al., 2013), cognitive fusion (CFQ; Shima et al., 2014), the extent to which the game is based on values, and social factors.

Hierarchical multiple regression analysis was performed with yips symptoms as a dependent variable. The results clarified that when a player threw the ball skillfully, the degree to which the player was relieved not to have failed ( $\beta = .30$ ,  $p < .001$ ), the cognitive fusion score ( $\beta = .20$ ,  $p < .05$ ), and the degree of scolding by the team increased yips symptoms ( $\beta = .17$ ,  $p < .01$ ).

These results suggest that a reduction of the degree of cognitive fusion and improvement of teaching methods for sport may be effective in reducing yips symptoms.

## **Examining the Role of Anxiety Sensitivity in Pain-Related Disability Beyond Pain Severity**

Components: *Original data*

Categories: Health / behavioral medicine, Pain

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Michael McDermott, Ph.D., University of Louisiana at Lafayette

Evidence demonstrates that symptoms of anxiety may be stronger predictors of pain-related disability than the experience of pain (Ocañez et al., 2010). One underlying factor potentially relevant to this relation is anxiety sensitivity (AS), which refers to the fear of anxiety-related symptoms which arises from the belief that these arousal sensations will cause harm (Taylor et al., 2007). Although theoretical evidence suggests that AS may be relevant in the experience of pain (Asmundson et al., 1999), few studies have examined the role of AS in pain-related disability beyond the experience of pain itself.

Therefore, the current study examined the relation between AS and pain-related disability beyond pain severity. In a sample of 140 university students, 40 (60% cis-gender women, Mage = 19.42) individuals who indicated having a pain condition were included in the analyses and reported on AS (Anxiety Sensitivity Index - III; Taylor et al., 2007), pain-related disability in everyday life (i.e., general activity, mood, walking ability, etc.) and pain severity (BPI; Brief Pain Inventory-Short Form; Cleeland & Ryan, 1994).

AS ( $\beta = .06$ ,  $p = .002$ ) predicted pain-related disability beyond pain severity (total  $R^2 = .47$ ,  $F(2, 37) = 16.09$ ,  $p < .001$ ) such that AS was associated with increased pain-related disability in daily activities.

Although, pain severity influences pain-related disability, the current study highlights the role of AS in pain conditions and pain-related disability, potentially through increased hypervigilance to threat-related stimuli. Future studies should examine the potential interaction between AS and anxiety in pain-related disability.



## **Experiential Avoidance and Gender nonconforming individuals**

Components: *Original data*

Categories: Social justice / equity / diversity, Processes of change, Experiential Avoidance

Danielle Haakinson, Texas Tech University  
Charles Everingham, Texas Tech University  
Nicholas Borgonga, Ph.D., Texas Tech University

The minority stress model (Meyer, 2003) gives reason for the prevalence of mental illness in sexuality and gender minority groups. Because of external factors, or factors internally influenced by societal norms, minoritized groups feel an excess of stress. Experiential avoidance is a transdiagnostic concept in which individuals purposefully avoid and/or attempt to alter particular private experiences (memories, thoughts, etc.) in order to reduce accompanying psychological distress (Haves et al., 1996). Experimental avoidance has been shown to be associated with a plethora of mental illnesses. Currently, it is unclear the degree to which experimental avoidance varies as a function of gender identity, specifically with regard to Gender nonconforming (GNC) individuals. – We aimed to address this gap in our literature. We hypothesized that that gender-nonconforming individuals would report significantly more experiential avoidance compared to cisgender individuals.

We examined a portion of the Healthy Minds Study (HMS) from the 2020-2021 school year involving N=33,698 participants. We used the Acceptance and Action Questionnaire-II (AAQ-II; Bond et al., 2011) as our measure of experimental avoidance.

Consistent with our hypothesis, results from a one-way ANOVA, indicated that GNC individuals assigned female at birth recorded the highest mean AAQ-II scores ( $n=1386$ ;  $M=30.14$ ;  $SD=8.65$ ), followed by GNC individuals assigned male at birth ( $n=294$ ;  $M=28.12$ ;  $SD=10.53$ ), cisgender women ( $n=1009$ ;  $M=27.51$ ;  $SD=9.89$ ), and cisgender men ( $n=1009$ ;  $M=24.23$ ;  $SD=10.05$ ), with a significant difference between each group  $F(3, 3694)= 75$ ;  $p<.001$ .

Based on our results, gender nonconforming individuals report disproportional experiential avoidance. This is likely attributable to minority stress processes.

### **Expert People Transmitter of Psychological Flexibility**

Components: *Case presentation, Literature review, Original data*

Categories: Professional development, Processes of change, ACT, FAP, Mindfulness, Client centered

Mario Guarderas, M.Sc., Perspectiva-Psicología de Procesos

People working with people have always presented high level of stress and low quality of life related factors. Contextual psychology processes have been studied to help change this markers in people life. Our proposal is that by transmitting psychological flexible repertoires to people working with people, they could achieve a "Transmitter effect" of psychological flexibility upon the groups they work with.

Base-measurement of PSY-FLEX, SWLQ and FAP+ACT behaviors over a longitudinal methodology. To generate changes over time we have designed the "Síntesis" workshop focused on developing these processes in an experiential way. Expert People Transmitter of Psychological Flexibility (EPTPsyFlex) are meant to ACT as informant of Psy-Flex and SWLQ measurement of their group they work with so we can probe the "transmitter effect"

There are positive changes over measurements of PSY-FLEX and SWLQ in our EPTPsyFlex reflecting result of previous researches. Acquire audio visual equipment to collect quantitative data of new flexible behaviors in participants life and applied to their personal practice, emerged as new objective. We count with 5 EPTPsyFlex managing own groups so they could inform over their Psy-Flex and Satisfaction with live levels.

PSY-FLEX and SWLQ result don't reflect the behavioral process we meant for our workshop. However, this information is valuable for diffusion and other communicative needs. It is important to generate an interinstitutional communication flow to reach a population with more impact.

This methodology demands strategies for developing these processes need to be specific as creative hopelessness, the observer point and clarifying values are

### **Factors Influencing Alcohol Use During COVID-19 With College Students**

Components: *Original data*

Categories: Other, Alcohol Use

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Tabitha DiBacco, M.A., Western Michigan University  
Amy Naugle, Ph.D., Western Michigan University

The COVID-19 pandemic has had adverse mental health implications. Studies have shown that those who reported higher perceived stress levels throughout the pandemic are particularly vulnerable to report higher alcohol use (Koopmann et al., 2020). Young adults have been identified as a particularly high-risk group for increased alcohol use during the pandemic (Capasso et al., 2021). This population may also have unique factors affecting their alcohol use and motives for drinking. In a study with college athletes, those who reported more frequent alcohol use showed lower levels of campus involvement (Brenner et al., 2009). Campus involvement and connectedness had not previously been examined in the general college population during COVID-19. Experiential avoidance has previously been found to be related to drinking behaviors and managing stress, but had also not been examined during COVID-19 in college students (Ehrenberg et al., 2016; Taylor et al., 2020). What motivates drinking behaviors during COVID-19 may be shifting (Graupensperger et al., 2021).

The current study surveyed a sample of college students (N = 130) about their alcohol use, psychological distress, motives for drinking, experiential avoidance, COVID-19 related fears, and campus connectedness during the COVID-19 pandemic.

Relationships between alcohol use, psychological distress, motives for drinking, experiential avoidance, COVID-19 related fears, and campus connectedness will be discussed.

Implications for interventions during future widespread and localized crises related to college students will be considered.

### **Generalized Pliance and Adherence to COVID-19 Restrictions**

Components: *Original data*

Categories: Behavior analysis, Health / behavioral medicine, Rule-Governed Behavior, Pliance, Generalized Pliance, COVID-19

Conor McCloskey, B.Sc., University College Dublin  
Alison Stapleton, University College Dublin  
Louise McHugh, University College Dublin

This study investigated the influence of peer adherence to COVID-19 restrictions on the adherence of individuals with high generalised pliance.

288 adults completed the Generalized Pliance Questionnaire and a questionnaire that assessed their adherence and the adherence of their peers.

Specific peer adherence correlated with the adherence of participants to COVID-19 restrictions, with peer type and relationship strength varying based on generalized pliance levels.

Recommendations are made for the use of perceived peer expectations for the future study of generalised pliance.

### **Interoceptive accuracy and eating disorder risk in young female adults: The mediating role of distress tolerance**

Components: *Original data*

Categories: Other, Other, Eating Disorder risk

Eleni Iasonidou, Ph.D., University of Nicosia  
Nuno Ferreira, University of Nicosia  
Maria Koushiou, University of Nicosia

Previous research suggests that eating disorder (ED) populations have difficulties in perceiving internal bodily signals which in turn affects their emotional experience and behavioural tendencies. For example, individuals who experience emotions and their bodily correlates with greater intensity (i.e., are more interoceptive accurate) might experience emotions as intolerable and thereby facilitate attempts to avoid or escape these experiences. The aim of the present study was two-fold: i) to examine interoceptive accuracy (IAcc) among young females at high vs. low ED risk, using the Heartbeat Perception Task, and ii) to examine their levels of distress tolerance (DT) as measured via the time spent on a physical - the "Breath-Holding Task" (BHT) - and

a cognitive distress task - the "Paced Auditory Serial Addition Task-Computerized" (PASAT-C). Finally, DT was assessed as a possible mediator in the relationship between IAcc and ED risk.

IAcc and DT was assessed in 114 females aged 18-25 years old, either at high (N=356) or low (N=358) risk for EDs.

High ED risk participants demonstrated higher IAcc and lower DT compared to their low-risk cohorts. DT to cognitive distress fully mediated the relationship between IAcc and ED risk.

Results suggest that intolerance to cognitive distress can act as a potential catalyst in the development of eating pathology and therefore interventions aimed at the establishment or improvement of DT skills might help prevent the development of clinical EDs.

