## **Tittle of dissertation**

## EFFECT OF YOGA BASED PERSONALITY DEVELOPMENT CAMP ON EMOTION REGULATION AND ATTENTION IN CHILDREN

Dissertation submited by Laxmi Under the guidance of Dr. Soubhagyalaxmi Mohanty

Towards Partial fulfillment Master of Science in yoga therapy



TO

### S-VYASA

Swami Vivekananada Yoga Anusandhana Samsthana (S-VYASA) (Decleared as Deemed -to-be university under section 3of the UGCAct,1956) No.19, Eknath Bhavan, Gavipuram Circle, Kempegowdanagar, Bangalore-560019 India

### A C K N O W L E D G E M E N T

I would like to express my deepest gratitude to my guide and mentor, Dr. Soubhagyalaxmi Mohanty for her constant guidance, encouragement as well as suggestions at every stage of my project from the beginning to its completion.

I am thankful to all children who participated in my research project as subjects in both control and yoga group.

I am grateful to all faculty members and my teachers for their help at different stages of this work.

I am always grateful to my university Swami Vivekananda Yoga Anusandhana Samsthana (S-VYASA) for its support and giving me the opportunity to gain knowledge and experience. Finally I thank to higher divine without whose wish, this work would not have been possible.

Date:

Name of the student

Place: S-VYASA BENGALURU

laxmi

### CERTIFICATE

This is Certify that LAXMI is submitting this literature review on Experimental Research on "EFFECT OF YOGA BASED PERSONALITY DEVELOPMENT CAMP ON EMOTION REGULATION AND ATTENTION IN CHILDREN" in partial fulfillment of the requirement for the Master of Science in Yoga registered in Swami Vivekananda Yoga Anusandhana Samsthana (S-VYASA University) Bengaluru and it is record of the work carried out by her in this institution.

Date:

Guide

Place: S-VYASA BENGALURU

Dr. Soubhagyalaxmi

Mohanty

### DECLARATION

I, hereby declare that this study was conducted by me at Jigni Bengaluru under the guidance of

Dr. Soubhagya laxmi, SVYASA University Bengaluru

I also declare that the subject matter of my dissertation entitled "THE EFFECT OF YOGA

### BASED PERSONALITY DEVELOPMENT CAMP ON EMOTION REGULATION AND ATTENTION IN CHILDREN".

Date:

student name

Place: S-VYASA BENGALURU

Laxmi

## STANDARD INTERNATIONAL TRANSLITERATION CODEUSED TO TRANSLITERATE SANSKRIT WORDS

a	=	अ	ìa	=	ভ	ра	=	प
ä	=	आ	са	=	च	pha	=	ጥ
i	=	इ	cha	=	छ	ba	=	ब
é	=	<b>6</b> 107	ja	=	ज	bha	=	भ
u	=	उ	jha	=	झ	ma	=	म
ü	=	জ	ï	=	ञ	ya	=	य
å	=	秾	öa	=	ट	ra	=	र
è	=	쟤	öha	=	ठ	la	=	ਲ
e	=	ए	òa	=	ड	va	=	व
ai	=	ऐ	òha	=	ढ	ça	=	হা
0	=	ओ	ëa	=	ण	ña	=	ष
au	=	औ	ta	=	त	sa	=	स
à	=	अ	tha	=	थ	ha	=	ह
ù	=	अः	da	=	द्	kña	=	क्ष
ka	=	क	dha	=	ध	tr	=	স
kha	=	ख	na	=	न	jïa	=	হ্ব
ga	=	ग				gha	=	घ

### ABSTRACT

#### **Background:**

Emotional-regulation is the conscious or non-conscious control on emotions, mood or effect. Children self-regulation skills are still developing and can often go up and down emotion regulation has been linked to attention. Attention is also considered an important emotion regulation strategy. Attentional deployment means antecedent emotion regulation strategy through which individual use attention to influence and shape their experience of emotion. Yoga may be an appropriate intervention to improve motor skills, executive function and attention

#### Method-

Sixty eight students were participated in this study. 40 participants were in yoga group and 28 in control group. The Emotion Regulation was assessed using Emotion Regulation Questionnaire and attention was assessed with the Six letter cancellation test. Yoga group was participated in a 10days yoga based personality development camp and the control group was followed their regular school activities. They were assessed on days 1 and after 10 days.

#### RESULT

The baseline was matched for the both variables. There was no significant improvement was in Yoga group (P = 0.739) and Control group (P = 0.611) in total emotion regulation. Both the groups showed significant change in six letter cancelation test total attempt; yoga group (p < 0.001) and Control group (p = 0.005). However the percentage of improvement was higher (24.77 %) in yoga group and as compared to control group (15.77%).

