

CHAPTER 5

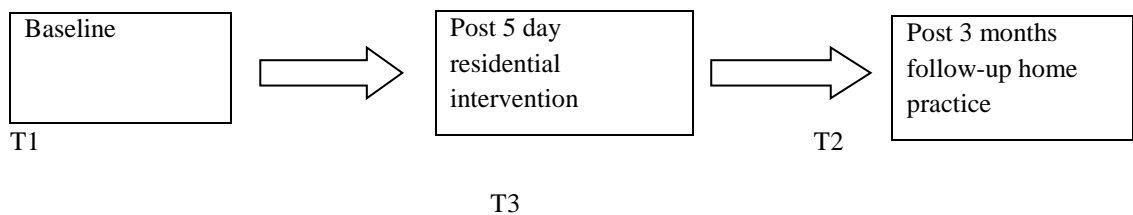
METHODS

5.1 OVERVIEW

Table 5.1: Overview of the components of the current research

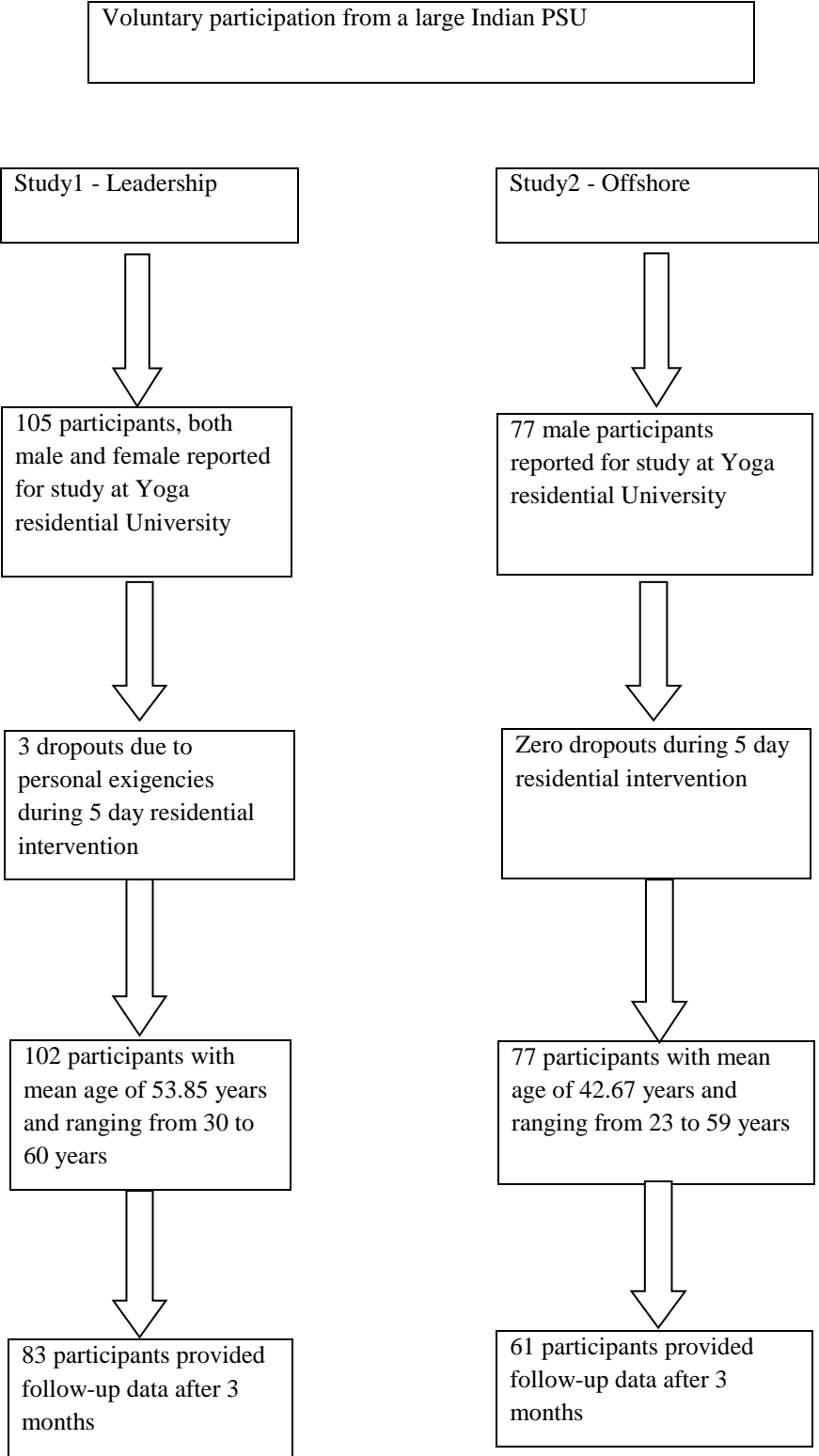
Design descriptors/variables	Study ONE Leadership			Study TWO Offshore		
Design of Study	Single group Pre-Post study with follow-up			Single group Pre-Post study with follow-up		
Time	Pre	Post (5 days)	Follow-up (3 months)	Pre	Post (5 days)	Follow-up (3 months)
No. of subjects	102	102	83	77	77	61
Participant Demographic Data	✓	✓	✓	✓	✓	✓
MINDFULNESS						
Mindfulness Attention Awareness Scale	✓	✓	✓	✓	✓	✓
PERCEIVED STRESS						
Perceived Stress Scale	✓	✓	✓	✓	✓	✓
EMOTION REGULATION	-	-				
Reappraisal	✓	✓	✓	✓	✓	✓
Suppression	✓	✓	✓	✓	✓	✓
AFFECT						
Positive Affect	✓	✓	✓	✓	✓	✓
Negative Affect	✓	✓	✓	✓	✓	✓

