Results: Participants did not differ in their reward learning parameters across monetary and social conditions (t(30)= -0.70, p = 0.490), suggesting similar perception of reward stability in both modalities. However, higher Bayesian prior mean (i.e., initial belief of reward rate; t(30)= -2.31, p = 0.028, d=0.42) and greater reward maximization (i.e., Softmax parameter; t(30)= -2.26, p = 0.031, d=0.41) were observed in response to social vs monetary rewards. In the social reward condition, higher self-reported social connectedness was associated with greater model fit of our DBM model (i.e., smaller Bayesian Information Criterion/BIC; r = -0.38, p = 0.041). In this condition, those expecting higher reward rates when initiating reward exploration (those with higher DBM prior mean) endorsed lower self-esteem (Spearman's ρ = -0.43, p = 0.078) and lower positive affect (ρ = -0.32, p = 0.078).
Conclusions: A Bayesian learning modeling framework can characterize mechanistic differences in the processing of social vs non-social reward among combat-exposed Veterans. Individuals with higher social connectedness were more model-based in their performance, consistent with the notion that they are more likely to estimate and anticipate how much social peers have to offer.
Combat-exposed individuals with lower self-esteem and positive affect appear to have higher initial expectations of reward from unknown partners, which could reflect greater need for mood and/or self-esteem repair in those individuals. Overall, Bayesian modeling of social reward behavior provides a useful quantitative framework to predict clinically relevant construct of functional outcomes in military populations.

Categories: Emotional and Social Processes
Keyword 1: social cognition
Keyword 2: social processes
Keyword 3: neurocognition
Correspondence: Alex F. Skupny, VA San Diego Healthcare System and the University of California, San Diego, askupny@health.ucsd.edu

35 Happiness Project: A Customized Mind Body Intervention Significantly Changed the Social Relationship Scores Among Healthy College Students during the COVID-19 pandemic.

Varun Pillai[1], Nuthan Manohar[2], Nicole Byrne[1], Adriana Rodriguez[1], Anil Nair[3]
[1]Boston Neuropsychiatry, Boston, MA, USA. [2]MeMetMe, Netherlandss, Netherlands, Netherlands. [3]Alzheimers Disease Center, Boston, MA, USA

Objective: To find how healthy college going participants SRS were affected by a customized Mind Body Intervention (MBI).
Participants and Methods: We performed a customized online tele-video course based MBI incorporating mindfulness and awareness training over a period of one month in 2021 to MBA students attending the Indian Institute of Management (IIM). Each subject was their own control. We used the World Health Organization Quality of Life Scale (QO-BREF) social relationship sub-scores pre and post intervention to assess participant SRS.
Results: 277 MBA students from the IIM with a mean age of 26.89 ± 1.7 were analyzed. Of the 277 students, 90 (32.49%) were female. The MBI decreased the self-perceived Social Relationship score among 277 graduate students. The mean SRS before the intervention was 7.51 ± 1.7 while the mean SRS after was 6.9 ± 1.7. Univariate paired t-test showed a significant mean difference (t = 5.1, p<.001). On a multivariate linear-regression model, the SRS change estimate was 0.46, t-value was 9.3, p < 0.001; 95% confidence interval was 0.37 - 0.56; p-value <0.001.
Conclusions: An online tele-video based customized Mind Body Intervention decreased the self-perceived social relationship score among graduate students at the IIM during the Covid-19 pandemic.

