### CHAPTER – 4.0

**AIM AND OBJECTIVES**

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4.0 AIM AND OBJECTIVES

4.1 AIM OF THE STUDY

- To study psychophysiological changes following two meditative states (dhāraṇā and dhyāna) described in yoga texts

4.2 OBJECTIVES OF THE STUDY

- To compile in-depth information on four mental states viz., cañcalatā, ekāgratā, dhāraṇā and dhyāna from classical yogic and spiritual literature.
- To explore the concept and classification of meditation from different classical and yoga texts.
- To investigate the effect of cañcalatā, ekāgratā, dhāraṇā and dhyāna on:
  (i) Mid-latency auditory evoked potentials (MLAEPs)
  (ii) Performance in the d2 test of attention
  (iii) Performance in the digit symbol substitution test (DSST)
  (iv) Subjective assessment of following guided instructions on visual analog scale.

4.3 RATIONALE OF THE STUDY

Most recently evolved meditation techniques such as Transcendental Meditation, Brahmakumaris Raja Yoga meditation, Sahaja Yoga meditation, and meditation on OM) have been derived within the last 200 years. Differences in results between meditation techniques could be related to the methods and principles involved. In Patanjali’s Yoga Sūtras, there are two meditative states (dhāraṇā and dhyāna) described, one leading to the other. Studying them was hoped to increase the understanding of the physiological changes during meditation.
Mid-latency auditory evoked potentials (MLAEPs) have been used to assess cortical and subcortical changes in meditation. It is believed that even if the main changes occur in the cortex, cortico-efferent connections would result in subcortical changes. There has been no study assessing the changes in MLAEPs during the four mental states viz., cañcalatā, ekāgratā, dhāraṇā and dhyāna. Hence, the present study was intended to assess changes in MLAEPs during cañcalatā, ekāgratā, dhāraṇā and dhyāna. And also, the present study was designed to assess the effects of dhāraṇā and ekāgratā using two attention tasks, (i) d2 test of attention and (ii) digit symbol substitution test considering a previous study showing an increase in the performance in cancellation test after dhāraṇā. There were no previous attempts to study subjective assessment to follow guided instructions for the four mental states. Hence, in the present study, the ability to follow guided instructions for the four mental states was assessed using visual analog scales.

4.4 HYPOTHESIS AND NULL HYPOTHESIS

HYPOTHESIS

The present study has hypothesized that, the two meditative states, dhāraṇā and dhyāna are different in construct and practice and hence they may produce different physiological changes.
**NULL HYPOTHESIS**

The null hypothesis of the present study was that, the two meditative states, *dhāraṇā* and *dhyāna* may not produce different physiological changes.