

*“Follow the heart. A pure heart sees beyond the intellect; it gets inspired; it knows things that reason can never know, and whenever there is conflict between the pure heart and the intellect, always side with the pure heart even if you think what your heart is doing is unreasonable.” – Swami Vivekananda*

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## *Chapter 5*

# RESEARCH METHODS

## **5 RESEARCH METHODS**

### **5.1 Participants**

Managers/Executives, professionals, employees between 25 -55 yrs of age. Both men and women are included. Participants in this study are healthy managers with min 2 years experience of working in various companies. Intervention was given by trained yoga teachers and physical education teachers during August 2015 to December 2015.

#### **5.1.1 Sample size**

Sample size was calculated using G- Power and based on previous studies with similar intervention. The sample size of 60 was planned. Total participants were 126 in number - 63 participants in each group. Integrated Yoga group has 24 Women and 39 Men (Age: Mean=33.55, SD=6.88) and Physical Exercise group has 19 Women and 44 Men (Age: Mean= 33.71, SD=7.49).

#### **5.1.2 Selection and source of participants**

Participants were selected by providing them the consent forms and those who opted to join willingly. Source of the participants are Business organizations, Govt. and Non Govt. organizations, academic Institutions.

#### **5.1.3 Inclusion criteria**

1. Experience of at least 2 years on leadership oriented tasks/projects.
2. At least 1 yr of association with the reporting supervisor/ leader.

#### **5.1.4 Exclusion criteria**

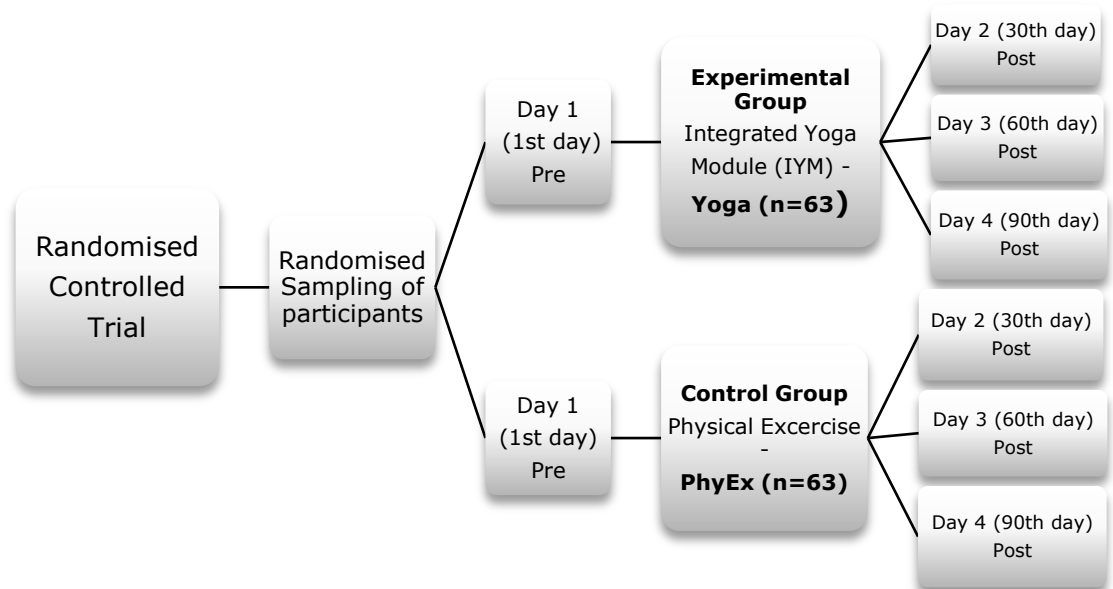
1. Unhealthy individuals – acute or chronic illness, on medication, surgery in last 3 months.
2. Those undergoing other leadership or succession programmes.

#### **5.1.5 Ethical consideration**

1. This study has been approved by Institution ethics committee.
2. The confidentiality of the data of participants was maintained and only codes were used for analysis.
3. All interventions used are safe for the participants and they are taken care by professional certified yoga teachers and physical education teachers.

## 5.2 Design: Randomized controlled trial experimental design (RCT).

This research study was planned as a Randomized Controlled Trial (RCT). Participants [Figure- 5] in one group were given training under Integrated Yoga Module (IYM) while participants in the other group were given training with Physical Exercises.



**Figure 5: Research Design - Randomized controlled trial study with repeated measures**

### **5.3 Variables studied**

1. Indian Transformational Leadership - These variables are listed as - Performance-oriented and humane, Openness and nurturing, Sensitive and conscientious, Personal touch, Conviction in self, Non-traditional.

2. Decision Making Style – The scale LBS-DMSQ has variables listed as achievement orientation, intuitive thinking, emotional involvement, risk preference, routine and systems.