### **KindMap - A mindfulness, ACT and compassion based self-guided web-app targeting people with infertility**

Components: *Conceptual analysis*

Categories: Health / behavioral medicine, Clinical intervention development or outcomes, Infertility

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Nair Carolino, Instituto Superior Miguel Torga

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Marina Cunha, Instituto Superior Miguel Torga; University of Coimbra, CINEICC, FPCEUC

Rute Rola, Instituto Superior Miguel Torga

José Pinto-Gouveia, University of Coimbra, CINEICC, FPCEUC

Facing infertility has been described as a low-control and stressful life crisis affecting 8-12% of people worldwide. The Mindfulness-Based Program for Infertility (MBPI) is a group structured in-person psychological intervention designed for people with infertility. Efficacy testing showed it promotes the development of mindfulness and infertility self-efficacy skills and decreases psychopathological symptoms, having shown long-term benefits. Nevertheless, being an in-person delivered program means it can be costly and less accessible. Adapting the MBPI to a cost-free, self-guided web app, the KindMap, should increase accessibility, but it is unknown if it will be acceptable and if its efficacy is not compromised due to online individual self-guided format.

Feasibility (demand, acceptability, implementation/practicalities, integration, and limited efficacy) will be evaluated in a two-arm 2:1 Randomized Control Trial. People self-identifying as having infertility problems will be recruited through APFertilidade (Portuguese patients association) and randomized to an experimental or a waitlist group. Participants will complete self-report measures pre- and post-intervention.

Overall, it is expected that adapting the MBPI into the KindMap will not compromise acceptability nor implementation/practicalities, though demand, in particular sustained use, will be lower as usually observed in online support. We expect efficacy will hold in per-protocol assessment but are uncertain about results per intention-to-treat. Results from this study will inform future improvements to KindMap and changes to study protocol for a future large-scale efficacy RCT.

KindMap will be unique as other existing interventions do not integrate mindfulness, ACT-based and compassion components, and only a minority have efficacy data.

### **Learning to ACT in Higher Education: A Randomized Comparison of Typical and Targeted ACT Delivered Online**

Components: *Original data*

Categories: Academics or education, Processes of change, Acceptance and Commitment Therapy Online

Emily Erb, M.A., Western University

Albert Malkin, M.A., BCBA, Western University

Jina Kum, Ph.D., M.Sc., Western University

Graduate students face pressure to maintain academic performance and manage distress in the face of demanding educational programs and day-to-day life. Students can learn to navigate the inevitable difficulties of higher education in an open, present, and engaged fashion through the use of Acceptance and Commitment Therapy/Training (ACT). The current study demonstrates a comparison of typical and targeted approaches to ACT.



We examined the effectiveness of variations of a 6-week online protocol, with the aim of increasing psychological flexibility, decreasing perceived stress, and increasing academic outcomes in graduate students. Such variations were based on a pre-test of psychological flexibility (Comprehensive Assessment of Acceptance and Commitment Therapy processes; CompACT) to personalize support. Participants were randomly assigned to one of three groups: 1) active treatment control group (study tips); 2) an experimental group (typical ACT - 6 processes); and 3) a second experimental group (personalized ACT - a focus on either open, aware, or engaged components of ACT).

Differences in group outcomes on the CompACT, The Acceptance and Action Questionnaire-II (AAQ-II; Bond et al., 2011), Perceived Stress Scale (Cohen, et al., 1983), and a 6-item social validity questionnaire will be presented.

The current work extends the research on both typical and targeted approaches to ACT with respect to the measures above. Further, we evaluate the feasibility of conducting ACT via a process-based approach online. Such findings will allow future ACT researchers to make the best use of the limited time students have to engage with much needed support services.

### **M.T.O.R: A Mindfulness-based program for the treatment of repetitive negative thinking (RNT)**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Mobile or digital technology, Low-intensity therapies, Mindfulness, Mindfulness-based interventions, Repetitive negative thinking

Juan Camilo Vargas-Nieto, Ph.D.Candidate, Fundación Universitaria Konrad Lorenz

In recent years, repetitive negative thinking (RNT) has been recognized as a transdiagnostic mechanism present in multiple psychological disorders such as anxiety and depression. Interventions based on mindfulness have made it possible to address psychological problems in which RNT is a central element. In the present research, we present the results of the application of Mindfulness Training for Overthinking Reduction (M.T.O.R.), a low-intensity therapy program administered online. This type of intervention is recommended by governmental organizations such as the Nice Care Excellence Institute (NICE) because it allows the dissemination of evidence-based interventions to a large number of people at a low cost.

A pretest-posttest experimental design was used with a waiting list control group, and the groups were randomly assigned by blocks.

The results of the implementation of this program are being analyzed at the time of submission of this proposal.

Although there is a significant body of evidence supporting the notion that mindfulness-based protocols are effective for the treatment of anxiety, stress and depression problems, mindfulness research is still growing and is currently directed towards the identification of the different psychological aspects related to its practice. Likewise, there are a large number of mindfulness-based therapeutic modalities that still need to be reviewed through the most rigorous scientific methods (Baer, 2015). M.T.O.R. could be an interesting therapeutic alternative for the treatment of emotional disorders such as anxiety and depression where RNT is a central factor of maintenance.

### **Measure mindfulness - Development of a dynamic functional analysis measurement with the verbal selves**

Components: *Original data*

Categories: Processes of change, Clinical intervention development or outcomes, Mindfulness, Process-based approach, Supervised Machine Learning, RFT, Verbal Self

Sheng Li, Master of Human Science, The Ritsumeikan University of Japan

Tianyi Yan, University of Hamburg

Shinji Tani, Ph.D., Ritsumeikan University

The measurement of mindfulness is limited in self-report questionnaires. While it is almost impossible to tell the changes based on the self-report questionnaires came from the participants' change of "mindfulness", the concept, or real experience. A process-based approach is appealed to be useful for evaluating effectiveness in clinical psychology by Contextual Behavioral Science(CBS) researchers. As some researches show that participants' improvement of mindfulness can be seen as a range of changing of verbal selves. So it is vital to

develop a new evaluation for the so called "Mindfulness" in a process-based (dynamic) way in terms of the verbal selves .

Pilot1:1 units of ACT clinical conversation transcripts (580 data in Japanese) was used to train a set of machine learning groups(supervised deep learning model) for categorizing ROE analysis units with Python. Pilot2:Another 4 units of ACT clinical conversation transcripts (2400 data) were used. Each analysis units(category) was trained with its own machine with Python.

Under an analysis of confusion matrix of the test result, pilot1 result shows high accuracy of [Evoking]&[Relating Levels] with 98%&#37;. However, there is a tendency for identify input as Na, .Pilot2 result shows the accuracy of [Emotion](3 values:-1,0,1), [Attention] (2 values:0,1), &[Selves](3 values:SS,SX,SP) were 95%,90%,96%.

The confusion matrix of the test result shows there was too much NA in the training data. So coming data sets should be of less NA.And the test of machine accuracy is still need to be improved with more balanced data (which means a data set with more self-as-process units, specifically).

### **Measuring Gender-Related Biases and Exploring Methods to Diminish Bias by Targeting Relations for Defusion**

Components: *Case presentation, Conceptual analysis, Literature review, Original data*

Categories: RFT / RGB / language, Social justice / equity / diversity, Genderism

Chynna Frizell, Masters, Missouri State University  
Dana Paliliunas, Ph.D., Missouri State University  
Breanna Lee, Missouri State University

Biases related to gender are an important area of empirical attention in the United States due to social challenges related to prejudice, stereotyping, and discrimination based on gender. This study evaluated potential bias related to binary and nonbinary gender using a measure of relational responding rooted in Relational Density Theory (RDT) (Belisle & Dixon, 2020). Mass and volume of networks in terms of gendered stereotypical relations are assessed to further examine binary gendered stereotypes and to examine relations regarding nonbinary genders in the context of traditionally masculine and feminine labels. Implicit biases regarding male and female genders have been examined, however less research on nonbinary gender biases and stereotypes is available. Using this approach, gender stereotypes are expected to tightly cluster, but the relations may become less dense using an Acceptance and Commitment Therapy (ACT) technique to weaken stereotypical relations that create bias.

A defusion procedure was utilized to elaborate relational networks, using an approach adapted from previous research (Belisle, Palilunas, Dixon, & Speelman, 2018).

Preliminary data was conducted with 54 participants (29 female, 25 male, 1 non-binary); age M=18.9, range 18-21) that completed the RDT Phases- two phases. In phase 1. participants completed the MDS task with descriptors from a standardized list. In phase 2. Participants completed another MDS task with descriptors.

Gender bias is an issue that deserves evaluation. By utilizing an ACT defusion procedure we targeted stereotypical relations of gender bias, including exploration of non-binary gender. Future directions will explore additional avenues for diminishing gender related bias.

### **Meditation in Pandemic: Perception of practices utility and frequency**

Components: *Original data*

Categories: Dissemination or global health strategies, Dissemination or global health strategies, Meditation

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Ana Galhardo, Ph.D., Instituto Superior Miguel Torga; University of Coimbra, CINEICC, FPCEUC  
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Mindfulness and compassion practices may be useful for emotion regulation and decreasing human suffering. The Covid-19 pandemic has confronted us with several challenges. This study aimed to explore how meditators used their meditation practice (frequency and perception of utility) during these difficult times.

62 participants having completed an 8-week mindfulness and compassion course prior to the Covid-19 pandemic completed an online survey. Participants showed a mean age of 43.06 (SD = 11.21) years old and a mean of 16.79 (SD = 2.69) years of education. Most participants were employed (91.9%; n = 57) and 87.1 % (n = 54) were facing lockdown with a mean of 33.32 (SD = 16.46) days duration.

The frequency of meditation practice before and during the pandemic was significantly different ( $\chi^2(16) = 125.27$ ;  $p < .001$ ). Before the pandemic 13 (21%) participants meditated daily and during the lockdown, this number increased to 25 (40.3%). Participants meditating occasionally (25.8%; n = 16) or rarely (11.3%; n = 7) before pandemic decreased to 11.3% (n = 16) and 6.3% (n = 4), respectively during pandemic. The practices rated as the most useful during the pandemic were breathing, compassion and lovingkindness meditations.

