

Effects of Hatha yoga and African dance on perceived stress, affect, and salivary cortisol.

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BACKGROUND:

Dance and yoga have been shown to produce improvements in psychological well-being.

PURPOSE:

The aim of this study was to examine some of the psychological and neuroendocrine response to these activities.

METHODS:

Sixty-nine healthy college students participated in one of three 90-min classes: African dance (n = 21), Hatha yoga (n= 18), or a biology lecture as a control session (n = 30). Before and after each condition participants completed the Perceived Stress Scale (PSS), completed the Positive Affect and Negative Affect Schedule, and provided a saliva sample for cortisol.

RESULTS:

There were significant reductions in PSS and negative affect ($p < .0001$) and Time x Treatment interactions ($p < .0001$) such that African dance and Hatha yoga showed significant declines, whereas there was no significant change in biology lecture. There was no significant main effect for positive affect ($p = .53$), however there was a significant interaction effect ($p < .001$) such that positive affect increased in African dance, decreased in biology lecture, and did not change significantly in Hatha yoga. There was a significant main effect for salivary cortisol ($p < .05$) and a significant interaction effect ($p < .0001$) such that cortisol increased in African dance, decreased in Hatha yoga, and did not change in biology. Changes in cortisol were not significantly related to changes in psychological variables across treatments. There was 1 significant interaction effect ($p = .04$) such that change in positive affect and change in cortisol were negatively correlated in Hatha yoga but positively correlated in Africa dance and biology.

CONCLUSIONS:

Both African dance and Hatha yoga reduced perceived stress and negative affect. Cortisol increased in African dance and decreased in

Hatha yoga. Therefore, even when these interventions produce similar positive psychological effects, the effects may be very different on physiological stress processes. One factor that may have particular salience is that amount of physiological arousal produced by the intervention