Figure 5.1 Overview of study design



Repeated measures design with a single group followed at three time points, baseline (T1), after the intervention (T2), and after the followup for 3 months (T3).

Figure 5.2 : Overview of study participants



5.2 STUDY ONE

5.2.1 Design of the study

Repeated measures design with a single group followed at three time points, baseline, after the intervention, and after the follow-up for 3 months.

5.2.1.1 Source of Subjects

Participants were recruited from a large multinational public sector undertaking, Oil and Natural Gas Corporation (ONGC). We adopted a convenience sampling procedure.

Program details were shared with senior level leadership professionals in the organization and the sample was drawn from senior executives who voluntarily opted for the program. However, the sample had representation from various states across India, like Andhra Pradesh, Assam, Delhi, Goa, Gujarat, Maharashtra, Tamil Nadu, Tripura, and Uttarakhand. Participants were sent in 4 consecutive batches, spanning across two months.

5.2.1.2 Inclusion criteria

All volunteers, both male and female

5.2.1.3 Exclusion Criteria

Subjects who could not participate in 5 day residential intervention

5.2.2 Sample Size

One hundred and five participants reported for the residential program located in a Yoga university set up at Bengaluru. There were 3 dropouts due to personal exigencies during the study. 102 senior level leadership professionals with a mean age of 53.85 years and ranging from 30 to 60 years participated in the study and were given five day residential yoga-based stress reduction program. Both males and females who volunteered for the program were included in the study. Later they were asked to continue the practices at home and assessments were made at the baseline, after the residential program and following three months of home practice. Out of the

102 participants who attended the full 5-day residential intervention, 83 participants provided follow-up data after 3 months.

5.2.3 Ethics clearance and consent

Signed informed consent form was obtained from participants before beginning of the study, after explaining in detail about the study. Subjects were explained about their rights to withdraw from the study at any point in time. The current study was approved by the Institute Ethics committee, before commencing the study.

5.2.4 Data collection

Data was collected at three time points, baseline, after the 5-day residential intervention, and after the follow-up for 3 months.

5.3 STUDY TWO

5.3.1 Design of the study

Repeated measures design with a single group followed at three time points, baseline, after the intervention, and after the follow-up for 3 months.

5.3.1.1 Source of subjects

Participants were recruited from a large multinational public sector undertaking, Oil and Natural Gas Corporation (ONGC). We adopted a convenience sampling procedure.

Program details were shared with offshore professionals in ONGC and the sample was drawn from those who voluntarily opted for the program. The sample had only male representation. Offshore professionals are engaged in a high-risk work environment. Participants were sent in 4 consecutive batches, spanning across two months.

5.3.1.2 Inclusion criteria

All volunteers, both male and female

5.3.1.3 Exclusion criteria

Subjects who could not participate in 5 day residential intervention

5.3.2 Sample size

Seventy-seven offshore male employees of ONGC organization reported for the residential program located in a Yoga university set up at Bengaluru. The participants had a mean age of 42.67 years and ranging from 23 to 59 years and were given one-week residential yoga-based stress reduction program. Later they were asked to continue the practices at home and assessments were made at the baseline, after the residential program and following three months of home practice. Out of the seventy-seven participants who attended the full 5-day residential intervention, 61 participants provided follow-up data after 3 months.