Meditation practice regularity during the pandemic seems to have increased, suggesting that this may have been perceived as a useful resource to deal with difficulties emerging from the lockdown. Results also pointed that, besides breathing meditation, compassion and lovingkindness were identified as valuable highlighting common humanity and the need for a kind and warm attitude.

### **MPFI Inflexibility Subscale has Strong Incremental Validity Explaining PTSD Symptoms**

Components: *Original data*

Categories: Methods/approaches for individual variation, Processes of change, PTSD

Vanessa Wang, M.A., Southern Illinois University  
Bryant Stone, Southern Illinois University Carbondale  
Chad Drake, Southern Illinois University Carbondale

Psychological inflexibility can explain PTSD symptoms using the AAQ-II (Bond et al., 2011) or the MPFI (Rolffs et al., 2016). In the current study, we test the incremental validity of the MPFI inflexibility subscale in explaining PTSD symptoms over the AAQ-II.

Participants completed an online survey, including the AAQ-II, MPFI, and PCL-5 (Blevins et al., 2015). Undergraduate (n = 448) participants' age ranged from 18 to 54 years old (M = 20.32, SD = 4.27) and were primarily White (54.5%) and female (69.0%). We conducted an HLR explaining PTSD symptoms with the MPFI, controlling for the AAQ-II.

Step one included the AAQ-II explaining PTSD symptoms,  $p < .001$ ,  $R^2 = .363$ ,  $\beta = .603$ . Step two involved the inflexibility scale of the MPFI controlling for variability explained by the AAQ-II. The model was significantly improved,  $p < .001$ ,  $R^2 = .485$ ,  $\beta = .466$ , reducing the explained variability of the AAQ-II significantly,  $\beta = .294$ ,  $\Delta R^2 = .122$ .

Our results suggest that the MPFI inflexibility scale has strong incremental validity for explaining PTSD symptoms.

### **My activities about CBS**

Components: *Original data*

Categories: Dissemination or global health strategies, Professional development, CBS dissemination

Veysel Güleç, M.D., ACBS Türkiye, Bakırköy Research and Training Hospital For Neurology and Psychiatry

My name is Veysel. I am a psychiatrist at Bakırköy Mental Health Education and Research Hospital. It's been 4 years since I started. I can say that I am acquainted with contextual sciences from the first day.

I participated and launched some CBS books reading groups. We read the ABCs of human behavior, learning RFT, master of clinical conversation etc. in these reading groups.

I am a member of ACBS Turkey chapter and ex Student Representative of chapter. The chapter has been doing nice work. I participated in the last two ACT Days conferences and took responsibility at the organizing committee.

I use ACT in my clinical practice in the hospital. We usually work on psychotic and affective disorders in hospital. I also use a functional contextual approach while doing my work. We have been conducting some research with a functional contextual approach. One of them focuses on doctors in psychiatry residency. The research lasts 4 years, and we investigate the change in their clinical approach (mechanistic or contextualistic) in residency period.

We have initiated a working group named Family issues working group within ACBS Türkiye. There are different working groups, I am co-coordinator of the Family issues working group.

I have so many precious masters. I met CBS and ACT thanks to them. I am learning a lot of things from them. I owe them a lot. We all will attend the ACBS world conference.

### **My Current CBS Work in Türkiye**

Components: *Original data*

Categories: Dissemination or global health strategies, Developing Nations Conference Scholar

Enver Denizhan Ramakan, M.D., ACBS Türkiye, Bakirkoy Research and Training Hospital for Neurology and Psychiatry

Hi, I'm Denizhan Ramakan. I'm a psychiatry residency student in a rooted mental health hospital. I'm a member of ACBS Türkiye.

I use ACT in my practice with or without pharmacotherapy. I find lots of chance to practice with both inpatients and outpatients. I have chance to see and manage patients with severe mental disorders. Our hospital has an alcohol and substance dependence center and we're currently doing a research with people suffers from alcohol or substance use disorders. We're planning an intervention for these patients. We have also an affective disorders center. We're initiating a study which is an ACT group therapy for people with bipolar disorder.

I'm working with residents, residency students, psychologists, social workers and nurses. When I met them, I see that they didn't know what CBS, RFT and ACT are or they knew very few of ACT. It is priceless to introduce them CBS and see them thinking about it. I take part of the education of residency students and medical students. We're doing researches in the context of CBS with some of them. We're reading CBS papers together. We've initiated Language and Behaviour Research Working Group with our community. In this group, we're deepening our knowledge about RFT and planning to do researches in this area. We have a growing e-mail listserv for RFT.

I'm planning to extend this work with the take aways of the conference and the connection with researchers around the world which ACBS created the opportunity to meet them.

### **Navigating Childhood Adversity: An Exploration of Strategies that Enhance Resilience & Post-traumatic Growth**

Components: *Case presentation, Original data*

Categories: Clinical intervention development or outcomes, Health / behavioral medicine, Targeting ACT: Effective Intervention with Precision

Sean Friedman, M.A., University of the Witwatersrand

Adverse Childhood Experiences (ACE's) have been shown to be a risk factor for deleterious health outcomes, in an additive and cascading manner. Calls for intervention and prevention have done little to translate into effective solutions: ineffective approaches in developed contexts are even less likely to apply effectively in developing contexts like South Africa where the majority of the population faces a number of adverse conditions. Given the societal shifts needed for outright prevention, targeting young adults with a history of ACE's allows for a meditational intervention to prevent the cascading effects of former experiences. Psychological flexibility it explored as a a potential meditational target; more specifically as there is evidence that both type of ACE's and inflexibility in different processes impact differentially on health outcomes, an assessment of deficits or inflexibility in processes coupled with targeted intervention on these processes alone, offers a possibility for very costs effective, short-term, scalable, and accessible protective intervention. My research thesis will be exploring the possibility of the above approach, as well as the implications for easy access through technology (smart-phones for example).

Small scale, (non generaliceable) experimental design, masters level. Pretest (PPFI) of psych flex discriminating between domains; targeted intervention for the specific domains (acceptance, avoidance, harnessing); post-test measure.

To be seen. Likely available by May.

To be seen.

## **Online delivered Acceptance and Commitment Therapy for chemsex and hypersexual behaviour: A single-case study**

Components: *Case presentation*

Categories: Clinical intervention development or outcomes, Health / behavioral medicine, Sexuality

Francisco Montesinos, Ph.D., Universidad Europea de Madrid

Marta Ortega, Universidad Europea de Madrid

The case of a 44 years old HIV positive homosexual male, with highly frequent unprotected sexual behaviour associated to drug use, affecting his social, family and work spheres is presented. The aim was to assess the usefulness of an ACT-based protocol to treat hypersexual behaviour. The study also aimed at assessing the feasibility of the protocol to be rolled out to a larger sample.

The treatment was delivered on-line through eight sessions. Changes were tracked during the treatment and three months after through self-monitoring and standardized questionnaires HBI, NSSS-S, AAQ-II, CFQ, SBC and MAAS.

Adherence and satisfaction with the treatment was very high. Jacobson-Truax clinically significant change index showed improvements in hypersexuality, cognitive fusion, sexual satisfaction and body connection. The treatment has proven to be successful in reducing participant's hypersexuality 90% ( $d = -0.9$ ,  $p = 0.0$ ). Time spent looking for sexual intercourses, as well as the number of encounters, different partners, and frequency of drug usage during sex was drastically reduced after intervention.

Results provided evidence that ACT contributed to improve compulsive sexual behaviour and therefore justified its use in subsequent clinical trials.

## **Preliminary effects of ACT-based counselling program for improving physical activity in people with early psychosis**

Components: *Original data*

Categories: Health / behavioral medicine, Clinical intervention development or outcomes, Psychosis

Yuen Yu Chong, Ph.D., The Chinese University of Hong Kong

Pui-tik Yau, Faculty of Medicine, The Chinese University of Hong Kong

Daniel Bressington, Charles Darwin University

wai Tong Chien, Faculty of Medicine, The Chinese University of Hong Kong

Psychosis patients are at significant risk of premature death due to sedentary lifestyles, inactivity and inadequate nutrition, attributed to the lack of autonomous motivation to maintain healthy lifestyle behaviours. Fostering one's psychological flexibility may help people with early psychosis engage in meaningful and intrinsic behaviours which lead to better health outcomes.

We aim to present the preliminary results from an ongoing randomised controlled trial examining the effects of an Acceptance and Commitment Therapy (ACT) Lifestyle Counseling program (ACT-LCP) for people with early psychosis ( $n = 72$ ). Participants were assessed at recruitment, post-intervention and at 3-months post-intervention to determine their levels of physical activity and psychological health outcomes.

At post-intervention, significant medium-to-large within-group effect sizes were found on improving mental status ( $ES = 1.06$ ), levels of participation in moderate to vigorous physical activities ( $ES = 0.26-0.34$ ) and adherence to healthy dietary intake ( $ES = 0.34$ ).

Our findings demonstrate the feasibility, acceptability and potential efficacy of ACT-LCP for people with early psychosis in Hong Kong, full-scale clinical trials are warranted to confirm its effectiveness.

## **PROSOCIAL Practice and Effectiveness - Through Practice in a Group within an Organization in Japan**

Components: *Original data*

Categories: Organizational / Industrial psychology, Clinical intervention development or outcomes, Prosocial, Organization

Fumiki Haneda, M.A., Startline Co., Ltd. CBS Human Support Research Institute.

Our Institute has been working on Prosocial as one of the CBS approaches. In April-July 2021, about 20 members of our company attended the Prosocial facilitator training by Dr. Paul Atkins et al. and obtained facilitator certification. In this presentation, we will report on the implementation of the Prosocial approach to several organization groups.