3. Quality of Life - Four domains of WHOQOL-BREF are Physical health, Psychological Health, Social Relationships and Environment.

4. Guna Personality Inventory (GPI) – Satva, Rajas and Tamas.

### **5.4 Intervention**

Experimental Intervention- 1 hr daily of Integrated Yoga Module Training sessions comprising Suryanamaskar, set of asanas, and cyclic meditation [Table 2] along with informational sessions once a week on four paths of yoga namely Karma yoga, Bhakti Yoga, Raja Yoga and Jnana Yoga for Yoga group.

Control Intervention - Physical exercises comprising general warming up and relaxation techniques [Table 3] along with once a week general health sessions for PhyEx group.

Consent forms were taken from all participants. Participants were provided with adequate information on scales and method of responding to items in scale. The responses were collected at regular intervals of 30<sup>th</sup>, 60<sup>th</sup> and 90<sup>th</sup> day.

### 5.4.1 Experimental: Integrated Yoga Module\* (IYM)

**Table 2: Experimental: Integrated Yoga Module\* (IYM), (Yoga)**

| <b>Practices</b>   | <b>Detail Guidelines</b>   | <b>Time</b> |
|--|--|-------------|
| <b>Surya namaskara (Sun salutation)</b>  | 12 postures combined with breathing and chanting.<br>Two rounds – slow and dynamic   | 20 min      |
| <b>Pranayama – yogic breathing practices</b>                                     | Kapalbhati (Forceful inhalation-exhalation – 21 rounds)<br>Vibhagiya pranayama (Sectional breathing 5 rounds)<br>Nadishuddhi pranayama (Alternate nostril breathing – 9 rounds)<br>Sitli, sitkari, sadanta pranayama (cooling breathing)<br>Bhramari pranayama (breathing with Honey bee sound)  | 10 min      |
| <b>Cyclic meditation</b>   | Starting prayer<br>1 min: Instant relaxation technique (IRT)<br>Centring – balancing on foot<br>Ardha kati chakrasana (lateral AKC)<br>3 min: quick relaxation/technique (QRT)<br>Vajrasana (sitting on knees)<br>Shashankasana (Moon position)<br>Ustrasana (Camel position)<br>14 min: deep relaxation technique (DRT)<br>Ending prayer. | 30 min      |
| *Developed by Swami Vivekananda Yoga Anusandhana Samsthana (S-VYASA), Bangalore. |  |             |

## 5.4.2 Cyclic Meditation Steps

Step I: Starting Prayer

लये संबोधयेत् चित्तं विक्षिप्तं शमयेत् पुनः

सकषायं विजानीयात् समप्राप्तं न चालयेत् ।

laye sambodhayet cittam vikṣiptam śamayet punaḥ

Sakaṣāyam vijānīyāt samaprāp taṁ na cālayet।

(Maṇḍūkya Kārikā 3-44)

Step II: Instant Relaxation Technique (IRT) 1 min

Step III: Centering

Step IV: Standing Asanas - Ardha Kati Chakrāsana

Step V: Quick Relaxation Technique (QRT) – 3 min

Phase I -Observing the abdominal movements.

Phase II -Associate with breathing.

Phase III - Breathing with feeling.

Step VI: Sitting Ásanas - Vajrāsana, Śaśāṅkāsana, Śaśāṅkāsana,

Uśtrāsana

Step VII: Deep Relaxation Technique (DRT) – 15 min

Step VIII. Closing Prayer

ॐ सर्वे भवन्तु सुखिनः सर्वे सन्तु निरामयाः ।

सर्वे भद्राणि पश्यन्तु माकश्चित् दुःखभाग् भवेत् ॥

ॐ शान्तिः शान्तिः शान्तिः ॥

Om sarve bhavantu sukhinaḥ sarve santu nirāmayāḥ ।

Sarve bhadraṇi paśyantu mākaścit duḥkhabhāg bhavet ॥

Om śāntiḥ śāntiḥ śāntiḥ ॥

Rub the palms of the hands together and place them gently over the closed eyes. With beautiful smile on your face gently open your eyes.