5.3.3 Ethics clearance and consent

Signed informed consent form was obtained from participants before beginning of the study, after explaining in detail about the study. Subjects were explained about their rights to withdraw from the study at any point of time. The current study was approved by the Institute Ethics committee, before commencing the study

5.3.4 Data collection

Data was collected at three time points, baseline, after the 5 day residential intervention, and after the follow-up for 3 months.

5.4 PARTICIPANT DATA – COMBINED VIEW

Table 5.2: Participant data combined

Participant Data	Leadership Group (n=102)	Offshore Group (n=77)
# of Participants who reported for study at residential setup	105	77
# of Dropouts (due to personal exigencies) during 5 day residential intervention	3	-
# of Participants who completed 5 day residential intervention	102	77
# of Participants who provided follow up after 3 months	83	61
Follow up response rate(in %)	81.3	79.2

Table 5.3: Participant data breakup

Participant Data		Leadership Group (n=102)	Offshore Group (n=77)
Gender	Male	90	77
	Female	12	-
Age	Range (Years)	30 to 60	23 to 59
	Mean Age	53.85	42.67

Table 5.4: Participant follow up practice data

Practice Log – # of Participants who reported practice	Leadership Group (n=102)	Offshore Group (n=77)
1-2 times per week	33	14
3-4 times per week	26	19
5-7 times per week	16	19
More than 7 times per week	2	3
Never Practiced	6	6
Total no: of Participants who provided follow up data	83	61
Overall Response Rate (In %)	81.4	79.2

5.5 INTERVENTION

The residential program was termed as SMET (Self Management of Excessive Tension) and it covered theory sessions that provided conceptual understanding of yoga, stress and its release, concept of executive growth and group dynamics. Theory sessions were followed up with practice sessions on cyclic meditation (CM) technique. Interaction sessions were conducted to address any participant queries. In addition, the program had components on yogasanas (postures), kriyas (cleansing techniques), *prāṇāyāma* (breathing practices) and bhajan (devotional sessions). Simple, healthy nutrient rich vegetarian diet was served.

Following the residential program, participants were expected to continue their daily practice of 35 minutes of cyclic meditation on their own for an additional period of 3 months. Standardized guided instructions in audio format were provided to facilitate the individual practice.

Table 5.5: Sample Daily Routine

Time	Activity	Time	Activity
5:30 am	Ablution	2:00 pm	<i>Krida</i> Yoga – Yogic Games or Theory session - 2
6:00 am	<i>āsanas</i> - Yogic Postures	3:00 pm	Cyclic meditation practice
7:00 am	Friendship Meet (Maitri Milan) – <i>gītā</i> Sloka Chanting and Discourse (Satsang)	4:00 pm	<i>āsanas</i> - Yoga postures
8:00 am	Breakfast	5:00 pm	Milk or Ayurvedic tea (Malt)
9:30 am	Theory Session - 1	5:30 pm	Tuning to Nature
10:30 am	Cyclic meditation practice	6:00 pm	Devotional Session (Bhajan)
11:30 am	Milk or Ayurvedic tea (Malt)	7:30 pm	Dinner
12:00 pm	<i>prāṇāyāma</i> – Breathing Techniques	8:30 pm	Self-study/Reflection time
1:00 pm	Lunch and Rest	10:00 pm	Lights Off

Table 5.6: Theory Components of Yoga Intervention

Day	Session1	Session2
1	Introduction to SMET	Happiness Analysis
2	Concept of Stress and its Release	Introduction to Kriya
3	Executive Growth	Happiness Analysis
4	Group Dynamics	SMET Research
5	VYASA movement	Yoga and Diet

Table 5.7: Practice components of Cyclic Meditation

Day	Session1	Session2
1	IRT (Instant Relaxation Technique) Relaxation and Centering in Tadasana <i>Ardha Kati Chakrasana</i> (Right & Left) QRT (Quick Relaxation Technique)	<i>Ardha Kati Chakrasana</i> (Right & Left) QRT, <i>Sithila Dandasana</i> , <i>Vajrasana</i> <i>Ardha Ustrasana</i> or <i>Ustrasana</i>
2	FULL PRACTICE (starting from IRT to DRT, including all standing and sitting postures) with recognition of stimulation- relaxation.	FULL PRACTICE, allowing for more relaxation than stimulation
3	FULL PRACTICE feeling the blood flow, blood pressure and nerve impulses	FULL PRACTICE feeling the pulse, heart beat and the synchronization of both
4	FULL PRACTICE, feeling the changes in the mind and emotions with pointed, linear, surface and 3 dimensional awareness of the whole body	FULL PRACTICE, enjoying the group awareness expanding to all-pervasive awareness.
5	FULL PRACTISE WITH TOTAL AWARENESS	FULL PRACTISE WITH TOTAL AWARENESS