The first target group of the Prosocial approach was a department consisting of four members of our company. Two facilitators from the Institute participated as facilitators and scribes. The training consisted of five sessions of lectures and discussions, including an overview of Prosocial, an individual matrix, a group matrix, and a CDP review.

To assess the psychological flexibility of the group, the full MPFI (Lin et al., 2020) was administered before and after the entire training, the MPFI short version was administered after each session, and the CDP evaluation (Atkins et al., 2019) scores were also measured to assess the effectiveness of each training session.

The MPFI full version showed an increase in mean values for the psychological flexibility and psychological inflexibility items, while the MPFI short version showed fluctuations in these items as each session was conducted. In the CDP evaluation, all items were highly rated after the training.

Including the results of this practice, we will examine the effects of implementation on groups within the organization, as well as issues in preparation and implementation in Prosocial practice and its applicability to various organizations in the future.

### **Protocol for a SCED of a DBCI to increase engagement in Physical Activity in children with Spina Bifida**

Components: *Case presentation, Original data*

Categories: Health / behavioral medicine, Mobile or digital technology, Children with Spina Bifida

Joseph Lavelle, M.Sc., UCD School of Psychology; UCD School of Public Health, Physiotherapy, and Sports Science

Ross Neville, University College Dublin

Despite the recognized importance of physical activity (PA) for children of all abilities, research consistently shows that children with disabilities fail to meet the recommending daily levels of PA which support physical health, mental health, and independent living. This disparity is especially evident in children with Spina Bifida (SB). For children with SB, engagement in physical activity is strongly linked to ambulatory ability, severity of physical disability, deterioration across time, and capacity for greater independent and autonomous living. Clearly, interventions to promote increased consistent PA are integral for children with SB. Despite this, healthcare providers are rarely adequately resourced or enabled to recognize the importance of PA in formal and consistent ways as part of standard care. As such, the onus rests with parents to facilitate opportunities for PA.

The present paper describes a protocol to trial a brief values-based digital behavior change intervention (DBCI) to increase PA facilitation by parents and caregivers of children with SB. Ten parent-child dyads will be recruited to participate in a randomized multiple-baseline trial via an Irish paediatric hospital.

The independent variable will be the staggered onset of a brief smartphone-delivered and values-based intervention. The dependent variables will be child-level physical activity (operationalized as activity monitor-measured steps, heart rate, sleep, and sedentary time) and parental-level psychological flexibility (as measured by the Brief Acceptance Measure; BAM).

It is anticipated that the present study will provide insight into the feasibility, acceptability, and preliminary efficacy of such interventions.

### **Psychiatry Residents On The Road: First Year Results of a Follow up Study: Türkiye Chapter Sponsored**

Components: *Original data*

Categories: Professional development, Academics or education, Psychiatry Residents

Fatih Yavuz, M.D., Istanbul Medipol University, Department of Psychology

Veysel Guleç, Bakirkoy Mazhar Osman Mental Health Teaching and Research Hospital, Istanbul Türkiye

Denizhan Ramakan, Bakirkoy Mazhar Osman Mental Health Teaching and Research Hospital, Istanbul, Türkiye

Sevinç Ulusoy, Bakirkoy Mazhar Osman Mental Health Teaching and Research Hospital, Istanbul, Turkiye

Although the mechanistic model dominates psychiatry today, the functional contextual approach has recently become accepted in the field of psychiatry.

One of the important attitudes that may affect the treatment process of clinicians is stigmatization. Studies report that there is a stigmatizing attitude in health workers and even mental health professionals as well as in the social environment. Another condition that affects the attitudes and interventions of clinicians towards their patients is burnout.

Our research aims to examine the changes in the philosophical viewpoint, burnout levels and stigmatization toward mental health and diseases of psychiatry residents throughout their four year training. Here, we will present the first year results of our ongoing study.

Psychiatry residents who are within the first 1 month of their education participated in our research. Participants who agree to participate filled Mental Illness Clinician's Attitude Scale, Maslach Burnout Scale, Bakirkoy Clinician Stance Questionnaire. Afterwards, the participants reassessed after one year. The collected data will be subjected to statistical analysis.

58 (74.4%) of the participants were women. The mean age was found to be 25.5. 59 of them were single (75.6%).

Considering the initial and first year evaluations; there was no significant change in the participants' mechanistic perspectives, psychological flexibility levels and stigmatization levels ( $p > 0.05$ ). However, there was a significant increase in their tendencies towards psychotherapy practices and their burnout levels ( $p < 0.05$ ).

In the first years of psychiatry training, it may be necessary to plan preventive programs and interventions focused on stigma and burnout.

### **Psychological flexibility and parenting competence in parents of young children with physical-mental comorbidities**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Health / behavioral medicine, Parents, Children, Comorbid conditions

Yuen Yu Chong, Ph.D., The Chinese University of Hong Kong  
Shu Yan Lam, MBBS, FRCPCH, Tuen Mun Hospital  
Kenneth Fung, M.D., University of Toronto  
Wai Tong Chien, The Chinese University of Hong Kong

Over one-third of children with physical illness experience mental health problems, which often occurs concomitantly. Such physical-mental multimorbidity creates multifaceted challenges for parents in their caregiving and affects their functioning outcomes.

This study aimed to explore and compare the dual roles of parental psychological flexibility and parenting competence in the relationship between psychological adjustment and functioning in parents of young children with physical-mental comorbidities.

Baseline data from an ongoing clinical trial of Acceptance and Commitment Therapy (ACT)-based parenting program for a sample of 118 Hong Kong parents (85% mothers) of children (73% boys, mean age [SD] = 8.5 [2.2]) diagnosed with asthma comorbid with attention-deficient hyperactive disorder was used for the analysis. Our multiple mediation model showed that the indirect mediated effect of psychological flexibility (standardised beta = 0.26,  $p < .001$ ) was greater than those of parenting competence (standardised beta = 0.17,  $p < .009$ ) in affecting parents' functioning,

Our findings have important implications for developing supportive programs for families raising children with multimorbidity in the future.

### **Psychological Flexibility Moderates Relations Between Coping with COVID-19 on Social Media and Self Esteem**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Mobile or digital technology, Social Media Use

Sara White, University at Albany, SUNY

Max Roberts, University at Albany, SUNY  
Shannon Underwood, University at Albany, SUNY  
Eric Tiff, University at Albany, SUNY  
John Forsyth, University at Albany, SUNY

Multiple studies show that increased social media usage is associated with lower self-esteem. However, many undergraduates report using social media to cope with stress and anxiety, which likely increased during the COVID-19 pandemic. From a functional contextual perspective, social media usage should not be considered inherently problematic. That is, more social media usage would not necessarily lead to lower self-esteem. One's (in)flexible relationship with the thoughts and feelings that emerge while on social media (e.g., "why don't I look like that?") may better explain social media's association with low self-esteem.

The present study tested psychological inflexibility (PI) as a moderator of social media use for coping with the COVID-19 pandemic's relation with self-esteem. A large sample of undergraduates (N = 1288; 57% female; Mage = 19) completed a battery of measures including the Multidimensional Psychological Flexibility Inventory (MPFI), Quality of Life Inventory (QOLI), and a yes/no measure of whether or not they used social media to cope with COVID-19. The QOLI self-esteem subscale was the measure of self-esteem in this study.

Results showed that social media use for coping was significantly negatively associated with self-esteem. However, PI significantly moderated the relation between using social media for coping and self-esteem; thus, the more inflexible one is, the more that using social media to cope with the COVID-19 pandemic led to lower self-esteem.

These results highlight that using social media to cope with pandemic stress affects self-esteem based on one's PI level. Clinical and research implications of these findings will be discussed.

### **Psychological inflexibility mediates the effects of impulsivity on alcohol consumption**

Components: *Original data*

Categories: Other, Other, Clinical intervention development or outcomes

Pablo Ruisoto, Ph.D., Public University of Navarre, Spain  
Lidia Budziszewska, M.S., European University of Madrid  
Esperanza Quintero, Universidad de Sevilla, Spain  
Juan Carlos López-García, Universidad de Sevilla, Spain  
Silvia L. Vaca, Universidad Técnica Particular de Loja, Ecuador  
Pablo Torres, Universidad Técnica Particular de Loja, Ecuador

Psychological inflexibility and Impulsivity increase the risk of alcohol consumption. However, how they relate to each other is unclear. Aim. The aim of this study is to examine how psychological inflexibility impact the effect of impulsivity on problematic alcohol consumption.

A large sample of 5982 college students from 3 large universities of Ecuador were surveyed. Only gold standard measures were used to assess impulsivity The Barratt impulsiveness scale (BIS-11), psychological inflexibility (AAQ-II), and alcohol consumption (AUDIT-C). The study was approved by Ethics Committee (UTPL-CEISH-2019-09) and data analyzed by Process Macro for SPSS.

Psychological inflexibility (AAQ-II) mediated the impact of psychological inflexibility (PSS-10) on alcohol consumption (AUDIT-C), reporting a significant indirect effect of .0887, IC (.0632, .1165) for men and .0939, IC (.0671, .1210) for women. This indirect effect was not moderated by sex .0052, IC (-.0084-.0180).

Psychological inflexibility mediated the impact of impulsivity on alcohol consumption regardless of sex. These results support the role of psychological inflexibility as a transdiagnostic variable. Funded by the European Union – NextGenerationEU and CEDIA-CEPRA XII 2018.

### **Psychological inflexibility mediates the effects of stress on health**

Components: *Original data*

Categories: Other, Other, Clinical intervention development or outcomes

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How psychological inflexibility relates with the adverse effect of psychological stress on depression remains unclear. Aim. The aim of this study is to examine how psychological inflexibility impact the effect of psychological stress on depressive symptoms

A large sample of 5982 college students from 3 large universities of Ecuador were surveyed. Only gold-standard-measures were used: Psychological inflexibility (AAQ-II), psychological stress (PSS-10), depression (PHQ-9) and alcohol consumption (AUDIT-C). Study approved by Ethics Committee (UTPL-CEISH-2019-09) and data analyzed by Process Macro for SPSS.