### **Conclusion-**

This study suggested that yoga may effective to regulating emotion in children and also yoga can improve the attention in children

**KEY-WORDS** 

Yoga, emotion regulation, attention, children

### CONTENT

I.INTRODUCTION11.1.1 Emotion11.2 Importance of emotions11.3 Emotional-regulation11.4 Poor emotion regulation21.5 Emotion-regulation and children21.6 Attention31.7 Attention and emotions regulation31.9 Yoga as a solution41.10 Need for the Study52.ANCIENT LITARATURE62.1.1 Aim72.1.2 Objectives72.1.3 Textual Resources72.1.4 Literature search outcomes72.1.5 Summery173SCIENTIFIC LITARATURE18	).
1.1 Emotion11.2 Importance of emotions11.3 Emotional-regulation11.3 Emotional-regulation11.4 Poor emotion regulation21.5 Emotion-regulation and children21.6 Attention31.7 Attention and emotions regulation31.9 Yoga as a solution41.10 Need for the Study52.ANCIENT LITARATURE62.1.1 Aim72.1.2 Objectives72.1.3 Textual Resources72.1.5 Summery173SCIENTIFIC LITARATURE18	
1.1 Emotion11.2 Importance of emotions11.3 Emotional-regulation11.4 Poor emotion regulation21.5 Emotion-regulation and children21.6 Attention31.7 Attention and emotions regulation31.9 Yoga as a solution41.10 Need for the Study52.ANCIENT LITARATURE62.1.1 Aim72.1.2 Objectives72.1.3 Textual Resources72.1.5 Summery173SCIENTIFIC LITARATURE18	
1.2 Importance of emotions11.3 Emotional-regulation11.4 Poor emotion regulation21.5 Emotion-regulation and children21.6 Attention31.7 Attention and emotions regulation31.9 Yoga as a solution41.10 Need for the Study52.ANCIENT LITARATURE62.1.1 Aim72.1.2 Objectives72.1.3 Textual Resources72.1.5 Summery173SCIENTIFIC LITARATURE18	
1.3 Emotional-regulation11.4 Poor emotion regulation21.5 Emotion-regulation and children21.6 Attention31.7 Attention and emotions regulation31.9 Yoga as a solution41.10 Need for the Study52.ANCIENT LITARATURE62.1.1 Aim72.1.2 Objectives72.1.3 Textual Resources72.1.4 Literature search outcomes72.1.5 Summery173SCIENTIFIC LITARATURE18	
1.4 Poor emotion regulation21.5 Emotion-regulation and children21.6 Attention31.7 Attention and emotions regulation31.9 Yoga as a solution41.10 Need for the Study52.ANCIENT LITARATURE62.1.1 Introduction62.1.2 Objectives72.1.3 Textual Resources72.1.4 Literature search outcomes72.1.5 Summery173SCIENTIFIC LITARATURE18	
1.5 Emotion-regulation and children21.6 Attention31.7 Attention and emotions regulation31.9 Yoga as a solution41.10 Need for the Study52.ANCIENT LITARATURE62.1 Introduction62.1.1 Aim72.1.2 Objectives72.1.3 Textual Resources72.1.4 Literature search outcomes72.1.5 Summery173SCIENTIFIC LITARATURE18	
1.6 Attention31.7 Attention and emotions regulation31.9 Yoga as a solution41.10 Need for the Study52.ANCIENT LITARATURE62.1 Introduction62.1.1 Aim72.1.2 Objectives72.1.3 Textual Resources72.1.4 Literature search outcomes72.1.5 Summery173SCIENTIFIC LITARATURE18	
1.7 Attention and emotions regulation31.9 Yoga as a solution41.10 Need for the Study52.ANCIENT LITARATURE62.1 Introduction62.1.1 Aim72.1.2 Objectives72.1.3 Textual Resources72.1.4 Literature search outcomes72.1.5 Summery173SCIENTIFIC LITARATURE18	
1.9 Yoga as a solution41.10 Need for the Study52.ANCIENT LITARATURE62.1 Introduction62.1.1 Aim72.1.2 Objectives72.1.3 Textual Resources72.1.4 Literature search outcomes72.1.5 Summery173SCIENTIFIC LITARATURE18	
1.10 Need for the Study52.ANCIENT LITARATURE62.1 Introduction62.1.1 Aim72.1.2 Objectives72.1.3 Textual Resources72.1.4 Literature search outcomes72.1.5 Summery173SCIENTIFIC LITARATURE18	
2.ANCIENT LITARATURE62.1 Introduction62.1.1 Aim72.1.2 Objectives72.1.3 Textual Resources72.1.4 Literature search outcomes72.1.5 Summery173SCIENTIFIC LITARATURE18	
2.1 Introduction62.1.1 Aim72.1.2 Objectives72.1.3 Textual Resources72.1.4 Literature search outcomes72.1.5 Summery173SCIENTIFIC LITARATURE18	
2.1.1 Aim72.1.2 Objectives72.1.3 Textual Resources72.1.4 Literature search outcomes72.1.5 Summery173SCIENTIFIC LITARATURE18	
2.1.2 Objectives72.1.3 Textual Resources72.1.4 Literature search outcomes72.1.5 Summery173SCIENTIFIC LITARATURE18	
2.1.3 Textual Resources72.1.4 Literature search outcomes72.1.5 Summery173SCIENTIFIC LITARATURE18	
2.1.4 Literature search outcomes72.1.5 Summery173SCIENTIFIC LITARATURE18	
2.1.5 Summery173SCIENTIFIC LITARATURE18	
<b>3 SCIENTIFIC LITARATURE</b> 18	
3.1 Yoga and Emotion regulation and 18	
attention in children	
4 AIM AND OBJECTIVES 22	
4.1 Aim 22	
4.2 Objective 22	
4.3 Research Question 22	
4.4 Hypothesis 22	
4.5 Null hypothesis 23	
5 5. METHODS 24	
5.1 Participent 24	

