

## Evidence-Based Clinical Application of Yoga for Stress Management

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### Introduction

A recent systematic review reports the effects of yoga on stress reduction. It inspires mental health professionals on the application of yoga for stress management in clinical practice [1]. Indeed, the causes of stress are multi-factorial and so are the management strategies [2]. This makes the consideration of various intervention modalities necessary. One should be open-minded enough to the potential application of pharmacological treatment and non-pharmacological treatment. In the authors' clinical practices, it is not uncommon to find that medical professionals (including doctors and nurses) tend to mainly focus on biological mechanisms of interventions and sometimes neglect or even ignore the psychological basis. The reverse is true for non-medical personnel (such as social workers). In fact, while the main parameters of pharmacological treatment are physiological, it does not mean that physiological parameters do not exist in non-pharmacological treatment. Yoga is a good example which yields positive effects in both physiological and psychological aspects. A stress-diathesis model can be used to illustrate the interaction between these two aspects [3]. In this model, the diathesis (physiological predisposition) interacts with stressors (e.g. life events) to trigger psychological disorders such as depression. The greater the diathesis, the less stress is needed to trigger the disorder. Stress is thus well regarded as a determining factor which precipitates the illness and probably perpetuates it. In this regard, stress reduction is a crucial key to managing the illness. The findings of the systematic review highlight that practicing yoga yields psychological effects by empowering self-management of stress, and biological effects by better regulating the sympathetic nervous system and hypothalamic-pituitary-adrenal system [1].

Evidence plays a critical role in bringing yoga into clinical practice. Due to limited healthcare resources, clinical interventions must be well justified in terms of effectiveness. In fact, evidence-based medicine model can be adopted to guide evidence-based practice of clinical interventions. It certainly can serve to analyze the feasibility of clinical application of yoga for stress management. This model contains a cycle with five "A", namely, Assess, Ask, Acquire, Appraise and Apply, respectively [4]. "Assess" refers to the investigation of the clinical situations and identification of the problems (i.e. the causes and impacts of stress). "Ask" is to decide a research question in a "PICO" format. PICO stands

for Patients, Interventions, Comparison and Outcomes respectively. It is very well in line with a randomized controlled trial (RCT). In our case, patients are those with high stress level. Interventions may include any potentially effective treatment such as medication, yoga or counseling etc. Comparison is to compare the effectiveness of the interventions (for instance, yoga versus no yoga, or yoga versus medication) between the experimental group and the control group according to the outcome measures (such as self-efficacy, cortisol level, etc.). The subsequent "A" is "Acquire" which is to look for related sources of information about the intervention effectiveness mainly from research evidence including RCTs or systematic reviews of RCTs. After acquiring such pieces of information, it comes to "Appraise" which is to evaluate their quality. It should be noted that studies with good quality do not guarantee high external validity. External validity refers to the degree of generalizability of the findings to individuals other than the subjects of the study concerned. In fact, the characteristics of the research subjects are not necessarily alike to those of others which are out of the study pool and that the age, ethnicity and culture may vary. Therefore, the findings may not be directly applicable and so the conclusion about the effectiveness of the intervention (e.g. yoga can reduce stress) cannot be drawn without reservation. This calls for the last "A" of the cycle, "Apply". Clinicians should carefully and sharply judge the level of generalizability of the findings to their patients and hence whether yoga is to be recommended (i.e. applied in the clinical practice).

To conclude, mental health professionals (whether medical or non-medical) should be nurtured with the concepts and skills of evidence-based practice. Only then can launching (or continuing) yoga as a clinical intervention for stress management is well justify.

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