Psychological inflexibility mediated the impact of stress on depression, reporting a significant indirect effect of .289, IC (0,2680- 0,3111) and the impact of psychological stress on alcohol consumption, reporting a significant indirect effect of .0613, IC (.0341-.0895), particularly in women.

Psychological inflexibility mediated the impact of stress on two important health indicators, depressive symptoms and alcohol consumption. These results support the role of psychological inflexibility as a transdiagnostic variable. Funded by the European Union – NextGenerationEU and CEDIA-CEPRA XII 2018.

### **Relation of Emotion Regulation Difficulties, Self-Compassion, and Posttraumatic Stress Symptoms**

Components: *Original data*

Categories: Theory and philosophical foundations, Processes of change, PTSD, Self-compassion, Emotion Regulation, College students

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Exposure to potentially traumatic events is associated with high emotion regulation (ER) difficulties and development of posttraumatic stress disorder. ER difficulties are related to worse clinical and sub-clinical posttraumatic stress symptomology compared to use of effective ER strategies (Tull et al., 2007). Yet, significant variance in posttraumatic stress symptom severity remains after accounting for ER difficulties (Tull et al., 2016; Vujanovic et al., 2010), suggesting identification of further explanatory variables is warranted. Notably, researchers posit high (vs. low) self-compassion (i.e., extending kindness to oneself; Neff, 2003) is related to more effective ER and lower posttraumatic stress symptom severity (Kearney et al., 2011). As such, self-compassion may account for variance in the relation of posttraumatic stress symptomology beyond ER. Yet, no research has specified the relation of posttraumatic stress symptom severity, ER difficulties, and self-compassion in a singular statistical model.

Accordingly, the current study examined these relations among a sample of undergraduate college students exposed to at least one potentially traumatic event (N = 145; Mage = 19.68, SDage = 2.77; Range = 18–23).

Results suggested ER difficulties were significantly inversely related to self-compassion and ER difficulties and self-compassion were positively related to posttraumatic stress symptom severity ( $ps < 0.01$ ). However, self-compassion did not account for significant posttraumatic stress symptom severity variance beyond that accounted for by ER difficulties ( $p = 0.40$ ).

Future directions and clinical implications will be discussed in terms of variables that may modify the ER-self-compassion relation in PTE exposed individuals.

### **Relational Density Theory: A Translational Approach to Pro and Anti-Climate Consumer Behavior**

Components: *Original data*

Categories: RFT / RGB / language, Environmental problems, RDT, Relational training, Consumer behavior

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Meredith Matthews, Missouri State University  
Jordan Belisle, Ph.D., Missouri State University  
Elana Sickman, Missouri State University

A recent report from the Intergovernmental Panel on Climate Change (IPCC, 2021) states that increases in greenhouse gas concentrations are undeniably caused by human actions and that it is extremely likely that

human influences have contributed to environmental degradation. Although systemic change is necessary in making a difference in reducing the effects of climate change, individual climate action is still needed to achieve these targets. In this study, a relational density theory analysis was used to observe relational frames in the context of climate in a sample of college participants (n=34).

A multidimensional scaling procedure (MDS) was used as a pre and post-test measure following stimulus pairing observation procedure (SPOP) training. Participants were instructed to rate sets of stimuli that consisted of pro-climate images, anti-climate images, and arbitrary symbols. SPOP training was used to establish the arbitrary symbols as either pro-climate or anti-climate.

Results from the initial MDS show clusters of relational classes that appear to be related by being pro-environmental, anti-environmental, as well as grouped by alive items, manufactured items and arbitrary items. Results from the post-test MDS show that not only did SPOP training merge each arbitrary stimulus into the respective pro-climate and anti-climate relational class, but also that all items collapsed into two dense classes, based solely on Earth impact.

Implications exist for understanding how relational frames may self-organize around climate change and how we might promote pro-environmental behavior in a consumer context. The MDS procedure as a tool for capturing relational frames will also be discussed.

### **Relational Density Theory: An Exploratory Analysis of Relational Framing in Bias and Stereotyping**

Components: *Conceptual analysis, Original data*

Categories: RFT / RGB / language, Social justice / equity / diversity, Relational Density Theory

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Relational frames may contribute to implicit biases that operate within nested contingency systems. However, there is still little understood regarding the formation of stereotyping and bias through this framework. The following studies were conducted to apply the concepts from Relational Density Theory (Belisle & Dixon, 2020) to the phenomenon of stereotyping within the gender binary and with bias more broadly with arbitrary stimuli.

The first study establishes resistance to change (relational mass) in terms of gender stereotyping relations with college student participants (n=106). The relational volume of relational frames was assessed by using a multidimensional scale (MDS) to create a geospace of sixteen adjectives that were reliably considered feminine or masculine. The second research study attempts to explore how self-organization of arbitrary stimuli, pre-existing relational frames and learning history may attribute to bias utilizing a similar multidimensional scaling procedure. To examine potential bias formation participants were split into two groups and introduced to a hypothetical narrative about arbitrary creatures. To test the interaction between the story and the features, participants completed a MDS scale with stimuli obtained from Implicit Relational Assessment Procedure (IRAP) and Implicit Association Test (IAT) studies.

The results for study one showed that the geospace was divided by two distinct gendered binaries, as well as appetitive and negative functions. Results from study two showed differences in the formation of biased frames as shown within the geometric space.

Results have implications for understanding the innermost layer of the nested model.

### **Relationship between psychological flexibility and behaviour of cancelling medical appointments during SARS-CoV-2**

Components: *Original data*

Categories: Health / behavioral medicine, Adherence, Behaviour of cancelling medical appointments, SARS-CoV-2

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Psychological distress imposed by the SARS-CoV-2 outbreak particularly affects patients with pre-existing medical conditions, and the progression of their diseases. Patients who fail to keep scheduled medical appointments experience a negative impact on care. The aim of this study is to investigate the psychosocial factors contributing to the cancellation of medical appointments during the pandemic by patients with pre-existing health conditions.

Data were collected in eleven Italian hospitals during the last week of lockdown, and one month later. In order to assess the emotional impact of the SARS-CoV2 outbreak and the subject's degree of psychological flexibility, we developed an ad hoc questionnaire (ImpACT), referring to the Acceptance and Commitment Therapy (ACT) model. The Impact of Event Scale-Revised (IES-R), the Depression, Anxiety and Stress Scale (DASS) and the Cognitive Fusion Questionnaire (CFQ) were also used.

Pervasive dysfunctional use of experiential avoidance behaviours (used with the function to avoid thought, emotions, sensations), feelings of loneliness and high post-traumatic stress scores were found to correlate with the fear of COVID-19, increasing the likelihood of cancelling medical appointments.

Responding promptly to the information and psychological needs of patients who cancel medical appointments can have positive effects in terms of psychological and physical health.

### **Scrutinizing the Relationship Between Psychological Flexibility and Inflexibility: A Simulation Study**

Components: *Conceptual analysis, Original data*

Categories: Methods/approaches for individual variation, Processes of change, Psychological Flexibility

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Previous work has demonstrated that correlations between psychological inflexibility and psychological flexibility, as measured by the Multidimensional Psychological Flexibility Inventory (MPFI), have ranged from  $r = 0.03$  to  $r = -0.69$  across various samples (Rolffs et al., 2016). However, the literature has yet to determine a confidence interval for these correlations to demonstrate that this relationship is highly variable and dependent on the sample. In the current study, we set out to clarify this relationship using a simulation.

Participants completed an online survey for course credit as part of a large multi-site project across universities in the United States. Undergraduate ( $n = 448$ ) participants' age ranged from 18 to 54 years old ( $M = 20.32$ ,  $SD = 4.27$ ). The sample was primarily White ( $n = 244$ ; 54.5%) and female ( $n = 309$ ; 69.0%). The researchers conducted a bootstrap analysis of the obtained correlation between the psychological flexibility and psychological inflexibility composite scores of the MPFI.

The results, which involved over 10,000 samples (i.e., 4,500,000 simulated cases), found a 99% confidence interval ranging from  $r = -.268$  to  $r = .048$ .

Because this range includes values that could be interpreted as a weak negative correlation or as no correlation at all, it seems unlikely that the relationship between flexibility and inflexibility would be consistent over time and across different samples and settings. Several variables that may contribute to the volatility of this relationship will be discussed.

### **Self-compassion for Emotional Distress in a Forensic Clinical Unit Team of a Public Hospital in Chile**

Components: *Case presentation, Conceptual analysis, Original data*

Categories: Clinical intervention development or outcomes, Other, Emotional Distress, Self Compassion

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Cristian Santamaria, M.Sc., clinical psychologist

How do we typically react when things go wrong in our lives—when we suffer, fail or feel inadequate? Our first instinct is to avoid uncomfortable feelings, a strategy which usually just makes things worse. Then we start to blame and shame ourselves. What is a healthier alternative? Mindfulness is the first step—turning with loving awareness toward difficult experience (thoughts, emotions, and sensations). Self compassion comes next—bringing loving awareness to ourselves. Together, mindfulness and self-compassion comprise a state of warm, connected, presence during difficult moments in our lives.

Rapidly expanding research demonstrates that self-compassion is related to emotional well-being, lower levels of anxiety and depression, healthy habits such as diet and exercise, and more satisfying personal relationships.

A three-session workshop related to self-compassion will be given to the team of a forensic clinical unit of a hospital in Chile that presents emotional affectations.

A pre- and post-workshop sample will be taken with the self-compassion scale.

The results are still being tabulated; however, preliminary data indicate that the symptoms associated with emotional distress have decreased considerably in a three-session workshop for a team from the forensic climate unit of a hospital in Chile.

The work on self-compassion in the team of the forensic clinical unit of a hospital shows that by acquiring some basic skills of self-compassion, emotional pain can be diminished, increasing the contact with their own emotions as well as those of the environment. This work demonstrates the importance of self-compassion as a caring skill for health teams.

