women and Chinese individuals have unique lived experiences that may differentially impact brain structure and function. Future work should continue to include diverse research samples to account for such experiences.

Categories: Neuroimaging
Keyword 1: post-traumatic stress disorder
Keyword 2: neuroimaging: structural connectivity
Keyword 3: diversity
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6 Why Do Cultures Affect Facial Emotion Perception? – A Systematic Review

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Objective: Most emotion perception assessments were developed in western societies using English terms and Caucasian faces, so the extent to which they are cross-culturally valid is in question. To sort this, understanding the mechanisms of cultural variations is the key. In the past half-century, cross-cultural differences in perceiving facial emotions have been consistently reported and discussed, advancing knowledge to feed theoretical and practical interests. However, as these studies are heterogeneous in the questions asked and methods used, without understanding their association, we cannot provide a clear answer to the simple question: why do people from different cultures perceive facial emotions differently? This limitation represents a bottleneck for adapting western clinical assessments cross-culturally to suit the increasing trend of globalisation in research and testing. To address this issue, we conducted a systematic review aiming to reveal the effect of culture on emotion perception from past cross-cultural studies on healthy people. We expected this review to bridge findings in basic research and clinical application.
Participants and Methods: The systematic review followed the framework outlined in Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). We searched five databases using three groups of keywords. We included all peer-reviewed original studies that 1) conducted cross-cultural comparison in facial emotion perception with healthy adults and 2) used a design that allowed identifying specific mechanisms to explain cultural variations.
The qualitative data synthesis included three steps: 1) categorising eligible studies according to the type of cross-cultural differences they investigated, 2) summarising the findings of each cluster, and 3) summarising the mechanisms revealed by the findings.
Results: We found the 122 eligible articles clustered into five groups that investigated 1) how race and in-group and out-group status affected facial emotion perception; 2) cultural differences in using context to identify facial expressions; 3) cultural differences in emotion conceptualisation and how they affected facial emotion perception; 4) cultural differences in interpreting facial muscle configurations; 5) how culture interacted with the inference making process.
Seven mechanisms underlying cultural variations in facial emotion perception were revealed. These are facial emotion templates, emotion conceptualisation, in/out-group differentiation, information surveying strategies, belief that expressers are independent agents, reliance on the face and other emotion expressing channels, and stereotypes. The relative importance of these factors may depend on the cultures chosen to compare and the situational settings that affect how they work together in real life.
Conclusions: This review, for the first time, systematically addresses the mechanisms underlying cross-cultural differences in facial emotion perception. Besides advancing knowledge about this rapidly growing area, it guides what needs to be considered when designing new tests, adapting existing tests, and assessing the risk of bias brought about by cross-cultural issues.

Categories: Social Cognition
Keyword 1: cross-cultural issues
Keyword 2: facial affect
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Mid-Career Award Presentation

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Speaker: Sharon Naismith

Optimising cognition in at-risk older people: A journey of discovery, clinical research and health translation.

10:15 - 11:15am
Friday, 3rd February, 2023
Pacific Ballroom E

Abstract:
Modifiable dementia risk factors such as depression, cardiovascular disease and physical and cognitive activity account for 40-50% of dementia risk and their association with neuropsychological performance is evident in both preclinical and prodromal dementia stages. Over the course of her career, Professor Naismith has examined how modifiable risk factors relate to various aspects of cognition and brain degeneration and how best to treat them. She has led the development of cognitive training programs and clinical trials targeting these risk factors. She has authored more than 350 papers across a range of fields largely focused on cognition but also utilising neuroimaging, genetics, e-health, data syntheses, as well as clinical trials and health services. Her most recent work focuses on how sleep and circadian disturbance is linked to cognitive decline, how best to treat sleep disturbance in older people and how to utilise new digital sleep technologies to derive maximal reach and scale within the rapidly rising ageing population.
In this presentation, the evolution of her program of work over time will be considered with respect to core discipline-specific foundations but also amidst the changing research landscape, research challenges and the need to optimise health impact. The importance of multidisciplinarity, career mentors and partners, capacity building, and engaging with government and policy makers will be discussed as well as other factors considered to be key to mid-career research success.

Poster Session 06: Memory | Movement Disorders | Neurodegenerative Disorders | Demyelinating Disorders | Sleep Disorders

10:15 - 11:30am
Friday, 3rd February, 2023
Town & Country Foyer

1 The Impact of *APOε4* and *BDNF* val66met on Executive Function in Older Veterans with Post-traumatic Stress Disorder

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Objective: Both *Apolipoprotein* ε4 (*APO*ε4) and *Brain-Derived Neurotropic Factor* val66met (*BDNF*-met) have been implicated as cognitive risk polymorphisms and may signal a more rapid trajectory of cognitive decline (Boots et al., 2017; Lim et al., 2015). The presence of both risk alleles may additively result in greater cognitive difficulties (Cechova et al., 2020), specifically executive functioning (Sapkota et al., 2017). As executive functioning difficulties can be associated with Posttraumatic Stress Disorder (PTSD; Woon et al., 2017), individuals with PTSD who carry these polymorphisms may be at higher risk for decline in executive functioning. In this study, we examined the cross-sectional and longitudinal impact of these alleles on executive functioning performance in Veterans with PTSD.
Participants and Methods: Seventy community-dwelling male Veterans were enrolled as part of a larger study at VAPAHCS and consented to genetic analysis. A current or lifetime history of PTSD (score ≥ 40 on the CAPS-IV; Blake et al., 1995) was required for study participation. Trail Making Test B (TMT-B; Army Individual Test Battery, 1994) was used to assess executive functioning. TMT-B was part of a comprehensive neuropsychological battery administered at baseline and yearly over the following three years. Mean age and education were 61 years old (SD = 4.5; range = 55-78) and 14 years (SD = 2.3; range = 8-20), respectively.

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