Effect of Yoga nidra and pranayama on selected psychological variables of pre diabetic male patient

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Abstract
This study has one fold objectives: (i) to know the effect of yoga Nidra and pranayama on selected psychological variables of pre diabetic male patient. Sixty pre diabetic male patients (30-45 years) from different parts of Gorakhpur were randomly selected and were randomized into three groups. These patients fully participated in all training sessions during ten weeks of the training schedule. During this practice they did not take any other treatment. All participants were randomized into three groups. Group-I - Yoga Nidra, Group-II - pranayama group and Group-III - Control Group.

Results: The calculated value of t is 0.633 which is less than the tabulated value of t which is 1.984 at 0.05 level of significance (p<0.05), therefore there is no significant difference existing between the yoga asana group and yoga Nidra group at the initial stage, before the training was applied to all the groups. The calculated value of t is 3.00 which is higher than the tabulated value of t which is 1.984 at 0.05 level of significance (p<0.05), therefore there exist a no significant difference in the stress level between the experimental group and control group at the later stage at the end of the training. Hence it can be said that the yoga Nidra and pranayama training not helped in remarkable improvement in lowering the stress level of the diabetic patient in comparison to the control group.

Conclusion: The subjects showing minimal to moderate stress level have shown no significant decrease in their life style after ten weeks ‘Yoga Nidra’ and pranayama session. Even in most cases their sugar level is not reduced.

Keywords: Yoga nidra, pre diabetic patient

Introduction
As system of practice, yoga has from the beginning been one of the most influential features of Hinduism. Yoga exerted a powerful attraction upon Hindus because of the wonders attributed to it and because it gives countenance to the performance of austerities, to which Hindus are so strongly inclined. The strong influence of yoga can again be seen in Buddhism, which is also notable for austerities, and for its spirituals exercises and trance state. As knowledge of yoga spread, it fascinated and won followers among Westerners. Among more recent students of yoga are the British writers Major Francis Yeats Brown. In recent years yoga exercises have been recommended by some physical fitness experts as a means of cleansing the body of impurities, of reducing weight, of toning up the nerves and muscles and generally, of improving health and prolonging life.

Yoga one of the six classic system of Hindu philosophy, distinguished from the others by the marvels of bodily control and the magical powers ascribed to its advanced devotees. Yoga affirms the doctrine that through the practice of certain disciplines one may achieve liberation from the limitation of flesh, the delusions of sense, and the pitfalls of thoughts and thus attain union with the object of knowledge. Such union according to the doctrine is the only true way of knowing. For most yogi, the object of knowledge is the universal spirit Brahma. Yoga Nidra has been known for thousands of years by the sages and yogis., Of the three states of consciousness of waking, Dreaming and sleep, as expounded in the Upanishads, particularly Mandukya Upanishad, Yoga Nidra refers to the conscious awareness of the Deep Sleep state, referred to as prajna in Mandukya Upanishad. This is the third of the four levels of consciousness of AUM mantra. The state of yoga Nidra, conscious Deep Sleep, is beyond or subtler than the imagery and mental process of the Waking and Dreaming states. As a state of conscious Deep Sleep, Yoga Nidra is universal principle, and is not the exclusive domain of any more recent teachers or traditions. Yoga Nidra brings
an incredible calmness, quietness and clarity. Yoga Nidra is one of the deepest of all meditations, leading awareness through many levels of mental process to a state of supreme stillness and insight.

**Statement of the problem**
The purpose of the study is to determine the effect of yoga Nidra and pranayama on selected psychological components of pre diabetic patients.

**Procedure and methodology**
Sixty pre diabetic patients, with age ranging between 30-45 years will be purposively selected as subjects from Gorakhpur (U.P). The study will conducted for a period of ten weeks.

**Psychological variables**
1. Stress
2. Physical life style

**Definition and expiations of the terms**

**Stress**
The body reaction to mental or physical challenges.

**Life style**
An individual typical way of life: his attitude and their expression in a self-consistent manner as developing from childhood.