Categories: Emotional and Social Processes
Keyword 1: social cognition
Keyword 2: metacognition
Keyword 3: adaptive functioning
Correspondence: Anil Nair, ADC, nair.anil@gmail.com

36 White Matter Correlates of Coping with Social Stress in Adolescence, and Their Links to Mental Health

https://doi.org/10.1017/S1355617723010226 Published online by Cambridge University Press

Erin Gilliland[1], Peyton Thomas[1], Scout Crowell[1], Whitney I Mattson[1], Eric E Nelson[1,2], Kristen R Hoskinson[1,2]
[1]Abigail Wexner Research Institute at Nationwide Children's Hospital, Columbus, Ohio, USA. [2]The Ohio State University College of Medicine, Columbus, Ohio, USA

Objective: The increasing complexity of social stress may be especially threatening to mental health during childhood and adolescence. One's skills in effectively coping with this stress may contribute to symptoms of pediatric anxiety and depression, a growing, significant, and pervasive public health concern.
In addition to strategic skills, individual differences in coping may reflect differences in brain structure, including the white matter pathways that integrate frontal lobe networks with those involved in social functioning. Identifying the neurological substrates underlying anxiety and depression is an important way to delineate mechanisms underlying development of these disorders. Deterministic automated-fiber quantification (AFQ) is a technique that removes potential error from manual tracking of white matter, segregating tracts into distinct nodes—diminishing the effect of crossing fibers—and quantifying the number of fibers in a tract, allowing for assessment of connectivity across regions. Collectively, this investigation aims to quantify the interplay between anxiety, depression, coping with social stress, and white matter microstructure in children and adolescents.
Participants and Methods: Ninety-two healthy children and adolescents (8-17 years old; n=53 female, M_{age}=12.96; n=39 male, M_{age}=12.31) and a parent rated symptoms of anxiety and depression using the Behavior Assessment System for Children (BASC-III). Coping and stress reactivity were assessed using the Responses to Stress Questionnaire, Social Stress version. Children and adolescents also completed 64-direction DTI in a Siemens 3T Prisma scanner. White matter microstructure was quantified using AFQ; Fractional anisotropy (FA) values were extracted for 18 tracts, comprised of 100 nodes each.
Results: Mean levels of parent- and self-reported anxiety and depression fell within the normative range, and children reported mild- to moderate social stress. Higher levels of social stress were associated with increased parent-reported anxiety (r=.294, p=.002) and parent- and self-reported depression (r=.481, p<.001; r=.211, p=.034, respectively). Anxiety and depression were not significantly related to white matter microstructure; however, several specific links with coping were noted. Use of secondary control coping (e.g., cognitive restructuring) was associated with higher FA of the bilateral inferior fronto-occipital fasciculi (left IFOF r=.228, p=.027; right IFOF r=.299, p=.003) and left inferior longitudinal fasciculus (r=.269, p=.009); use of primary control coping (e.g., problem solving) was associated with higher FA of the bilateral uncinate fasciculi (left UF r=.216, p=.036; right UF r=.207, p=.045). Furthermore, use of primary and secondary control coping were associated with fewer symptoms of anxiety and depression, whereas greater use of disengagement coping (e.g., wishful thinking) was associated with more depressive symptoms.
Conclusions: These findings highlight links among white matter microstructure in tracts integrating frontal with temporal and occipital regions, and adoption of adaptive (i.e., primary and secondary control) coping responses. This may suggest that strong connections between brain regions supports more of a modulatory than a neglecting coping strategy. Finding also replicate extant literature on the ties between coping style and psychosocial distress. Given that coping responses are amenable to intervention, capitalizing on these brain-behavior links during ongoing neuromaturation is worthy of future research, with a goal of reducing symptoms of anxiety and depression via the brain's support of adaptive coping.

Categories: Emotional and Social Processes
Keyword 1: neuroimaging: structural connectivity
Keyword 2: adolescence
Keyword 3: mood disorders
Correspondence: Erin Gilliland, Center for Biobehavioral Health, The Abigail Wexner Research Institute at Nationwide Children's Hospital, Erin.gilliland@nationwidechildrens.org

37 Assessment of Social Cognition in Patients with Multiple Sclerosis

Francesca Mariani, Laura Uriarte, Fabian Gomez, Emilio Salazar, Sergio Dansilio

https://doi.org/10.1017/S1355617723010226 Published online by Cambridge University Press