। हरिः ॐ तत् सत् । |Hariḥ om tat sat |

### 5.4.3 Control: Physical Exercise

**Table 3: Control: Physical Exercise\* (PhyEx)**

| <b>Practices</b>   | <b>Detail Guidelines</b>  | <b>Time</b> |
|--|---|-------------|
| <b>Warm up exercises</b>   | Loosening of ankles, knee caps and waist<br>Spine twisting<br>Shoulder movements, hand movements, head, neck, and wrist movements and rotations | 10 min      |
| <b>Stretches</b>   | Leg stretch, hand stretch<br>Lumbar stretch<br>Side leg stretch, folded leg lumbar stretch<br>Dog stretch, tiger stretch and dorsal stretch     | 10 min      |
| <b>Sit ups and push ups</b>  | Sit ups and push ups  | 10 min      |
| <b>Dynamics</b>  | Forward bending<br>Backward bending<br>Side bending<br>Twisting<br>Twisting and bending   | 10 min      |
| <b>Supine</b>  | Single leg raising<br>Alternate leg raising<br>Both leg raising<br>Rocking and rolling<br>Cycling   | 10 min      |
| <b>Supine rest</b>   | Supine rest (guided)  | 10 min      |
| *Based on guidelines given by WHO on Physical Activity for healthy adults. |   |             |

## **5.5 Data extraction**

Data extraction was done by using following Questionnaires. All measurements forms are collected individually by the assistants.

### **5.5.1 Indian Transformational Leadership Scale (ITLS)**

Indian Transformational Leadership Scale was used to measure the Leadership Competencies. The items in the scale to you and same at regular intervals of 1<sup>st</sup> as Day1, 30<sup>th</sup> as Day2, 60<sup>th</sup> as Day3 and 90<sup>th</sup> as Day4. Questionnaire has 41 item statements with objective choice in Likert Scale- scoring is given as 1 for strongly disagree to 5 for strongly agree.

The items were grouped to represent sub-dimensions of the competencies of Indian Transformational Leadership. These variables are listed as - *Performance-oriented and humane, Openness and nurturing, Sensitive and conscientious, Personal touch, Conviction in self, Non-traditional* (Singh & Krishnan, 2007).

Hypothesis-1a - Integrated Yoga Module has impact on Leadership competencies of Managers.

Hypothesis-1b - Physical Exercise has impact on Leadership competencies of Managers.

### **5.5.2 London Business School researchers (LBS-DMSQ)**

Decision-making style questionnaire developed by London Business School researchers (LBS-DMSQ) was used to measure the decision-making phenomenon. The items in the scale to you and the same at regular intervals of 30<sup>th</sup>, 60<sup>th</sup> and 90<sup>th</sup> day – analysed as Day 1 refers to data collection on 1<sup>st</sup> day, Day 2 refers to data collection on 30<sup>th</sup> day, Day 3 refers to data collection on 60<sup>th</sup> day, Day 4 refers to data collection

on 90th day. Questionnaire has 41 item statements with objective choice in Likert Scale – scoring is given as 1 for strongly disagree to 5 for strongly agree.

These items were grouped to represent domains of the decision-making styles. These variables are listed as achievement orientation, intuitive thinking, emotional involvement, risk preference, routine and systems (Figure 1).

Hypothesis-2a – Integrated yoga module has consistent positive impact on decision-making style of managers.

Hypothesis-2b – Physical exercise has consistent positive impact on decision-making style of managers.

### **5.5.3 World Health Organisation - Quality of Life (WHOQOL-BREF)**

Participants were provided with adequate information on scales and method of responding to items in scale. WHOQOL-BREF was used to measure domains of quality of life. The responses were collected at regular intervals of 30<sup>th</sup>, 60<sup>th</sup> and 90<sup>th</sup> day.

WHOQOL-BREF is a valid and reliable alternative to the assessment of domain profiles using the WHOQOL-100. WHOQOL-BREF may also be of use to health professionals in the assessment and evaluation of treatment efficacy. The WHOQOL-BREF contains a total of 26 questions. To provide a broad and comprehensive assessment, one item from each of the 24 facets contained in the WHOQOL-100 has been included. In addition, two items from the Overall quality of Life and General Health facet have been included. (Whoqol Group, 1998).

Four domains of WHOQOL-BREF are Physical health, Psychological Health, Social Relationships and Environment. All are separately analysed with transformed scores to 4-20 scale as per the guidelines given in WHOQOL-BREF manual.

Hypothesis-3a - Integrated Yoga Module has impact on Quality of Life of Managers.

Hypothesis-3b - Physical Exercise has impact on Quality of Life of Managers.

#### **5.5.4 Guna Personality Inventory (GPI)**

Guna Personality Inventory (GPI) was used to measure the Three Gunas of participants and define their Guna scores. Composition of Satva, Rajas and Tamas in percentage for each participant was analysed. This measurement was used as supportive to the Vedanta Model of Leadership by showing the effect of Yoga in increasing the Satva and reducing the Rajas and Tamas.

Hypothesis-4a - Integrated Yoga Module has impact on Guna personality of Managers.

Hypothesis-4b - Physical Exercise has impact on Guna personality of Managers.

#### **5.6 Data Analysis**

Data analysis was done by using the SPSS software version 23.

Two groups were Yoga and Physical Exercise. RM ANOVA method of analysis for two groups.