	5.1.1 Sample size	24
	5.1.2 Source of the sample	24
	5.2 Inclusion criteria	24
	5.3 Exclusion criteria	25
	5.4 Informed consent	25
	5.5 Design	25
	5.6 Intervention	26
	5.7 Assessment	28
	5.7.1 Emotion Regulation Questionnaire	28
	for Children and Adolescents (ERQ-CA):	
	5.7.2 Six Letter Cancellation Task (SLCT):	29
6	6. DATA EXTRACTION AND	30
	ANALYSIS	
	6.1 Data Extraction	30
	6.2 Data analysis	30
7	RESULT	31
8	DISCUSSION	36
9	APPRISAL AND	38
	CONCLUSION	39
	REFARENCE	40
	APPENDICES	46

### Chapter -1

### **INTRODUCTION**

#### **1.1 Emotion**

Emotion is an important part of our life. Sometimes we are not aware of them but their effect can be seen in our actions and relatively performance. Emotion is a wave of positive or negative experience that related with a specific pattern of physiological, behavioral and cognitive changes. Emotion has played a key role to inspire Adaptive behaviors that within the past would have given to the survival of humans and also responses to inner and outside events (Schacter, Gilbert, Wegner, & Hood, 2011).

#### **1.2 Importance of emotions**

Emotion is a mood for self and others and gratitude. Emotions are not still. Therefore, to train in the abilities of emotion consciousness, identification, and controlling, it is useful to practice observing them "on the spot" (Broderic 2009) in cognitive processes like our thought process, behavior particularly in learning emotion can play an important role. Emotions play a vital role to take any action and also influence the decisions (Cherry, 2017 &Kerkeni, Serrestou, Mbarki, Raoof, Mahjoub, 2017).

#### **1.3 Emotional-regulation**

The ability of monitoring and controlling our own behavior, emotions, or thoughts, and also altering them in following with the requirement of the situation called emotion regulation. Skillful understanding and balancing of the emotions is called emotion regulation. The emotion regulation involves the management or the company of diverse systems and components, including internal system (i.e., neurophysiological, cognitive, and subjective evaluations), behavioral part (i.e., facial and behavioral actions), and external/social components (i.e., cultural values, social contextual significance, personal motivation/goals) (Fox, 1994). Emotion regulations is affected by a range of methods in the physical, cognitive, behavioral, and social systems, and are particularly vulnerable during adolescence (Dahl, 2004).

#### **1.4 Poor emotion regulation**

Emotion deregulation conduct to a possibility of negative outcomes and has been related to depression (Garnefski, Boon, and Kraaij, 2003), self-injury (Hasking, Coric, Swannell, Martin, Thompson, and Frost, 2010), disordered eating, and drug and alcohol use in adolescents (Weinberg and Klonsky, 2009). Students who do not able to properly regulate their emotions are unable to create good relationships between themselves and other people and greater expressing problems, such as insolence, hyperactivity, and fighting behavior (Dunn & Brown, 1994; Rydell, Berlin, & Bohlin, 2003).

#### **1.5 Emotional-regulation and children**

Improvement is a "progressive sequence of orderly, rational changes", and usually describe through the different phases or period of development. The childhood period is from 24 month to about 11 years. Commonly this period distributed into two stages, first one is early childhood, and middle and later childhood .the early childhood period is from 24months about 5 to 6 years and the middle and late childhood is from about 5 to 6 years to 11 years. The adolescence is from 11 years to about 18 to 20 years (Hurlock, 1997).

The early childhood years is a fundamental period for the improvement of exclusive functions such as attention, self-consciousness, working memory (Anderson, 2002) and learning skills (Aram, 2005), that are compulsory for positive school alteration and later

academic success. When children move in early adolescence, children's social network is stretched to include new siblings, classroom and neighborhood peers and teachers and all these social influences offer a variety of information about emotion, its controlling inspirations, and its social tolerability (Cole, Michel, & Teti, 1994). Emotional behaviors were responses that could become "trained" and thus shape the personality of the child. Emotions caused pathological problems and required to be inhibited. Parents have to strictly control their exhibits of affection towards their children and to engage in manners designed to ascertain that children would reduce or suppress their emotions.

(http://www.encyclopedia.com/medicine/psychology/psychology-and-psychiatry)

#### **1.6 Attention**

Attention means to focus on events, matters, tasks, and complications in the outside world, procedures which are all dependent on the operative of attentional links in the brain (Weijer-Bergsma, Wijnroks, Jongmans, 2008). According to Reynolds thought to change with age concurrently with changes in brain function is considered as attention (Reynolds, Courage, Richards, 2008).

According to Levine (1990), brain's channel selector is called attention. Students pay attention in a classroom on the activities of other students, on the board, the color of their friend's shoes and bags also, someone ambulating down the hall, or what their teachers is verbally expressing. From these many possibilities, the mind must decide that which are the most pertinent from moment to moment and focus or concentrate on them.

