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Dissertation Title:
The role of attentional processes in the associations between syndemics and HIV risk

Abstract:

Sexual minority men (SMM) remain the group most affected by HIV in the United States. The term “syndemic” has been used to describe high levels of comorbidity and additive effects that some factors—childhood sexual abuse, intimate partner violence, sexual compulsivity, substance use, and depression—have on HIV transmission risk behavior (TRB). Previous research provides support for an HIV syndemic among SMM, but mechanisms linking syndemic factors and driving the association between the factors and TRB are less understood. Some research suggests that executive attention and emotion dysregulation are linked with several syndemic factors. As such, the aims of this dissertation were to (1) examine the role of emotion dysregulation and executive attention on the associations between experiences of victimization, polydrug use, depression, sexual compulsivity, and TRB and (2) examine attention bias for drug-related and sex-related cues and the influence of attention bias on the associations between polydrug use, sexual compulsivity, and TRB.

To accomplish the first aim, I collected data as part of a larger longitudinal study of syndemics among HIV-negative SMM from across the United States (Study 1). As part of this project, SMM completed annual online assessments. I tested a series of hypotheses by running a negative binomial logistic regression model with executive attention and emotion dysregulation as mediators of the effects of childhood sexual abuse and intimate partner violence on depression, sexual compulsivity, polydrug use, and TRB. Childhood sexual abuse was directly associated with greater emotion dysregulation and poorer executive attention and was positively associated with depression and sexual compulsivity through these difficulties with self-regulation. Intimate partner violence was associated with greater emotion dysregulation but not with executive attention and was also positively associated with depression and sexual compulsivity through emotion regulation difficulties. Childhood sexual abuse and intimate partner violence were both associated with TRB through the combined indirect effects on self-regulation difficulties, depression, sexual compulsivity, and polydrug use. The results of the first aim suggest interventions that target executive attention and emotion dysregulation may have a significant impact on TRB among SMM by reducing the syndemic burden in this population.

To accomplish the second aim, I administered a visual probe paradigm to assess attention bias for drug-related and sex-related content in two distinct sample of SMM. The first sample was a nationwide sample of SMM who completed the visual probe paradigm online, and the second sample was a NYC-based sample of SMM who completed the visual probe paradigm in a lab setting. Using linear regression, I tested a series of hypotheses comparing attention bias between SMM with sexual compulsivity, SMM who engage in polydrug use, and a control group of SMM. Using logistic regression, I tested a series of hypotheses examining the associations between attention bias and TRB. The results from these analyses were mixed. Sexual compulsivity was associated with
attention bias to sex-related content in the nationwide sample but not the NYC-based sample. Polydrug use was not associated with attention bias to drug-related content in either sample. Attention bias for sex-related content and drug-related content were both associated with greater odds of TRB in the NYC-based sample only. Although mixed, the results from the second aim suggest that regulation of attention in the context of drug and sexual stimuli may be a meaningful marker of TRB for SMM.