

The Effects of iRest® Yoga Nidra on College Students’ Level of Stress, Worry, Depression and Mindfulness

Heather Eastman-Mueller, Ph.D., C.H.E.S.
Health Promotion Professional ■ University of Missouri Student Health Center

Terry Wilson, M.Ed., R.N., C.H.E.S.
Director, Health Promotion ■ University of Missouri Student Health Center

Ae Kyung Jung, M.A.
Graduate Research Assistant ■ University of Missouri Student Health Center

ABSTRACT

iRest® Yoga Nidra is a 10-stage protocol designed to teach deep relaxation and meditative inquiry. We investigated whether iRest® Yoga Nidra could reduce stress, worry, depression and increase mindfulness in a college population. The iRest® class was conducted weekly for two hours per session during an eight-week period. Data was collected throughout nine semesters between Fall 2007 through Spring 2012 and included undergraduate and graduate students. Pre-and post-quantitative assessments were administered prior to the first class and at the end of the last class. Qualitative data was collected at weeks 4 and 8. Statistically significant reductions were noted in perceived stress, worry and depression with significant increases noted for all mindfulness factors.

DEMOGRAPHICS

Over the course of nine semesters (n=81) participants successfully completed both pre- and post-test assessments and were included in the analysis. Ages ranged from 18 to 56 years of age (M=24.82) with 54.3% (n=44) being undergraduates, 74.1% (n= 60) were female, and 79.0% (n= 64) were European American. The level of meditation and yoga experience of the respondents ranged from no experience (40.7% and 27.2%, respectively) to very high experience (9.9% and 11.1%, respectively).

OUTCOME MEASURES

- **Perceived Stress Scale** (PSS; Cohen et al., 1983) 10-item, self-report scale measuring the degree to which one’s life is stressful
- **Penn State Worry Questionnaire** (PSWQ; Meyer et. al., 1990) 16-item, self-report questionnaire assessing the frequency and intensity of worry
- **Beck Depression Inventory** (BDI; Beck & Steer, 1987) 21 multiple choice items measuring the presence and absence of depression
- **Five Factor Mindfulness Questionnaire** (FMM; Baer, 2006) 39-item Likert scale measuring the five factors of mindfulness including: non-reactivity to inner experience, observing, acting with awareness, describing/labeling with words and non-judging of experience
- **Instructor-designed Qualitative Evaluation** Four question assessment: “Describe your experiences in the iRest class thus far,” “Things I have noticed about myself since I started practicing iRest,” “I want to know more about...,” “How often are you practicing iRest outside of class? With or without self-practice CD?”
- **The GAD-7 scale is a self-report screening tool to assess generalized anxiety.** This scale consists of 7 items scored on a 4 point scale indicating the frequency of symptoms experienced in the last two weeks. The internal consistency of the GAD-7 was excellent (Cronbach [1]=.92). Test-retest reliability was also good (intraclass correlation=0.83).
- **The State-Trait Anxiety Inventory** is designed to measure state and trait anxiety and consists of 29-item self-report measures on a 4-point Likert scale ranging from not at all to very much so. The scale has excellent internal consistency (>.89) and good test-retest reliability (average r=.88). Construct and discriminant validity has also been noted.

ACKNOWLEDGEMENTS

- Richard Miller, Ph.D., Founder/Executive Director ■ Integrative Restoration Institute, San Rafael, CA ■ www.irest.us

FURTHER INFORMATION

For additional information, contact Terry Wilson at WilsonT@health.missouri.edu.

RESULTS

Table 1. Means, Standard Deviations and Repeated t-test

		Pre		Post		
Measure	n	M	SD	M	SD	t-test
PSS	81	22.85	3.80	19.74	4.74	6.01*
PSWQ	43 ^a	49.79	9.48	42.19	6.89	5.06*
BDI	79	13.70	8.06	5.95	5.95	9.68*
FFM						
Non-reactivity	81	18.90	5.16	23.65	4.51	-9.42*
Acting with awareness	81	23.56	5.66	26.09	5.66	-3.72*
Observing	81	26.37	6.41	30.57	5.24	-7.49*
Describing/labeling w/ words	69 ^b	25.96	6.30	29.13	6.39	-4.99*
Non-judging of experience	81	23.44	7.29	27.80	7.88	-4.81*