### **Supporting LGBTQIA+ College Students: Promoting Verbal Behavior of Support and Inclusion**

Components: *Original data*

Categories: RFT / RGB / language, Social justice / equity / diversity, Implicit biases related to sexuality

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LGBTQIA+ youth consistently report lower levels of psychological well-being, often as a result of external stressors (Smithies & Byrom, 2018). The degree of available social support from members of local communities, such as students and faculty on a university campus, as well as the implicit biases of those individuals have the potential to influence the experience of LGBTQIA+ students in college, either positively or negatively.

Smithies, D., & Byrom, N. C. (2018). LGBTQ+ Student Mental Health: The challenges and needs of gender, sexual and romantic minorities in Higher Education.

First, the relationship between psychological flexibility, self-compassion, and perceived social support reported by LGBTQIA+ and non-LGBTQIA+ college students will be compared and explored. Second, a Relational Density Theory framework will be utilized to explore biases related to sexuality among college student participants. A relational task design to defuse relations will be evaluated to examine the effectiveness of targeted interventions to reduce implicit biases regarding sexuality.

Preliminary data has supported previous research, suggesting that LGBTQIA+ college students experience decreased rates of psychological well-being. It is expected that the current relational framing task may reveal implicit biases against LGBTQIA+ individuals reflecting societal stereotypes.

Avenues for behavior analytic approaches to both supporting psychological wellbeing among LGBTQIA+ college students and reducing bias will be discussed. This information may provide direction in increasing support and inclusion on campuses.

### **The Association Between Valued Living, Depression and Anxiety: A Systematic Review and Meta-Analysis**

Components: *Literature review, Original data*

Categories: Clinical intervention development or outcomes, Behavior analysis, Valued Living, Depression, Anxiety, ACT, Systematic Review, Meta-Analysis

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Valued living is one of the core processes of Acceptance and Commitment Therapy (ACT). Negative relationships between valued living and depression and between valued living and anxiety have been reported in previous empirical studies. The main aim of this study is to systematically review the relationship between valued living and depression, and the relationship between valued living and anxiety (PROSPERO ID: CRD42021236882).

Literature searches were carried out using MEDLINE, EMBASE, PsycINFO, ProQuest Dissertations & Thesis Global, Social Science databases. All studies using a validated measurement of valued living (as conceptualised in ACT), depression and/or anxiety were considered for inclusion. The methodological quality of included studies was assessed using a risk of bias tool specifically developed for this systematic review.

63 studies were included in this review; 45 assessed valued living and both depression and anxiety, 3 assessed valued living and only anxiety, and 15 assessed valued living and only depression. 11 of these studies were rated as high risk while 52 were rated as low risk for bias. Narrative synthesis indicated that the effect sizes ( $r$ ) were larger for valued living and depression associations (in 38/45 studies). Meta-analysis results showed a negative correlation between valued living and depression ( $k = 60$ ,  $o = 13198$ ,  $r = -0.42$ ,  $p < .001$ , 95% CI = [-0.45; -0.38]), and valued living and anxiety ( $k = 48$ ,  $o = 10149$ ,  $r = -0.27$ ,  $p < .001$ , 95% CI = [-0.31; -0.23]).

The evidence overall demonstrated the relationship of valued living with depression and anxiety.

### **The Effect of Fear of Negative and Positive Evaluation on Verbal and Facial Stimuli Using the IRAP**

Components: *Original data*

Categories: RFT / RGB / language, Social anxiety, IRAP

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Although social anxiety is characterized by Fear of Negative Evaluation (FNE), Fear of Positive Evaluation (FPE) has also recently received attention. We aimed to observe the transformation of stimulus functions of verbal and facial stimuli by FNE and FPE using the Implicit Relational Assessment Procedure (IRAP).

Japanese university students ( $N = 100$ ) participated in this experiment. Their ages ranged from 18-31 ( $M = 20.06$ ,  $SD = 1.66$ ). First, they completed the Japanese Short Fear of Negative Evaluation Scale (SFNE: Sasagawa et al., 2004) and a Japanese version of the Fear of Negative Evaluation Scale (FPES: Maeda et al., 2015). Next, they evaluated the verbal and facial stimuli. Finally, two IRAPs (one with word stimuli and one with word facial stimuli for the target stimuli) were conducted.

Participants were assigned to FNE (highest, higher, lower, and lowest) and FPE group depending on SFNE and FPES scores. Analysis of variance on the FNE and FPE groups showed no significant differences in verbal and facial stimuli evaluations and D-scores of facial stimuli. However, some groups showed significant differences in D-scores of verbal stimuli.

In this study, the lack of significant difference between groups in the D-score of the facial stimuli may reflect that the order of the IRAPs was not randomized. Some results in the D-score of verbal stimuli were difficult to interpret using the Differential Arbitrarily Applicable Relational Responding Effects (DAARRE) model.

### **The Effect of Meditation on Dental-Phobic Patients**

Components: *Case presentation*

Categories: Clinical intervention development or outcomes, Methods/approaches for individual variation, Meditation, Dental Phobic Patients, Case-Study, The Reversal-Replication Design (ABAB)

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Ahmad Borjali, Allameh Tabataba'i University

To investigate "instant effectiveness of emotional-based meditation" on dental-phobic patients. Insights are useful for further research on long-term changes.

"The Reversal-Replication Design" (ABAB), single session, two phases:

1. Early February 2021, 5 dentophobic patients
2. Late May 2021, 1 non-dentophobic subject

Base-line: EEG data with "Omnifit Brain OCW-H20" (2 sensors, frontal lobe, one minute). Alterations were monitored in each stage. Scanning continues in exact same situation.

Stages (Persian Instructions):

1. A1, qualitative interview about their prior dentistry experiences. Voices recorded for future references, transcription, and analyses.
2. B1, main intervention, Neff's "Noting your Emotions" meditation (5/6-10mins).
3. A2, video viz, "Apicoectomy with Bone Graft and Membrane, with Steven T. Cutbirth, DDS", retrieved from YouTube, showing abscess removal with the operation.
4. B2, replication stage: "Active Imagery Exercise" relaxation, retrieved from "SeeWhatYouRead.com" by InJoy Productions.

Raw materials were the EEG and A1's data. Various interview duration.

Showed interventions' immediate positive effects, reduced people's dentophobia.

Interviews showed some involved factors in dentophobia:

1. Dentist's gender, age, character/manners, and, area(s) of expertise: Child/Adult
  2. Clinic's appearance to patient: cleanliness, order, and crowdedness (whether private office, dental clinic, or hospital).
  3. Atmosphere: Presence of dental devices and dentist.
  4. Patient and dentist knowing each other reciprocally, well/in dept.
  5. Patient's prior experiences affect their perception/inferences of inputs, before, during, and after dental procedures.
  6. Patient's attitude toward their condition.
  7. Subject's psychiatric and psychopharmacological history, especially: antidepressants and tranquilizers.
- These factors should be considered case-by-case. Although, we saw the positive effects on them all.

### **The effect of Values Clarification program conducted by junior high school teachers**

Components: *Original data*

Categories: Academics or education, Clinical intervention development or outcomes, Junior high school, Values Clarification

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The purpose of this study was to examine the impact of a values clarification program on continuation of avoidance and clarification of value and commitment. Although clarification of values in the school setting is thought to be helpful in situations such as career choices, it is often difficult to conduct interventions by psychologists in Japan. Therefore, the program was conducted by teachers in this study.

A values clarification program was conducted at a public junior high school. The intervention was consisted of two sessions (50 minutes each) in an open trial setting, and measured the effectiveness at four time points (Pre1, Pre2, Post, and FU). Four teachers in each class administered the program. None of them had any knowledge of ACT, and the intervention protocol was developed by the authors. The first author explained the developed protocol to one teacher, and the other intervention providers were explained by the teacher. The main outcome was the 15-item "Values of Younger Ages" scale (VOYAGE : Ishizu et al., 2020) and the secondary outcome was the 2-item self-esteem scale (Minoura & Narita, 2013).

Within the VOYAGE, no significant differences were found for both Values ( $F(3, 53)=0.57, p=.45$ ), and Avoidance ( $F(3, 53)=0.75, p=.52$ ). No effect was also obtained for self-esteem ( $F(3, 53)=0.47, p=.70$ ).

These results indicate that the value clarification program used in this study was not effective. Increasing the intensity of the intervention and promoting teachers' understanding of it are needed in future research.



### **The Interactive Role of PTSD Symptoms and Mindfulness on Mental Wellbeing**

Components: *Original data*

Categories: Clinical intervention development or outcomes, Behavior analysis, PTSD, Mindfulness, Wellbeing

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PTSD is a debilitating disorder affecting approximately 8% of non-clinical population. Individuals with PTSD report lower life satisfaction and wellbeing. Studies have shown an inverse relationship between PTSD and mindfulness, and a positive relationship between wellbeing and mindfulness (Arnaudova & Amaro, 2020; Bowen et al., 2017). The present study aimed to test the moderating role of mindfulness in the association between PTSD and wellbeing controlling for gender. We hypothesized that the association between PTSD and wellbeing would be negative and stronger at lower levels than at mean and high levels of mindfulness.

College students ( $N=493$ ; Mean age = 19.33; 73% Female; 90% White) completed online cross-sectional survey. The PTSD Checklist for DSM-5, the Mindful Attention Awareness Scale, and the Warwick-Edinburgh Mental Wellbeing Scale were used. A moderation analysis was conducted in Stata 17.

The full model was significant  $F(4, 420) = 33.17, \Delta R^2 = .23$ . Results indicated that the interaction between PTSD and mindfulness ( $b = .07, p = .019$ ) was associated with wellbeing, such that the association between PTSD and wellbeing was significantly stronger at low levels of mindfulness. The simple slope of wellbeing on PTSD at 1 SD below the mean of mindfulness was  $b = -.26, p = .000$ , at the mean of mindfulness was  $b = -.18, p = .000$ , and at 1 SD above the mean of mindfulness was  $b = -.11, p = .041$ .

