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Attention bias modification training as a potential preventative tool

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Attention bias modification training as a potential preventative tool

Background

Adolescence is a critical period of development for mental health concerns. Anxiety and depressive symptoms and disorders tend to increase, which can impair memory, attention and problem solving. At the same time, an adolescent is dealing with academic, interpersonal and other challenges as groundwork for a healthy adulthood.

Prevention tools that target at-risk adolescents are crucial, but these tools need to be effective, economical and easily shared. Effective prevention tools not only reduce risk, they can also help researchers test whether a potential causal factor is important by showing that reducing that factor through prevention reduces the disorder. Unfortunately, effective preventions are rare. We also don't understand how the few preventions that are known to be effective change the brain.

The Problem

'Attentional bias' is when our attention is focused on only certain cues, outcomes or stimuli (for example, those that support a position or opinion we already hold). Attention that is consistently and excessively focused on negative information (such as emotions, whether ours or someone else's) plays an important role in mental disorders, including depression and anxiety.

Attention Bias Modification (ABM), which trains individuals to direct attention away from negative cues, is an effective treatment for anxiety; however, we don't know if ABM can prevent the development of anxiety.

The Project

We will use eye-tracking techniques to understand more about attentional bias and how it changes through ABM training.

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Human Cognition & Sensorimotor Core
Imaging Core

Western Faculty, Group or Institution

Faculty of Social Science,
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Keywords

Aging, mental health, mood & emotion & social behaviour, neurodevelopment

Related

None

Through neuroimaging, we will look at 'resting state functional connectivity', which is the activity and communication in the brain when a person is not engaging in any activity themselves. There are resting-state patterns of brain activity that have been identified in the brains of youth with depression, anxiety and related disorders, but we do not know if these brain patterns can be used to identify those at risk for these disorders. We also don't know if preventative approaches to depression and anxiety, such as ABM, can change these patterns in the brain.

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