Title:
IMPACT of Yoga on Autonomic Nervous System and Its Clinical Implications

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Session Title:
Rising Stars of Nursing Invited Posters - Group 1
Slot (superslotted):
RSG STR 1: Thursday, September 25, 2014: 9:45 AM-10:30 AM
Slot (superslotted):
RSG STR 1: Thursday, September 25, 2014: 2:30 PM-3:15 PM

Keywords:
Clinical implications, Yoga and heart rate variability

References:
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Learning Activity:

LEARNING OBJECTIVES	EXPANDED CONTENT OUTLINE	TIME ALLOTTED	FACULTY/SPEAKER	TEACHING/LEARNING METHOD	EVALUATION/FEEDBACK
Example Critique selected definition of the term, "curriculum"	**Example** Definitions of "curriculum" Course of study Arrangements of instructional materials The subject matter that is taught Cultural "training" Planned engagement of learners	**Example** 20 minutes	**Example** Name, Credentials	**Example** Lecture PowerPoint presentation Participant feedback	**Example** Group discussion: What does cultural training mean to you?
Definition of the term heart rate variability	- Definition of heart rate variability as a measure of autonomic	5 minutes	Mahesh (Maheswari) Murugesan, RN, MSN, ACNP-BC, PCCN	Participant feed back	Define heart rate variability?

		nervous system				
	Critique the methods used for Literature search	- Key words used in literature search - Inclusion/Exclusion criteria for the literature review	5 minutes	Mahesh (Maheswari) Murugesan, RN, MSN, ACNP-BC, PCCN	Participant feed back	What are the strengths and weaknesses of the Methods used in this literature search?
	Identify few of the clinical implications of yoga in the management of diseases	- Results/Conclusions - Future recommendations	10 minutes	Mahesh (Maheswari) Murugesan, RN, MSN, ACNP-BC, PCCN	Participant feed back	List some of the impact that yoga has on general health and illness

Abstract Text:

IMPACT OF YOGA ON AUTONOMIC NERVOUS SYSTEM AND ITS CLINICAL IMPLICATIONS

Purpose: An integrated literature review was conducted to identify the effect of yoga intervention on heart rate variability in adults. Heart rate variability, the variance between the R-R intervals on the electrocardiogram can be used to assess the balance between the sympathetic and the parasympathetic branches of the autonomic nervous system.

Methods: Extensive computerized searches of diverse data bases (Ovid MEDLINE, PubMed, APA PsycNET, Alt Health Watch via EBSCOhost, CINAHL) were conducted including ancestry searches on previously reviewed articles and on all potential primary studies. The key terms used for the search were *yoga* and *heart rate variability*. These extensive computerized searches yielded 230 studies (Ovid MEDLINE-25, PubMed-31, APA PsycNET- 16, Alt Health Watch- 153, and CINAHL- 5). Out of the 230 studies, nineteen studies were included in the final analysis.

Inclusion criteria: The inclusion criteria were:

- Subject age >18 years

- Studies measured heart rate variability or autonomic nervous system function using any form of Yoga as an intervention

- Studies reported during the years 2000 through 2013

- Studies published in peer-reviewed scientific journals

- Studies reported in English language

Results: Heart rate variability indices showed significant shift in autonomic balance towards vagal dominance after yoga-based interventions. Both time (RR interval, SDNN, SDNNi, SDANN, NN50, pNN50, sNN50, rMSDD) and frequency (Total power, low frequency power (LF), high frequency power (HF), LF:HF ratio) domain indices of heart rate variability showed significant changes towards parasympathetic modulation. Heart rate, systolic, diastolic and mean blood pressure decreased significantly. Yoga intervention reduced the indices of ventricular repolarization dispersion (QTd, JTd) in patients with arrhythmia. Significant reduction in stress, anger, depression, anxiety and neurotic symptoms were noted. Yoga based interventions also showed improvement in sleep quality, chronic pain and overall quality of life. In patients with paroxysmal atrial fibrillation, yoga improves symptoms, arrhythmia burden, heart rate, blood pressure, anxiety and depression scores, and several domains of quality-of-life.

Future recommendations: More randomized control trials are needed to evaluate the impact of yoga on adults with cardiovascular diseases.