

Neurocognitive correlates of HIV/STI-associated sexual decision-making in AA girls

Safiya George Dalmida and James Rilling

CFAR, Emory University, USA

African American (AA) girls are disproportionately affected by the human immunodeficiency virus (HIV) and sexually transmitted infections (STIs). These epidemics among adolescents in the U.S. are inextricably tied to individual, psychosocial and cultural phenomena. However, knowledge gaps persist, especially regarding the role of neurocognitive determinants of adolescent sexual risk behavior (SRB). The purpose of this pilot study is to examine: (1) neurocognitive and psychosocial correlates of SRB and (2) individual variation in associations between emotive/affective and cognitive control components of the social information processing network (SIPN) and individual variation in SRB, among AA girls. This study is guided by the Biopsychosocial Model of Risk Taking (BMRT); a combined social neuroscience framework that incorporates biological, psychological, cognitive, environmental and social factors, which influence adolescent risk taking. 32 AA females ages 15-23 years were recruited from community organizations.

Data Collection: A battery of computerized neuropsychological tests measured prefrontal cortex/executive function/decision-making, impulse control and emotive-cognitive function to examine the underlying cognitive mechanisms of decision making and correlates of SRB. Participants also completed sociodemographics, psychosocial and SRB-related surveys.

Analysis: Bivariate correlations, mixed modeling and hierarchical regression statistics were used. Our results indicate that poor cognitive skills were significantly correlated to risky sexual patterns. Higher SRB is associated with poorer cognition, mainly poorer impulse control & also time to make affective choices. Some AA girls with high reported SRB (compared to low SRB) showed greater cognitive delay aversion during reward-related risk-taking (gambling). On average, AA girls with high SRB made more illogically based decisions and took longer to make decisions.

Conclusions/Implications: Healthcare providers should provide tailored HIV/STI prevention education based on important links between executive/affective cognition, impulse control & psychosocial factors and AA girls' SRB. Findings will facilitate development and testing of future hypothesis-driven, culturally-specific, age-appropriate imaging, longitudinal and intervention studies.

Biography

Safiya George Dalmida is an assistant Professor at Emory University School of Nursing in Atlanta, GA. She is a graduate of Emory University's Ph.D. in Nursing program and completed a postdoctoral fellowship in research on Religion and Health from Duke University in Durham, NC. Her research focuses on intersections between stress and coping, including religious coping, and relationship to mental health, immune function and health-related quality of life among people living with HIV/AIDS, particularly among women and minorities. Her work also focuses on the examination of sexual decision making of African American adolescents and their risk for HIV and other sexually transmitted infections. She is particularly interested in the role of social factors, including religious and cultural factors, and cognitive function in HIV/STI-associated sexual risk behavior of minority adolescents.

safiya.george.dalmida@emory.edu