#### **1.7** Attention and emotions regulation

Attention is more than just observing incoming motivations. Attention is also considered as an important emotion regulation strategy (Gelow, 2013). Attention can plan, preview, monitor and regulate our thoughts and actions (Thorne and Thomas, 2009). Attention has two major forms: passive and active. The involuntary process directed by external events that stand out from their environment, such as a bright flash, a strong dour, or a sudden loud noise is denoted as passive attention. Active attention is guided by alertness, concentration, interest and needs such as curiosity and hunger (Gaddes, Edgell, 1994).

#### **1.9 Yoga as a solution**

The term yoga has its verbal root "*yuj*" in Sanskrit, means joining. Yoga is joining *jivatama* with *Paramatma*, the individual self with the self. It is an expansion of the narrow constricted egoistic personality to an all-pervasive, eternal a blissful state of reality. Knowledge about the function of the mind, the body, and intellect in the process of attaining freedom is considered as yoga. According to Patanjali, yoga is a conscious process of gaining mastery over the mind *"Yoga Citta Våtti Nirodhaù"*. Sri Aurobindo gives the special importance of yoga and impact all-round personality development at the physiological, mental, intellectual, emotional and spiritual levels. Yoga is a methodical effort towards self–perfection by the development of the potentialities latent in the individual (Nagendra, 2000).

Yoga may be a well-liked and relatively inexpensive intervention that a lot of schools are integrating into their curriculums to handle an increasing need for self-regulatory skills like feeling regulation. Yoga is an ancient contemplative practice dating back over three, 500 years that aims at one issue – to alleviate suffering and promote optimal physical and mental thriving (Feuerstein, 2011). Yoga tends to be synonymous with yoga postures, breathing, and some meditation practices In Western contemporary settings. Historically, we can understand much broader and more comprehensive the practice of yoga with a wider range of techniques to promote wellbeing and balance among mind–brain–body functions. For children, mind-body integration exercises can help to reduce stress and anxiety, whilst enhancing attention and social skills. Self-regulation through breathing also improves metacognition and self-

esteem (Davidson et al., 2012). Yoga may be an appropriate intervention to improve motor skills, executive function and attention (Dash & Tells, 1999; Manjunath& Telles, 2001; Telles Raghuraj, Arankalle & Naveen, 2008). Yoga increases emotion regulation capacities of middle adolescents and provides benefits beyond that of physical education alone also showed a significant and positive correlation between body awareness and emotion regulation (Daly, Haden, Hagins, Papouchis, and Ramirez, 2015).

#### 1.10 Need for the Study

Emotion regulation has been a highly profound concept that has given rise to a vast amount of research. Improved emotion regulation leads to beneficial in all area of a child life. Children who are able to regulate their emotion pay more attention, work harder and achieve more in school. With their peers and show lower levels of physiological stress, they are better able to resolve conflicts. They are also behaved- and more caring towards others.

The present study was designed to assess the efficacy of 10 days yoga based personality development on attention and emotion regulation in school children.

### Chapter-2

### **ANCIENT LITERATURE REVIEW**

#### TITLE- Concept of emotion regulation according to ancient scripture

#### **2.1 Introduction**

Emotions form the central organizing dynamic of the mind, which seeks to know the phenomenal world. Emotions activate mental activity and shape the formation of events in the mind and important clusters of events that contribute to a sense of self.

Yoga has to say about controlling the emotions control the mind, the seat of all emotion, says Raja yoga. Think of others before you think of yourself, says karma yoga. Realize that you are not in this mind, says jnana yoga. Sublimate them by surrendering yourselves to the lord, says bhakti yoga.

Emotional regulation in Yoga is tied to stilling the mind and not identifying with this mental/emotional process. The yogi has developed skills derived from yogic practice and the wisdom that practice engenders. The yogi knows what feelings and emotions are present without being lost in them. This is essentially what *Patañjala* states as the goal of yoga in sutra 2: "*Yogaś citta vratti nirodhal*," Yoga is the stilling of the whirlpools of the mind.

In yoga psychology, emotions correspond most closely to *Patañjala* concept of *Citta Vritti* "whirlpools" of thought, feeling, sensation and action that seek to know and participate in *Prakrti*, the material world.

The present literary study thus focuses mainly on the concept of emotion regulations according to various ancient Indian scriptures.

### 2.1.1 AIM

Find out the concept of emotion regulation according to ancient scriptures.

### **2.1.2 OBJECTIVES**

The objectives of this review are to:

- 1. Understand the concept of the emotion according to ancient scriptures.
- 2. Recognize the consequences of emotion de according to ancient scriptures.
- 3. To find out the process of emotion regulation according to ancient scriptures.

#### 2.1.3 TEXTUAL RESOURCE

- Pātanjala Yoga Sutra
- Śrīmadbhāgavatagītā
- Nārada bhakti sūtra
- Muṇḍaka Upaniṣad
- Taittirīya Upaniṣad
- Charak samhita

### 2.1.4 LITERATURE SEARCH OUTCOME

• According to *Bhagavad Gītā*,

## कोधाद्भवति संमोहः संमोहात्स्मृतिविभ्रमः । स्मृतिभ्रंशाद् बुद्धिनाशो बुद्धिनाशात्प्रणश्यति ॥

Krodhādbhdavati sammohah sammohātsmṛtivibhramah

#### smrtibhramśād buddhināśo buddhināśātpranaśyati || BG 2/63

From anger comes delusion, and from delusion loss of memory. From a loss of memory comes the ruin of discrimination, and from the ruin of discrimination, he perishes.