This finding supports our hypothesis and highlights the importance of mindfulness in wellbeing especially in the context of trauma.

### **The Relation Between ADHD Symptoms and Alcohol/Cannabis Use Outcomes: The Mediating Role of Experiential Avoidance**

Components: *Original data*

Categories: Processes of change, ADHD, Experiential avoidance, Alcohol, Cannabis, Substance use, Sexual/gender minorities

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Individuals with attention-deficit/hyperactivity disorder (ADHD) are at greater risk for alcohol and cannabis misuse and abuse compared to peers. College students with ADHD are particularly vulnerable to problematic alcohol/cannabis use, given widespread use and abuse of these substances. Experiential avoidance has been positively associated with ADHD symptoms and substance use problems. However, it is unclear what role experiential avoidance plays in the relation between ADHD and alcohol/cannabis use. This study examined whether experiential avoidance mediates the relation between ADHD symptoms and alcohol and cannabis use and related problems (e.g., driving under the influence). In addition, we examined two exploratory aims: (a) whether mediation effects differ by sexual/gender minority status (SGM; e.g., lesbian, bisexual, transgender) and (b) whether mediation effects differ by ADHD symptom dimension (i.e., hyperactive/impulsive, inattentive).

Participants ( $N = 2,158$ ; M age = 19.72) were college students in the U.S. with and without ADHD who reported past-month alcohol or cannabis use. Participants completed an online, self-report survey.

Experiential avoidance mediated the relation between ADHD symptoms and alcohol- and cannabis-related problems. Moderated mediation analyses showed that indirect effects did not differ according to SGM status; however, SGM status moderated the relation between ADHD symptoms and experiential avoidance, such that the relation was more robust for the non-SGM group compared to the SGM group. Finally, indirect effects were larger when inattentive symptoms were entered in mediation models versus hyperactive/impulsive symptoms.

Implications for future research and clinical practice are discussed.

### **The relationship between cognitive fusion and symptoms of anxiety and depression in patients with diabetes mellitus**

Components: *Original data*

Categories: Health / behavioral medicine, Diabetes, Depression, Anxiety, Cognitive fusion

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Diagnosis of diabetes will have a significant impact on patients' psychosocial functioning and patients often refer dysfunctional thoughts about the disease and symptoms of anxiety and depression, medical and drug treatment and need psychological support.

The aim of this study was to investigate the role of cognitive fusion in diabetics patients and its correlation with anxiety and depression symptoms.

The population includes patients with diabetes (type I and II), that refer to Diabetes Clinic of IRCCS - Ospedale "Sacro Cuore - Don Calabria" di Negrar di Valpolicella (VR) from september to december 2019. Research tools consisted of questionnaires CFQ (Cognitive Fusion Questionnaire), HADS (Hospital Anxiety Depression Scale), and PHQ-9 (Patient Health Questionnaire). Data were analyzed using non parametric analysis applying STATA version 12.0.

One hundred twenty-six patients were selected by convenience sampling. Results showed that there is a correlation between CFQ and HADS (anxiety subscale) ( $p < 0.001$ ) and between CFQ and HADS (depression subscale) ( $p < 0.001$ ) and between CFQ and PHQ-9 (depression) ( $p < 0.001$ ).

The data confirm that even in patients with diabetes mellitus a higher level of cognitive fusion with their own thoughts correlates with higher anxiety and depression scores. Healthcare providers should be encouraged to develop appropriate programs based on improving cognitive flexibility to help patients with diabetes mellitus.

### **The Relationship Between Measures of the Self and Performance on a Perspective-Taking Task**

Components: *Original data*

Categories: Processes of change, Other, Self-As-Context, Self-As-Content, Perspective-Taking

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Robert Zettle, Ph.D., Wichita State University  
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Multiple inventories of self-related processes posited to contribute to psychological flexibility/inflexibility have been developed in recent years, but have not been sufficiently validated against behavioral criteria. The current study addressed this omission by analyzing the relationships between measures of the conceptual and contextual selves and performance on the Relational Frame Theory Perspective-Taking Protocol (RFT-PTP) as an index deictic responding.

As this writing, 28 university students were orally administered the RFT-PTP and have completed a survey consisting of the Self-as-Context Scale, Self-Experiences Questionnaire, and the self-as-context and self-as-content subscales of the Multidimensional Psychological Flexibility Inventory (MPFI).

Only the self-as-content subscale of the MPFI was found to correlate significantly with total number of correct responses on the RFT-PTP ( $r = .381$ ,  $p = .046$ ), but in the unexpected direction. More detailed analyses revealed that self-as-content subscale scores were associated with correct responses to here-there ( $r = .529$ ,  $p = .004$ ) and now-then reversals ( $r = .389$ ,  $p = .041$ ) and here-there/now-then double reversals ( $r = .482$ ,  $p$



=.009). The SEQ's self-as-distinction scale as anticipated was also correlated with now-then single reversals ( $r = .409, p = .031$ ).

The overall findings of this study were contrary to the expectation that perspective-taking skills as assessed by the RFT-PTP would be positively correlated with self-as-context inventories and inversely with a self-as-content measure. Implications for further basic and applied research concerning paper-and-pencil measures of self-related process and perspective-taking are discussed.

### **The relationship between the duration of dating relationships and intimacy, couple satisfaction—a preliminary study**

Components: *Original data*

Categories: Health / behavioral medicine, Intimacy, Couple satisfaction

Chisato Tani, M.A., Ritsumeikan University  
Takashi Mitamura, Ritsumeikan University

Intimate relationships improve health and well-being. Several interventions aimed at improving intimacy have been developed based on contextual behavioral science. In this study, the relationship between the duration of dating relationships, intimacy, and couple satisfaction was explored as the first step toward developing an intimacy-enhancing intervention for Japanese young adults. It was hypothesized that the 1) duration of a dating relationship would be positively correlated with intimacy, and 2) couple satisfaction.

The sample consisted of 118 Japanese individuals, aged 18–25 years old, who had romantic partners (59 men and 59 women). Participants completed an online survey about the duration of their dating relationship, and self-report measures of the Japanese versions of the Triangular Love Scale's intimacy subscale (Kanemasa & Daibo, 2003) and Couple Satisfaction Index (Mitamura et al., 2022).

Spearman's rank-order correlation indicated no correlation between the duration of dating relationships and intimacy ( $p = .06, n.s.$ ) or couple satisfaction ( $p = .05, n.s.$ ). Additionally, no correlation was detected between the factors when the data were analyzed separately for men and women.

These results suggest that intimacy and couple satisfaction does not increase with the duration of dating relationships. Therefore, it is necessary to explore factors that may improve intimacy in couples.

### **The role of our view of self towards creating and managing suffering: Observations from psychology practice**

Components: *Conceptual analysis*

Categories: Clinical intervention development or outcomes, Health / behavioral medicine, Theory

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As conceptual animals we humans cannot avoid developing a concept or view of our self. In psychology practice clients invariably report various versions of 'feeling' they are not good enough. With reference to self-esteeming, a process model of the judged-self with its common 'solutions' is suggested as the core of maladaptive processes of living – a pro-me focus on psychological dimensions of attention, motivation, cognition, affect and behavior. Exploring beyond empirical psychology the development of an adaptive, non-judged Self process is described, facilitating living grounded in knowledge from experience – expanded perspective enhancing pro-social behavior. Factor loadings from a pilot study differentiate these two views of self. A therapeutic process involves helping clients recognise the relationship of their problem reactions and behavior with the maladaptive view, promoting a shift towards the adaptive view of self. Finally, the role of language in reinforcing view of self is addressed with hope that this model may drive empirical research for a workable replacement to reverse the maladaptive self that has been reinforced by self-esteeming since the 1970s.

### **The role of the athlete's mindfulness and self-judgment facing the coach's critical attitude and sports anxiety**

Components: *Original data*

Categories: Sports or performance-enhancing, Other, Sports, Mindfulness, Sports anxiety

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The coach-athlete relationship is a variable that impacts competitive anxiety. The goal was to analyze how athletes' perception of the coach's critical attitudes affects sports anxiety, exploring the role of mindfulness and the athlete's self-compassionate and self-judgmental attitudes.

The sample included 184 adolescent athletes, aged between 12 and 18, who filled in a protocol that assessed sports anxiety (SAS-2), the perception of coach's critical attitudes (APoCCAS), mindfulness (CAMM), self-compassion and self-judgment (SCS). T-tests for independent samples, Pearson correlations and linear regressions were performed. The path analyses were executed using the AMOS program.

Sports anxiety showed a positive association with critical coach attitudes, self-judgment and a negative association with mindfulness. Mindfulness demonstrated a negative association with self-judgment and the athletes' perception of the coach's critical attitudes. Self-judgment was negatively associated with the coach's critical attitudes. The predictor model explained 45% of the variance in sports anxiety, with mindfulness and self-judgment being the predictors. The data showed that the athlete's mindfulness and self-judgment fully mediated the effect of the coach's critical attitudes on sports anxiety.

Results suggest that athletes who perceive more critical attitudes from the coach, who have more self-judgmental attitudes, and less mindfulness skills tend to have higher levels of sports anxiety. The way these variables were associated was an innovative contribution of this study. These can suggest that the development of mindfulness skills and the reduction of self-judgmental attitudes can be helpful to reduce the impact of the coach's critical attitudes on competitive anxiety.

### **Training on the Use of ACT-Matrix Card for Vocational Rehabilitation Practitioners**

Components: *Case presentation*

Categories: Professional development, Supervision and training, ACT, ACT-Matrix Card, Vocational Rehabilitation Practitioners

Kazuhiro Ota, Masters, (株)スタートライン

Fumiki Haneda, Ltd. Start-Line

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The ACT-Matrix Card is a tool that can be used during various ACT-based interventions. In order for vocational rehabilitation practitioners to understand how to use the ACT-Matrix Card and effectively practice ACT-based approaches, we have developed and implemented the ACT-Matrix Card training program. In this presentation, we would like to report on the effectiveness of the training program and future issues.