5.6 DATA CLEANSING AND ANALYSIS

5.6.1 Study One

Data were extracted from the google form where the responses were originally recorded. Data were cleaned by checking for outliers and missing values. Outliers were checked using boxplot and the Grubbs tests. There were no outliers and all the values fell in the acceptable range. There were no missing data at T1 (baseline) and T2 (after residential intervention) however, after the home practice follow-up, there were 23 dropouts and at T3 only 81 were left for analysis. Various assumption tests

were checked for the suitability of running parametric tests. We used linear mixed effects models for analysis of repeated measures data, as we found this to be an unbalanced repeated measures design due to dropouts at T3. Linear mixed effects model are considered to be a better method whenever there is an unbalanced repeated measures design (Locker, Hoffman and Bovaird, 2007). We used R statistical software for analysis (R Development Core Team, 2018) and its packages nlme for mixed effect modelling (Pinheiro et al., 2012).

5.6.2 Study Two

Data were extracted from the google form where the responses were originally recorded. Data were cleaned by checking for outliers and missing values. Outliers were checked using boxplot and the Grubbs tests. There were no outliers and all the values fell in the acceptable range. There were no missing data at T1 (baseline) and T2 (after residential intervention) however, after the home practice follow-up, there were 16 dropouts and at T3 only 61 were left for analysis. Various assumption tests were checked for the suitability of running parametric tests. Linear mixed effects model was used for analysis of repeated measures data. R statistical software was used for analysis (R Development Core Team, 2018) and its packages nlme for mixed effect modelling (Pinheiro et al., 2012).

Mediation analysis was further conducted using nonparametric bootstrap method with the mediation package of R statistical software (Tingley, Yamamoto, Hirose, Keele, & Imai, 2014). A simple mediation model was studied in which Perceived Stress was the dependent variable, Positive Affect was the independent variable, and Mindfulness was the mediator.

5.7 OUTCOME MEASURES

5.7.1 Mindfulness

Mindfulness was measured using the Mindfulness Attention Awareness Scale (MAAS). MAAS is a 15-item self-reported single-factor scale that is exclusively focused on attention/awareness component of mindfulness construct (Brown and Ryan, 2003). The items are answered on a six-point scale (1 = Almost always; 6 = Almost never) on which higher scores are an indication of a higher trait mindfulness. The MAAS has been validated in student samples ($\alpha = 0.82$) and adults from the general community ($\alpha = 0.87$).

5.7.2 Emotion Regulation

Emotion regulation was measured using the Emotion Regulation Questionnaire (ERQ). ERQ is designed to assess individual differences in the habitual use of two emotion regulation strategies: cognitive reappraisal and expressive suppression (Gross and John, 2003). The questions involve two distinct aspects - one is on the emotional experience, or what you feel like inside and the other is on emotional expression, or how you show your emotions in the way you talk, gesture, or behave. ERQ has 10 items and is self-reported on a 7-point scale (1= strongly disagree; 7 = strongly agree).

5.7.3 Perceived Stress

Perceived stress was measured using the Perceived Stress Scale (PSS). PSS is a widely used and well-validated 10-item scale that measures the degree to which the situations in one's life are appraised as stressful (Cohen, Kamarck and Mermelstein, 1983). A higher score indicates a greater degree of perceived stress. 10-item version of PSS showed adequate internal consistency with a Cronbach's alpha of 0.67 (Leung et al., 2010).

5.7.4 Positive and Negative Affect

Positive affect and negative affect were measured using the positive affect and negative affect schedule (PANAS). PANAS consists of 20 items with two sub-scales and 10-items each measure to assess positive and negative affect. This is measured using a 5-point scale that ranges from very slightly (1) to extremely (5). It can show the relationship between positive and negative affect with personality states and traits. The internal consistency, alpha reported for PANAS ranges from 0.86–0.90 for positive affect and from 0.84–0.87 for negative affect (Watson, Clark and Tellegen, 1988).