## यस्त्विन्द्रियाणि मनसा नियम्यारभतेऽर्जुन ॥ कर्मेन्द्रियैः कर्मयोगमसक्तः स विशिष्यते ॥

Yastvindriyāņi manasā niyamyārabhate'rjuna|| karmendriyaih karamayogam asaktah sa višisyate|| BG 3/7

But that karma yoga is who control their knowledge senses with the mind, o Arjun, and engage the working senses in working without attachment, are certainly superior.

### मनुष्याणां सहस्रेषु कश्चिद्यतति सिद्धये ॥

### यततामपि सिद्धनां कश्चिन्मां वेत्ति तत्त्वतः ॥

Manuşyāṇāṁ sahasresu kaṣcidyatati siddhaye|| Yatatāmapi siddhanāṁ kaṣcinmāṁ vetti tattvataḥ|| BG 7/3

Amongst thousands of persons, hardly one strives for perfection, and amongst those who have achieved perfection, hardly one knows me in truth.

# यं हि न व्यथयन्त्येते पुरुषं पुरुष भ ।

### समदुःखसुखं धीरं सोऽमृतत्वाय कल्पते ॥

Yam hi na vyathayantyete puruṣam puruṣarṣabha Samaduḥkhasukham dhīram so'mṛtatvāya kalpate|| BG 2 / 15

o noblest of men, that person a wise judgment equipoised in happiness and distress, whom cannot be disturbed by these is certainly eligible for liberation.

### देवी संपद्विमोक्षाय निबन्धायासुरी मता।

### मा शुचः संपदं देवीमभिजातोऽसि पाण्डव ॥

Daivī sampadvimoksāya nibandhāyāsurī matā | Mā śucah sampadam daivīmbhijātonasi pāņdava || BG 16/5

Fix your mind on me alone, let your thoughts dwell in me. You will hereafter live in me alone. Of this, there is no doubt.

सुखदुःखे समे कृत्वा लाभालाभौ जयाजयौ। ततो युद्धाय युज्यस्व नैवं पापमवाप्स्यसि ॥

Sukhaduḥkhe same kṛtvā lābhālābhau jayājayau Tato yudhdāya yujyasva naivam pāpamavāpsyasi|| BG 2/38

Having made pain and pleasure, gain and loss, conquest and defeat, the same, engage thou then in battle. So shalt thou incur no sin.

## यस्मान्नोद्विजते लोको लोकान्नोद्विजते च यः। हर्षामर्षभयोद्वेगैर्मुक्तो यः स च मे प्रियः॥

yasmānno dvijate loko lokānnodvijate ca yaḥ Harṣāmarṣabhayodvegairmukto yaḥ sa ca me priyaḥ|| BG 12/15

He by whom the world is not afflicted and whom the world cannot be afflicted and whom the world cannot afflict, he who is free from joy, anger, fear, and anxiety—he is dear to me.

## ये तु धर्म्यामृतमिदं यथोक्तं पर्युपासते । श्रद्दधाना मत्परमा भक्तास्तेऽतीव मे प्रियाः ॥

Ye tu dharmyāmṛtamidam yathoktam paryupāsate

#### Śraddadhānā matparamā bhaktāstenatīva me priyāļ|| BG 12/20

They, verily, who follow this immortal dharma described above endued with sraddha looking upon me as the supreme goal, and devoted- they are exceedingly dear to me.

### त्रिविधं नरकस्येदं द्वारं नाशनमात्मनः ।

### कामः क्रोधस्तथा लोभस्तस्मादेतत्त्रयं त्यजेत् ॥

Trividham narakasyedam dvaaram nāśanamātmanah Kāmh krodhastathā lobhastasmādetattrayam tyajet|| BG 16/ 21

Lust, anger, and greed – this tread leads to the destruction of man's spiritual nature. They form the gateway to hell; they should be abandoned.

According to taittirīya Upanișad,

आनन्दो ब्रह्मेति व्यजानात् । आनन्दाद्ध्येव खल्विमानि भूतानि जायन्ते । आनन्देन जातानि जीवन्ति । आनन्दं प्रयन्त्यभिसंविश्चान्तीति ॥ Āanandoo brahmeti vyajānāt । Ānandād dhyeva khalvimāni bhutāni jāyante । Ānandena jātāni jīvanti ।

Ānandam Prayantyabhisamviśantīti II (taittirīya Upaniṣad 3/6)

Ananda or bliss is Brahman, the reality. It is from Ananda the whole universe has been created. It forms the same Ananda that the creation gets sustained and into the Ananda that the whole creation merges back.

According to Mundaka Upanisad,

# यं यं लोकं मनसा संविभाति विशुद्धसत्वः कामयते यांश्च कामान् । तं तं लोकं जयते ताम्स्च कामान् ।

तस्मात् आत्माज्ञं ह्यर्चयेत् भुतिकामः ॥

Yam yam lokam manasā samvibhāti viśudghasatvaḥ kāmayate yānśca kāmān Tam tam lokam jayate tāmsca kāmān Tasmāt āatmājñam hyarcayet bhutikāmaḥ|| ( muṇaḍaka) 3|1|10

Whatever world that a purified man conceives from his mind (desires), he gets those worlds. Hence the normal people desirous of physical benefits (as money, children, name, position, and fame) should worship such mahätmäs, bhaktas, the seers of the self.