We conducted an online group training program for our field support staff. The effectiveness of the training was examined through a questionnaire survey on changes in participants' understanding of how to use the ACT-Matrix Cards. In addition, the MPFI (Multidimensional Psychological Flexibility Inventory) was used to survey whether the training had an impact on the participants' psychological flexibility.

Regarding the questionnaire, there was an increase in understanding in all items, and regarding the MPFI, there was an increase in all items of flexibility.

The results suggest that this training program was highly effective in understanding how to use the ACT-Matrix Card and the ACT-based approach, and may have had a positive impact on the psychological flexibility of the participants. On the other hand, we believe that the training program needs to contribute to the promotion of specific practical actions in addition to the improvement of participants' understanding, and we plan to conduct a follow-up survey at 3 months after the training. In this presentation, we would like to discuss the effectiveness of the training program and future issues, including the results of the follow-up survey.

### **Translation, cross-cultural adaptation and evidence of validity of The Weight Self-stigma Questionnaire (WSSQ)**

Components: *Original data*

Categories: Methods/approaches for individual variation, Clinical intervention development or outcomes, Weight Self-stigma

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Obesity is a public health issue and its prevalence has increased over the years. Obese persons may suffer weight-based stigma and have their lives negatively impacted, being affected by psychological problems and eating disorders. Weight self-stigma is related to self-devaluation and fear of enacted stigma and, currently, there are only a few scales that measure this variable.

The purpose of this study was to translate the English version of The Weight Self-stigma Questionnaire (WSSQ) into Brazilian Portuguese and search for initial evidences of validity of the translated version. The WSSQ was developed by Lillis et al. (2010), has 12 items and seeks to measure the weight self-stigma in overweight or obese persons, in addition to detecting the impact of interventions targeting this variable. A sample of 53 overweight adults aged between 18 and 60 years old were used.

Exploratory factorial analyses revealed a two-factor model. Cronbach's  $\alpha$  was 0,828 for the total WSSQ, indicating acceptable reliability. Factor 1 contained the 6 original items related to fear of enacted stigma, with factor loadings ranging from 0.773 to 0.833. Factor 2 contained 3 of the original items that pertained to self-devaluation, with factor loadings ranging from 0.399 to 0.792. The other 3 items loaded on both factors, which is possibly due to cultural factors and the small sample size.

It is recommended to investigate the validity of the translated version with a larger sample and to include criterion validity.

### **Values Based Training (VBT): A Conceptual Approach to Training Psychologists Committed to a Professional Ethos: Greek & Cypriot Chapter Sponsored**

Components: *Case presentation, Conceptual analysis*

Categories: Supervision and training, Academics or education, Values, Professional Training

Anthi Loutsiou, Psy.D., University of Cyprus

The concept of values has been applied as a central component in contexts such as psychotherapy (ACT Hayes, Strosahl, & Wilson, 2011), education (Halstead, 1996), and business. Values has also been applied in the education of undergraduate students (Chase et al 2013) and the professional training of managers (Dixon & Hedley (1997), psychiatrists (Fulford, 2008) and US Marines (Mellinger, & Benfield, 2011). This presentation examines preliminary evidence from a Values Based Training (VBT) method applied to the practical training of professional psychologists to improve commitment to pillar program values, to reduce incidents of trainee professional misconduct, burnout, and attrition, and to develop a professional ethos in decision making.

Two Master's level courses were infused with VBT modules and offered to a convenient sample of three consecutive cohorts of School Psychology trainees as part of required coursework. The VBT method included didactics but primarily facilitated discussion and reflection towards the development of each cohort's unique values to serve the pillar program values. In the progression of the VBT, values were re-introduced and reinforced throughout the coursework and integrated in assignments and discussion of cases.

After two semesters, qualitative data suggested no trainee drop outs, and no supervisor reports of ethical violations or professional malpractice. The VBT method may have functioned as a protective factor against feelings of helplessness during the country wide pandemic school closures that significantly disrupted the practical training arrangements.

Further research could experimentally examine outcomes of a more systematic VBT method in the training of professional psychologists.

### **Veterans report higher treatment satisfaction when valued life goals are supported in treatment**

Components: *Original data*

Categories: Health / behavioral medicine, Other, Veterans; Alcohol Use Disorder; Value

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As functional outcomes become more central to addiction treatment research, values as conceptualized within by Acceptance and Commitment Therapy may be useful for examining such outcomes in a personally relevant manner. Building on previous findings demonstrating the importance of valued life goals in Veterans' mental health and addiction treatment, we sought to examine the relationship between provider support for valued life goals and treatment satisfaction.

This is a secondary analysis of an online survey of Veterans' (n=365) mental health and addiction treatment experiences during the first year of the coronavirus pandemic. Participants were Veterans (M<sub>age</sub>=41.4) who endorsed moderate (29.6%) or severe (70.4%) risk for alcohol use disorder and attended addiction or mental health treatment in the last year. Survey questions assessed substance use risk severity, treatment satisfaction, quality of life (as index of psychosocial resources), valued living, and provider support for valued life goals.

Provider support for valued life goals (rated 0-100) was high overall (M=73.9;SD=15.9). In a model accounting for the significant contributions of valued living progress and obstruction, quality of life, and Veteran age, provider support for valued life goals was uniquely associated with treatment satisfaction (R<sup>2</sup>=.43, F(5,364)=56.1,p<.001).

In this sample of Veterans endorsing moderate to high risk for alcohol use disorder, provider support for valued life goals was uniquely associated with mental health and addiction treatment satisfaction. These cross-sectional survey findings provide preliminary evidence suggesting that provider support may lead to higher satisfaction with treatment for substance use disorders.

### **What Do Flexible & Inflexible People Have in Common: Experiential Avoidance**

Components: *Original data*

Categories: Processes of change, Theory and philosophical foundations, Experiential Avoidance

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Acceptance and Commitment Therapy (ACT) is an evidence-based therapy that promotes psychological flexibility and valued living (Hayes et al., 2012).

In the current study, we used cluster analysis to determine different profiles of individuals based on the twelve subscales of the Multidimensional Psychological Flexibility Inventory (MPFI; Rolffs et al., 2016). Undergraduate (n = 448) participants' age ranged from 18 to 54 years old (M = 20.32, SD = 4.27) and were primarily White (n = 244; 54.5%) and female (n = 309; 69.0%).

The results of a cluster analysis suggested the presence of two clusters with good separation and cohesion (SC = 0.40). Independent samples t-tests with Bonferroni corrections of the subscales of the MPFI suggested that Cluster 1 is more flexible and less inflexible, ps < .001.

However, the two groups did not differ on experiential avoidance, p = .207, suggesting that individuals continue to report substantial experiential avoidance even when relatively low on inflexibility and high on flexibility.

### **Who conducts psychosocial intervention studies for children affected by armed conflict? A systematic review**

Components: *Literature review*

Categories: Social justice / equity / diversity, Clinical intervention development or outcomes, Mental health and psychosocial support (MHPSS)

Tania Bosqui, DClInPsy, American University of Beirut

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There is a growing evidence-base for mental health and psychosocial support (MHPSS) for children and adolescents affected by conflict. There is also a push to reduce the large treatment gap for this population,

and to scale-up evidence-based interventions. However, there are also significant concerns that the current-evidence base does not reflect cultural and contextual differences between populations and contexts, impacting on the efficacy, feasibility and acceptability of MHPSS programs.

To explore potential biases within the current evidence-base, we conducted a systematic review of MHPSS intervention studies for children and adolescents affected by conflict. We extracted data on the types of studies conducted, research teams, methodologies, interventions, community participation and funding.

In total, 63 studies were identified from 22 different countries or regions. The first authors in the vast majority of studies were based in high income countries, with few authors having a primary affiliation in the country of study. The majority used randomized control trial methodology, but with poor to limited community involvement. A range of intervention types were found, but with limited descriptions. The majority of studies led by researchers based in a low-income country were not funded.

The findings highlight the need for greater involvement of local researchers in leading and contributing to studies, and with much greater community engagement. In addition, making funding more readily available to researchers based in low-income countries may be vital to help counteract potential bias in evidence-base generation, and maximize the contextualized relevance of MHPSS in these settings.

### **To Restructure or Not to Restructure: A scoping review and its clinical implications**

Components: *Conceptual analysis, Literature review*

Categories: Clinical intervention development or outcomes, Theory and philosophical foundations, Cognitive interventions

Zacharias Obel Christensen, Masters degree in psychology, University of Copenhagen, Institute of Psychology

A major debate in cognitive behavior therapy (CBT) traditions is the relative efficacy of logico-rational cognitive interventions such as cognitive restructuring (CR) and contextually oriented cognitive interventions like cognitive defusion (CD), and detached mindfulness (DM). Randomised trials and meditational analyses directly comparing CR with contextually oriented cognitive interventions (CCIs) are needed to establish their comparative efficacy for various populations and clinical issues.

A scoping review was conducted by mapping and evaluating studies comparing the efficacy of CR interventions and CCIs. The review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews guidelines. Primary study findings were assessed for risk of bias using the Revised Cochrane Risk-of-Bias Tool for Randomised Trials.

Eight randomised trials that met the eligibility criteria were identified. Four studies compared CR to acceptance-based interventions. Three studies compared CR to CD. One study compared CR to DM. Four of the studies were conducted with healthy participants and the rest with participants with clinically significant psychopathology. Six studies found an equal effect of CR and CCI interventions. One study found an acceptance intervention superior to CR. One study found CR superior to an acceptance intervention. The review results indicate equal efficacy of CR and CD, CR and DM, and CR and acceptance interventions after weighting results based on risk-of-bias assessments.

It is argued that no strong clinical implications can be inferred from the empirical data. The available research is sparse, making clear implications for evidence-based practice difficult to identify.