Nick Hill

Anth 260 Lab Macfarlan

20 January 2010

Article Response

**“Cortisol awakening response and psychosocial factors: A systematic review and meta-analysis”**

Chida and Steptoe explain the cortisol awakening response (CAR) as a method of testing stress levels in human subjects in the introduction of their article. They give five reasons why CAR has been receiving attention among researchers. Two of the reasons given are that the CAR is an easy parameter of HPA axis function to measure and the magnitude of the CAR seems to be associated with psychosocial factors and health in potentially significant ways. They go on to explain that findings from studies employing the CAR as a method have had inconsistent findings. They attempt to answer two questions in this review. “First, what psychosocial factors are associated with larger and smaller CARs? Second, do associations with psychosocial factors differ with study design factors such as control for possible confounders, the number of days or time-points of measurement, participant characteristics (age, gender, and health status), and types of CAR outcomes (CARi or CARauc)?”

Chida and Steptoe essentially conducted a review of studies relating to the cortisol awakening response. They had seven criteria for determining which articles to include in their review and the criteria seemed to be formulated to remove redundant or potentially novel material. They devised a manual to serve as a reference with which to code the articles they were reviewing, but they did revise the manual during the coding process. They then describe the meta-analytical procedures they used in the data synthesis and analysis.

The results of the review indicated that CARi (the level of cortisol recorded on awaking) is significantly related to job stress and (inversely) post traumatic stress syndrome, but the relation to general life stress is not as significant. In contrast CARauc (the area under the curve of repeated samples of cortisol) seemed to be strongly related to general life stress, although only two articles measuring job stress and CARauc were reviewed.

In their discussion of the review Chida and Steptoe acknowledge that their findings were entirely dependent on the quality of the studies that they reviewed and that, often, studies seemed to have conflicting results. They recommend using caution when interpreting the psychosocial factors associated with CAR and admit that additional research is needed.

They relate in the conclusion of their article that an association between psychosocial factors and the cortisol awakening response has been shown. They assert that although it is only recently beginning to be studied intensively it is already providing valuable information about psychosocial factors and health.

This study attempts to make sense of the CAR readings reported in different research to identify patterns and meaning in the responses. I think that as further research into stress is conducted using the CAR method, and with further reviews like this one, a greater understanding of the human stress response can be gained.