## यथा नद्यः स्यन्दमानाः समुद्रेऽस्तं गच्छन्ति नामरूपे विहाय ॥ तथा विद्वान्नामरुपाद्विमुक्तः परात्परं पुरुषमुपैति दिव्यम् ॥

Yathā nadyaḥ syandamānāḥ samudre'stam gacchanti namaraūpe vihāya|| Tatha vidvannāmarupādvimuktaḥ parātparam puruṣamupaiti divyam||

(*Muņadaka U*|3|2|8)

All rivers with different dimensions, with different quarters, different colors, with different qualities, they all reach the ocean and lose their quantum, lose their direction and lose themselves totally.

In the same way, each and every individual who follows any path ultimately loses himself, loses all his individuality, all his limitations, strong likes, strong dislikes, all obsessions, all fears, he will relinquish everything and reach the source. That is the source of all bliss, knowledge, creativity, and freedom. According to nārada bhakti sūtra,

### नास्त्येव तस्मिन्तत्सुखसुखित्वम् ॥

Nastyeva Tasmianstatsukhitvam|| Nārada Bh|Su|24

There I am in that illicit love certainly there can never be happy in the happiness of the other.

### तदर्पिताखिलाचारः सन् कामकोधाभिमानादि तस्मिन्नेव करणीयम ॥

Tadarpitākhilācāraḥ San Kāmakrodhābhimānādi Tasmialeva karaṇaeyama||

Nārada Bh|Su 64

Having once dedicated all activities to god, he should show his desire, anger, egoism, etc only to him.

## यत्प्राप्य न किञ्चिद्वाञ्छति, न शोचति, न द्वेष्टि, न रमते, नोत्साही भवति ॥

Yatprāpya na kiñcidvāñchati na bhavati na śocati na dveṣṭi na Ramate notsāhī bhavati|| Nārada Bh|Su 5

By attaining which he does not desire anything else, neither grieves(over any loss or death of dear ones) nor hates anything, does not indulge in sensual pleasure, nor does he feels any urge(for the acquisition of material things).

### कामकोधमोहस्मृतिभ्रंशबुद्धिनाशसर्वनाशकारणत्वात् ॥

Kāmakrodhamohasmařtibhramśabuddhināśasarvanāśakāraṇatvāt|| Nārada Bh|Su 44

Because it's the cause of lust, anger, delusion, loss of memory, loss of intellect and total ruin.

looking upon me as the supreme goal, and devoted- they are exceedingly dear to me.

According to, Pātanjala Yoga Sutra

### दुःखदौर्मनस्याङ्गमेजयत्वश्वासप्रश्वासा विक्षेपसहभुवः ॥

Duhkhadauirmanasyāgngamejayatvaksvāsapraksvāsā Viksepasahabhuvah || Pa Yo Sü 31

Unhappiness, despair, nervousness and altered breathing indicate that a yogi is experiencing Antaraya.

### मैत्रीकरुणामुद्तितोक्षाणां

### सुखदुःख पुण्यापुण्यविषयाणांभावनातश्चित्तप्रसादनम् ॥३३

Maitrīkaruņāmuditokṣāṇāṁ Sukhaduḥkha puṇyāpuṇyaviṣayāṇāmbhāvanātackṣattaprasādanam|| Pa Yo Sü 33

To calm the mind, one should develop cultivating attitude s of friendliness, compassion,

gladness, and indifference respectively towards happiness, misery, virtue, and vice.

### यमनियमासनप्राणायामप्रत्याहारधरणाध्यानसमाधयोऽष्टावङ्गानि ॥

Yamaniyamāsanaprāņāyāmapratyāahāradhharaņādhhyānasamādhhayonastāvagnāni ||

Pa Yo Sü 3/29

yama, niyama, āsana, prāņāyāma and pratyāahāra known as bahirang yoga which is nothing

but controlling the mind in an indirect manner. The last three dhhyāna, dhyāna and

samādhhi are considered as antharanga yoga which are direct methods to gain mastery over the mind.

### अहिंसासत्यास्तेय ब्रह्मचर्यापरिग्रहः यमाः

#### Ahimsāsatyāsteya Brhmahācaryāparigrahah Yamāh || Pa Yo Sü 2/30

Non-violence, realism, non-stealing, sexual non-expressiveness Which results in the perception of spirituality(*Brahman*) and non-possessiveness, are the moral restraints

### शौचसंतोषतपःस्वाध्यायेश्वरप्रणिधानानि नियमाः ॥

Śauca Santoṣā Tapah Svādhyāyekṣvarapranidhānāni Niyamāh || Pa Yo Sü 32

Purification, contentment, austerity and profound religious meditation on the supreme lord are the recommended behaviors.

