O9.8. Stress And Cognitive Function Among Individuals At Clinical High-Risk For Psychosis: Findings From The Napls Cohort

Alexis Cullen, King’s College London
Kristin S Cadenhead, University of California, San Diego
Jean Addington, University of Calgary
Carrie E Bearden, University of California, Los Angeles
Tyrone Cannon, Yale University
Barbara A Cornblatt, Zucker Hillside Hospital
Daniel Mathalon, University of California, San Francisco
Thomas H McGlashan, Yale University
Diana O Perkins, University of North Carolina, Chapel Hill
Larry Seidman, Harvard Medical School

Only first 10 authors above; see publication for full author list.

Journal Title: Schizophrenia Bulletin
Volume: Volume 44, Number suppl_1
Publisher: Oxford University Press (OUP): Policy B - Oxford Open Option D | 2018-04-01, Pages S102-S102
Type of Work: Article | Final Publisher PDF
Publisher DOI: 10.1093/schbul/sby015.252
Permanent URL: https://pid.emory.edu/ark:/25593/tdxcz

Final published version: http://dx.doi.org/10.1093/schbul/sby015.252

Copyright information:
© Maryland Psychiatric Research Center 2018.
This is an Open Access work distributed under the terms of the Creative Commons Attribution 4.0 International License (https://creativecommons.org/licenses/by/4.0/).

Accessed January 6, 2020 11:12 AM EST
O9.8. STRESS AND COGNITIVE FUNCTION AMONG INDIVIDUALS AT CLINICAL HIGH-RISK FOR PSYCHOSIS: FINDINGS FROM THE NAPLS COHORT

Alexis Cullen1, Kristin S. Cadenhead2, Jean Addington1, Carrie E. Bearden3, Tyrone Cannon4, Barbara A. Cornblatt5, Daniel Mathalon7, Thomas H. McGlashan2, Diana O. Perkins8, Larry Seidman3, William S. Stone9, Ming Tsuang3, Scott W. Woods3, Elaine F. Walker11

1Institute of Psychiatry, Psychology & Neuroscience, King’s College London; 2University of California, San Diego; 3University of Calgary; 4University of California, Los Angeles; 5Yale University; 6Zucker Hillside Hospital; 7University of California, San Francisco; 8University of North Carolina, Chapel Hill; 9Harvard Medical School; 10Harvard Medical School, Beth Israel Deaconess Medical Center; 11Emory University

Background: Accumulated evidence from non-human animal studies suggests that the prominent deficits in memory and executive function that characterise individuals with psychosis may, at least in part, be due to the effects of stress on the brain regions that support these functions. However, studies of patients with established psychosis have yielded inconsistent findings with regards to the relationship between stress and cognition, and research in high-risk populations is notably lacking. Utilising data from the North American Prodrome Longitudinal Study 2 (NAPLS 2), we aimed to further elucidate the relationship between stress (daily stressors, life events, and childhood trauma) and cognitive function in clinical high-risk (CHR) individuals and healthy controls (HC). We additionally explored the role of potential mediators [hypothalamic-pituitary-adrenal (HPA) axis function] and moderators (group status, sex, family history of illness).

Methods: The sample comprised 885 participants (CHR=646; HC=239) who completed measures of stress and cognitive function at the NAPLS 2 baseline assessment. Stress measures included the Daily Stress Inventory and a modified version of the Psychiatric Epidemiology Research Interview. Life Events Scale, both of which provided continuous measures of stress exposure (number of events) and distress (subjective feelings of distress). Participants were also interviewed using the Childhood Trauma and Abuse Scale to determine any exposure to childhood trauma (abuse, neglect, and bullying occurring prior to age 16 years). Basal HPA axis activity was determined via salivary cortisol samples obtained at the baseline assessment and standardised scores from selected subtests from the Measurement and Treatment Research to Improve Cognition in Schizophrenia (MATRICS) were used to derive two cognitive domain scores (memory and executive function). To examine relationships between stress and cognitive domain scores, linear regression analyses were performed on standardised variables.

Results: Daily stressor exposure, daily stressor distress, and life event exposure exhibited negative quadratic (i.e., inverted-U-shaped) associations with both memory and executive function (P < 0.01 for all). In contrast, the reverse pattern (i.e., a negative linear relationship and a positive quadratic relationship) was shown in the model for life event distress and memory domain scores (P < 0.01) whilst trauma history showed only a trend-level association with poorer memory performance (P = 0.084). These relationships, which did not differ across CHR and healthy control groups, were largely unchanged after adjusting for demographic factors and salivary cortisol. Exploratory analyses suggested that trauma exposure and a family history of psychosis may moderate the relationship between daily stressors/ life events and cognitive function.

Discussion: In this large sample of predominately CHR individuals, we observed that the association between stress and cognition is complex and differs across stressor types. The negative quadratic associations that we observed for daily stressor exposure, daily stressor distress, and life event exposure imply that while lower levels of stress may facilitate memory and executive function, there may be a negative impact on cognition when these stressors become more frequent and distressing. Interventions aiming to minimise stress exposure and promote effective coping strategies might feasibly improve cognition in CHR individuals.

O10. Oral Session: Risk Factors

O10.1. DISORGANIZED GYRIFICATION NETWORK PROPERTIES DURING THE TRANSITION TO PSYCHOSIS

André Schmidt4, Tushar Das2, Daniel Hauke1, Fabienne Harrisberger1, Lena Palaniyappan2, Stefan Borgwardt4

1University of Basel; 2University of Western Ontario

Background: There is urgent need to improve the limited prognostic accuracy of psychopathology-based classifications to predict the onset of psychosis in clinical high-risk (CHR) subjects for psychosis. However, as yet no reliable biological marker has been established to differentiate CHR subjects who will develop psychosis from those who will not. This study investigated abnormalities in graph-based gyrification connectivity in CHR subjects and patients with first-episode psychosis (FEP) and tested the accuracy of this systems-based approach to predict the transition to psychosis among CHR individuals.