**Criterion measures**
1. Assessment of stress by using stress inventory questionnaire of Miller and Allen.
2. Assessment of life style by using life style assessment inventory (LSAI).

**Statistical procedure**
To determine the effect of yoga nidra and pranayama on selected psychological variables descriptive statistics and "Analysis of Covariance" will be applied at 0.05 level of significance.

**Significance of the study**
1. The present study will reveals that whether there is effect of yoga Nidra and pranayama on selected psychological variables on pre diabetic patients.
2. Does yoga Nidra produces any effect on blood glucose level or Glycated hemoglobin could be studied because relaxation is very important in terms of recovery.

### Table 1: Analysis of Co – Variance of two experimental groups and one Control group in relation to stress.

<table>
<thead>
<tr>
<th>Tests</th>
<th>Yoga Nidra (Mean)</th>
<th>Pranayama (Mean)</th>
<th>Control Group</th>
<th>df</th>
<th>F - ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>6.85 (3.94)</td>
<td>5.80 (3.30)</td>
<td>6.30 (3.59)</td>
<td>3</td>
<td>1.08 (0.36)</td>
</tr>
<tr>
<td>Post</td>
<td>4.40 (2.326)</td>
<td>3.90 (2.049)</td>
<td>3.10 (2.532)</td>
<td>3</td>
<td>1.61 (0.19)</td>
</tr>
<tr>
<td>Adjusted mean</td>
<td>4.37</td>
<td>4.05</td>
<td>3.17</td>
<td>3</td>
<td>1.27 (0.29)</td>
</tr>
</tbody>
</table>

In pretest a statistically insignificantly difference was found among the Experimental group of Yoga Nidra and pranayama and control group on the total, F ratio 1.08, p= 0.36 As shown in Table -1 the mean score in stress pretest was 6.85 and 5.80 and 6.30 was for control group.

### Table 2: Analysis of Co – Variance of two experimental groups and one Control group in relation to Physical life style.

<table>
<thead>
<tr>
<th>Tests</th>
<th>Yoga Nidra (Mean)</th>
<th>Pranayama (Mean)</th>
<th>Control Group</th>
<th>df</th>
<th>F - ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>22.15 (5.98)</td>
<td>23.15 (6.95)</td>
<td>20.70 (5.87)</td>
<td>3</td>
<td>0.45 (0.72)</td>
</tr>
<tr>
<td>Post</td>
<td>22.55 (5.472)</td>
<td>23.70 (6.275)</td>
<td>21.35 (6.252)</td>
<td>3</td>
<td>0.63 (0.60)</td>
</tr>
<tr>
<td>Adjusted mean</td>
<td>22.56</td>
<td>23.76</td>
<td>21.29</td>
<td>3</td>
<td>0.66 (0.58)</td>
</tr>
</tbody>
</table>

In pretest a statistically insignificantly difference was found among the Experimental group of Yoga Nidra and pranayama and control group on the total, F ratio 0.45, p= 0.72 As shown in Table -2 the mean score in physical life style pretest was 22.15 and 23.15 and 20.70 was for control group.

### Table 3: Analysis of Co - Variance of two experimental groups and one Control group in relation to Glucose Fasting.

<table>
<thead>
<tr>
<th>Tests</th>
<th>Yoga Nidra (Mean)</th>
<th>Pranayama (Mean)</th>
<th>Control Group</th>
<th>df</th>
<th>F - ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>110.75 (6.84)</td>
<td>112.00 (5.84)</td>
<td>110.20 (8.33)</td>
<td>3</td>
<td>0.20 (0.90)</td>
</tr>
<tr>
<td>Post</td>
<td>100.90 (12.628)</td>
<td>102.15 (10.908)</td>
<td>103.60 (9.832)</td>
<td>3</td>
<td>0.63 (0.60)</td>
</tr>
<tr>
<td>Adjusted mean</td>
<td>100.91</td>
<td>102.11</td>
<td>103.63</td>
<td>3</td>
<td>0.63 (0.60)</td>
</tr>
</tbody>
</table>

In pretest a statistically insignificantly difference was found among the Experimental group of Yoga Nidra and pranayama and control group on the total, F ratio 0.20, p= 0.90 As shown in Table-3 the mean score in Glucose Fasting pretest was 110.75 and 112.00 and 110.20 was for control group.