On the foundation of the yogic path of self-regulation lie ethical and moral precepts, which are specific examples of the standards or guidelines that contribute to self-control. These ethical precepts are contained in the first and second limb of *Pātanjala* eightfold *Raja yoga* path, namely *Yama* and *Niyama*, respectively. *Yama* refers to ethics regarding the outside world and therefore is particularly important in social contexts. It comprises non-violence (Sanskrit: *Ahimsa*), truthfulness non-stealing, moderation of senses, and greed lessens. *Niyama* refers to ethics regarding the inner world. It comprises purification or cleanliness and contentment, austerity (Sanskrit: *Tapas*), self-reflection and surrender or devotion to something greater than oneself. As such, the ethics suggested in yoga are devoid of religious connection—they are not based on moral value judgments of right and wrong—but are rather seen as actions that help to quiet an overactive mind, regulate emotions, and enhance prosocial and skillful behaviors.

शुरं धिरं शुचिमशुचिद्वेषिणं यज्वानमम्भोविहाररतिमक्तिष्टकर्माणं स्थानकोपप्रसादं वारुणं विधात्॥ Śuram dhiram śucimaśucidveşinam yajvānamambhovihāraratimaklistakarmānam Sthānakopaprasādam vārunam vidhāt || ca|| sam |4 37 |5|

Bravery, patience, purity dislike impurity, observance of religious rites fondness for aquatic sports, aversion for mean –acts, an exhibition of anger and pleasure proper place.

• Pātanjala Yoga Sutra	मैत्रीकरुणामुद्तितोक्षाणां सुखदुःख पुण्यापुण्यविषयाणांभावनातश्चित्तप्रसादनम ॥३३ to calm the mind, one should develop cultivating attitude s of friendliness, compassion, gladness, and indifference respectively towards happiness, misery, virtue, and vice.
• Śrīmadbhāgavatagītā	ध्यायतो विषयान्पुंसः संङ्गस्तेषूपजायते । सङ्गात्संजायते कामः कामात्कोधोऽभिजायत । २ । ६२ The man dwelling on sense objects develops an attachment for them. From attachment springs up desire and from desire (unfulfilled) ensues anger.
Nārada Bhakti Sutra	निरोधस्तु लोकवेदव्यापारन्यासः ।८ on the contrary, control of desires means the resignation to the lord of all worldly and scriptural activities.
Muṇaḍaka	यं यं लोकं मनसा संविभाति विशुद्धसत्वः कामयते यांश्च कामान् । तं तं लोकं जयते ताम्स्च कामान् । तस्मात् आत्माज्ञं ह्यर्चयेत् भुतिकामः ॥

॥ मुणडक ३ ।१ ।१०whatever world that a purified man conceives from his mind(desires) , he gets those worlds. Hence the normal peopledesirous of physical benefits (as money, children, name,position, and fame) should worship such mahätmäs, bhaktas,
the seers of the self.

#### 2.2 SUMMARY

Emotion is completely different from the attachment, emotional awareness with the ability to identify on the spot your own feeling and thoughts of others, the ability of harness emotion and apply them to tasks like thinking and problem solving.our strong likes and dislikes, our hatred and obsession our fears and moods all vanish after we surrender totally. Srīmadbhāgavatagītā teaches us the way to manage our emotion. The goal of devotion yoga in superbly enunciated below as" A prayer for the good of all, health and absence of misery and illness of all to succeed in divinity itself ". devotion yoga or the yoga of devotion aims to calm the mind, one ought to develop cultivating the perspective of friendliness, compassion, gladfulness, and indifference respectively towards happiness, misery, virtue, and vice. having once dedicated all activities to god, he should show his desire, anger, egoism, etc only to him.

### Chapter -3

### SCIENTIFIC LITERATURE REVIEW

#### **3.1 Yoga and Emotion regulation and attention in children**

### Yoga in an urban school for children with emotional and behavioral disorders: a

#### feasibility study

Thirty-seven children showed improved attention in class and adaptive skills and reduced depressive symptoms (behavioral symptoms and internalizing symptoms) after two yoga sessions per week during the school day for three months (Steiner, Sindhu, Pop Frenette, Perrin, 2012).

#### Yoga improves attention and self -esteem in underprivileged girl student.

Sixty girls have participated in this study with the 60 age range of 14 to 17 years at a low-income high school. IYM (physical posture, breathing exercises) for five days were given to the participant. Self- esteem and attention were assessed and the result showed a significant improvement in attention (Nagendra, Sethi, and Ganpat 2013).

#### Yoga and emotion regulation in high school students: A randomized controlled trial

Thirty-eight children have participated in this study. The sixteen-week intervention was given to the participants and the results highlight potential benefits to emphasizing the physical aspects of yoga when working with this population (Daly, Haden, Hagins, Papouchis, Ramirez, 2015).

#### Enhancing preschoolers self-regulation via mindful yoga

Twenty-nine children (16 interventions and 13 controls) participated in the yearlong study. The Mindful yoga intervention was implemented regularly by the classroom teacher for the treatment group. Children's self-regulation (i.e., attention, delay of gratification and inhibitory control) were assessed and results indicated significant effects of the intervention across all three indices of self-regulation (Razza, Dessa, Kimberly, 2013).

# Effect of yoga or physical exercise on physical, cognitive and emotional measures in children: A randomized controlled trial

Ninety-eight school children between 8 to 13 years were randomized as yoga and physical exercise groups Yoga group practiced yoga for 45 minutes each day, 5 days a week. During this time the physical exercise group had jogging-in-place, rapid repetitive movements and relay races or games. Both groups were assessed at the end of 3 months. Social self-esteem was higher after physical exercise compared to yoga. Both groups showed an increase in BMI and number of sit-ups. Balance worsened in the physical exercise group. Total, general and parental self-esteem improved in the yoga group (Telles, Singh, Bhardwaj, Kumar, & Balkrishna, 2013).