*P<.001; ^aPSWQ scale was not used 2 semesters; ^bDescribing subscale was not used during one semester

The results showed statistically significant reductions in perceived stress, worry, and depression. Conversely, all facets of mindfulness improved and were statistically significant. General anxiety was assessed using the State-Trait Anxiety Inventory (six semesters) and the Generalized Anxiety Disorder-7 (two semesters). Results from the STAI demonstrated no statistically significant reduction in state or trait anxiety from pre to post with trait anxiety noticing a slight decrease from M=46.53 to M=45.35. The GAD-7 showed a statistically significant decrease in generalized anxiety from pre to post, t(1, 31)= 4.13, p<.00.

QUALITATIVE DATA

The following were taken from the four- and eight-week qualitative assessment after being exposed to iRest:

- “My body awareness has increased. My ability to not become consumed with life and emotions is much greater.”
- “I can get relaxed very quickly.”
- “Much better at warding off anxiety before it consumes me.”
- “When I practice I notice differences in my overall calmness and ability to put stresses/problems in perspective mentally.”
- “I am sleeping better, generally more aware of bodily sensations, overall calmer.”
- “Once you begin to accept something as it is, you can begin to heal.”
- “The most significant thing I learned was unconditional acceptance of my personal feelings.”
- “I realized I give a lot of ‘things/people’ power over how I feel, but actually I am in control.”



LIMITATIONS

These results were based on self-report data and could contain several potential sources of bias. One hundred and sixty three respondents provided informed consent with a resultant 81 participants who completed both the pre- and post-test assessments, a 50% attrition rate, thus resulting in an overall small sample size. Therefore, our findings cannot be generalized. We hypothesize that the high attrition rate for the first eight semesters may be due to several factors. The class was not for academic credit and students were too busy and stressed to fit it into their lives due to academic demands and work schedules taking priority. In order to ameliorate this issue, the class was offered for academic credit starting Spring semester 2012. Another limitation to the study was the absence of a control group. Although our findings showed statistically significant changes on all scales, it is possible that self-selection or placebo effects explain these differences; an inert control condition would help to rule out these possibilities.

IMPLICATIONS FOR PRACTICE

Results from this study suggest the iRest® Yoga Nidra practice is an effective intervention for college students seeking coping strategies for management of stress or as adjunctive to traditional treatment modalities for mental health. Primary care, mental health and health promotion professionals may find iRest® a cost effective strategy to decrease stress, worry and depression and increase self-efficacy skills through mindfulness in the college population.

FUTURE DIRECTIONS

To improve the rigor of the study, a randomized placebo-controlled design is needed to further validate these study results. Future research should be conducted on specific sub-populations such as international or minority students, student veterans or those who have experienced trauma or a history of substance abuse or dependence. A longitudinal study of participants should be conducted to determine if these benefits are sustained over time. Lastly, it would be beneficial to identify and include other constructs to measure quality of life such as resilience, daily function, sleep and positive social relationships.

REFERENCES

- Baer, R.A., Smith, G.T., Hopkins, J., Krietemeyer, J., and Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment*, 13, 27-45.
- Meyer, T.J., Miller, M.L., Metzger, R.L., and Borkovec, T.D. (1990). Development and validation of the Penn State Worry Questionnaire. *Behaviour Research and Therapy*, 28, 487-495.
- Beck, A.T., Steer, R.A., and Garbin, M.G. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical Psychology Review*, 8, 77-100.
- Cohen, S., Kamarck, T., and Mermelstein, R. (1983). A global measure of perceived stress. *J Health Soc Behav*, 24, 385-396.
- Electronic resource. State-Trait Anxiety Inventory for adults. Retrieved August 5, 2008, from www.mindgarden.com/products
- Spitzer, R.L., Kroenke, K., Williams, J.B.W., and Lowe, B. (2006). A brief measure for assessing generalized anxiety disorder. *Arch Intern Med*, 166,1092-1097.
- Gros, D.F., Anthony, M.M., Simms, L.J., and McCabe, R.E. (2007). Psychometric properties of the State-Trait inventory for cognitive and somatic anxiety (STICSA): Comparison to the State-Trait Anxiety Inventory (STAI). *Psych assessment*, 19(4), 369-381.