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

Ac 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 female and 70.9% (n=60) being Caucasian 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). 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 female and 70.9% (n=60) being Caucasian 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). 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.

OUTCOME MEASURES
- Perceived Stress Scale (PSS; Cohen et al., 1983; 10-item, self-report scale measuring the degree to which 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 (FFMQ, 2006; 39-item Likert-scale measuring the full factors of mindfulness including non-reactivity to inner experiences, observing, acting with awareness, describing/labeling with words and non-judging of experiences)

Instructor-designed Qualitative Evaluations
- 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.

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

<table>
<thead>
<tr>
<th>Measure</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>W</th>
<th>M</th>
<th>SD</th>
<th>t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSS</td>
<td>81</td>
<td>22.88</td>
<td>5.06</td>
<td>19.74</td>
<td>4.74</td>
<td>.06*</td>
<td></td>
</tr>
<tr>
<td>BDI</td>
<td>79</td>
<td>13.70</td>
<td>8.06</td>
<td>5.95</td>
<td>5.95</td>
<td>9.68*</td>
<td></td>
</tr>
<tr>
<td>FFMQ</td>
<td>81</td>
<td>13.70</td>
<td>8.06</td>
<td>5.95</td>
<td>5.95</td>
<td>9.68*</td>
<td></td>
</tr>
</tbody>
</table>

The results showed statistically significant reductions in perceived stress, worry, and depression. Conversely, all facets of mindfulness improved and were statistically significant. The GAD-7 showed 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 general anxiety from pre to post, (t(1, 31)= -4.99, p<.00).

QUALITATIVE DATA
The following are quotes 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.”
“Time is the greatest gift.”
“Much better at warding off anxiety before it consumes me.”
“Once you begin to accept something as it is, you can begin to heal.”
“Much better at noticing changes in my overall awareness and ability to put stress/problems in perspective mentally.”
“...I am sleeping better, generally more aware of my mental state, overall calmness.”
“...I am feeling more empowering and able to just be, not being consumed by thoughts, worry, stress, etc.”
“...abilities to not become consumed with life and emotions is much greater.”

LIMITATIONS
These results were based on self-report data and could contain several potential sources of bias. One hundred and one three respondents provided informed consent with a medium 81 participants who completed both the pre- and post-test assessments, a 59% response rate, resulting in an overall small sample size. Therefore, our findings cannot be generalized. We hypothesize that the high attendance rates for the first eight sessions may be due to several factors. The class was not for academic credit and students were too busy and interested in it more than their duties 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 explains these differences, an inert control condition would help to rule out these possibilities.

IMPLICATIONS FOR PRACTICE
Results from the current 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 studies should be conducted on specific sub-populations such as international or minority students, student veteran 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 functioning, sleep and positive social relationships.

REFERENCES