### Table 4: Analysis of Co - Variance of two experimental groups and one Control group in relation to Glucose PP.

<table>
<thead>
<tr>
<th>Tests</th>
<th>Yoga Nidra (Mean)</th>
<th>Pranayama (Mean)</th>
<th>Control Group</th>
<th>df</th>
<th>F - ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>171.15 (20.62)</td>
<td>175.60 (13.80)</td>
<td>168.50 (19.86)</td>
<td>3</td>
<td>1.24 (0.30)</td>
</tr>
<tr>
<td>Post</td>
<td>108.35 (10.535)</td>
<td>109.60 (10.952)</td>
<td>108.10 (10.573)</td>
<td>3</td>
<td>0.07 (0.98)</td>
</tr>
<tr>
<td>Adjusted mean</td>
<td>108.36</td>
<td>109.65</td>
<td>108.08</td>
<td>3</td>
<td>0.07 (0.98)</td>
</tr>
</tbody>
</table>

In pretest a statistically insignificantly difference was found among the Experimental group of Yoga Nidra and pranayama and control group on the total, F ratio 1.24, p= 0.30 As shown in Table-4 the mean score in Glucose PP pretest was 171.15 and 175.60 and 168.50 was for control group.
Table 5: Analysis of Co - Variance of two experimental groups and one Control group in relation to HBA1c.

<table>
<thead>
<tr>
<th>Tests</th>
<th>Yoga Nidra (Mean)</th>
<th>Pranayama (Mean)</th>
<th>Control Group df</th>
<th>F - ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>5.40 (0.50)</td>
<td>5.40 (0.50)</td>
<td>5.55 (0.51)</td>
<td>3</td>
</tr>
<tr>
<td>Post</td>
<td>4.60 (0.503)</td>
<td>4.45 (0.51)</td>
<td>4.40 (0.503)</td>
<td>3</td>
</tr>
<tr>
<td>Adjusted mean</td>
<td>4.60</td>
<td>4.45</td>
<td>4.39</td>
<td>3</td>
</tr>
</tbody>
</table>

In pretest a statistically insignificantly difference was found among the Experimental group of Yoga Nidra and pranayama and control group on the total, F ratio 0.39, p= 0.76 As shown in Table 5 the mean score in HBA1c pretest was 5.40 and 5.40 and 5.55 was for control group.

Summary
The pre study reveals that no significant effect was found in case of Glucose fasting, Glucose PP, HBA1c after practicing yoga Nidra and pranayama for a duration of ten weeks. The primary purpose of the study was to experiment with well planned, systematically developed Yoga Nidra on the pre diabetic subjects. The subjects were from wide range of age group i.e. 30-45 years but only those subjects were consulted who were not taking any type of medicine and were just diagnosed as pre diabetic.

Results
1. No significant effect was found in case of Glucose Fasting.
2. No significant effect was found in case of Glucose PP.
3. No significant effect was found in case of HBA1c.

Conclusions
Based on the findings and within the limitations of the study, it was concluded that ten weeks of Yoga nidra and pranayama was not sufficient for maintain the Glucose level. Only Yoga Nidra and pranayama is not sufficient for maintain the Glucose level.

Recommendations
1. Same study may be conducted on different age category.
2. Similar studies may be conducted by selecting other physiological variables.
3. Similar type of study may be repeated by selecting larger sample.
4. Astang Yoga should be followed in daily routine of life.

References
3. Chen, Chen, Hong, Chao, Lin, Li. shortened silver yoga exercise programme is recommended to be incorporated as an activity programme in community-settings to promote the physical fitness of older adults, 2008.