Sl. No	Author & Year	Participants	Intervention	Outcome measures/ Variables	Result
1	Naomi et al., 2012	160 children infourth and fifthgrade (age8–11) at an urban	Two yoga sessions per week during the the school day for 3 months.	Behavior Assessment Scale, Teacher Rating Scale-Child, The Swanson, Kotkin, Agler, M- Flynn, and Pelham	Teachers reported improved attention in clas and adaptive skills and reduced depressive symptoms (behavioral symptoms and internalizing symptoms also
		elementary school in small groups (7– 10 students) twice		Rating Scale (SKAMP)	
2	Nagendra et al.,2013	60 ( age range of 14 to 17 years at a low-income high school)	IYM for 5 days ( physical postures, breathing exercises, meditation, and a distinct philosophy)	The Rosenberg Self-esteem (RSE) scale, d2 ( cancellation test),	The IYM is found to show significant improvement in the attention and SE in high girl students. The study confirms that even short-term Yoga intervention in the form of IYM improves the SE and enhances the attention abilities of the high school children paving way for academic excellence.
3	Rachel et al., 2013	29 children (18 intervention and 16 control) from two preschool	40 h of Mindful yoga across 25 weeks. The daily practice included breathing and sun	children behavior questionnaire, Toy Wrap, Head Shoulders Knees and Toes (HSKT), Drawing Task, Pencil-Tapping Task	Results from the direct assessments indicated significant effects of the intervention across all three indices of self-regulation. Overall, our results suggest that mindful yoga can be used to enhance self-regulation among pre-

		classrooms	salutations during		scholars
			Morning circle.		
4	Daly et al.,	Thirty-eight high	42 sessions of 40-	Emotion Regulation, Mindful	Emotion regulation increased significantly in
	2015	school students	min yoga classes,	Attention Awareness, Self-	the yoga group as compared to the PE group.
	2013		three times a week	Compassion Scale,	No significant relationship was discovered
			for 16 weeks	Multidimensional Assessment	between the changes in emotion regulation
			postures, breathing,		and proposed mediating variables.
			relaxation and		
			guided meditation		
5	Shirley et al., 2013	98 children; 38	Breathing	Euro fit physical fitness test,	BMI, and a number of sit-ups .increased
		were females, 49	techniques, postures,	Strop color-word task for	in Both groups. In the Strop task, both groups
		in yoga group and	relaxation, and	children, Battle's self-esteem	showed improved color, word- and color-
		49 were physical	chanting.PE group:	inventory	word naming. While the physical exercise
		exercise (PE),	jogging-in-place,		group showed higher interference scores.
		group	rapid repetitive		Total, general and parental self-esteem
			movements, and		improved in the yoga group.
			relay races or games.		

### Chapter - 4

### **AIM AND OBJECTIVES**

### 4.1 AIM

To measure the effect of yoga based Personality Development Camp on emotion Regulation and attention in children

### **4.2 OBJECTIVES**

- To measure the effect of yoga on attention
- To find out the effect of yoga on emotion regulation
- To compare the effect of 10 days residential personality development camp with the regular school activities of school on emotion regulation and children

### **4.3 RESEARCH QUESTION**

- Can yoga base personality camp show better improvement in emotion regulation in Children?
- Can yoga based personality development camp improve the attention of children?
- Can a 10 days residential program bring any positive changes in emotion regulation and attention as compared to the normal activities of school?

### 4.4 HYPOTHESIS

H1: Yoga-based personality development may bring positive changes in emotion

Regulation on children

H2: Yoga-based personality development may bring positive changes on attention in Children H3: Residential yoga based personality development group children may perform better Than the children who are attending regular school activities.

### **4.5 NULL HYPOTHESIS**

H01: Yoga-based personality development may not bring positive changes on emotion

Regulation in children

H02: Yoga-based personality development may not bring positive changes on emotion

Regulation in children

H03: Residential yoga based personality development group children may not perform Better than the children who are attending regular school activities.

### Chapter - 5

### **METHODS AND MATERIALS**

### **5.1 PARTICIPENT**

#### **5.1.1 SAMPLE SIZE**

The sample size was calculated by using G\* power software version 3.0.10 from the earlier study for the variable six letter cancellation test (Purohit et al., 2015). A required sample size of n=36 (18+18) was obtained by applying Cohen's formula for an effect size of 0.62 and an alpha of 0.05, power at 0.95.

#### **5.1.2 SOURCE OF THE SAMPLE**

- Yoga group children were selected from 10-day yoga-based "Personality Development Camp" (PDC) at SVYASA Yoga University, South India and without any experience of yoga.
- > Control group were selected from a school within the same locality.

### **5.2 INCLUSION CRITERIA**

The inclusion criteria included

- (i) between 9 and 15 years of age
- (ii) English as the medium of instruction in the school
- (iii) willingness to participate in the study
- (iv) no prior exposure to yoga in last six months
- (v) both gender

### **5.3 EXCLUSION CRITERIA**

The exclusion criteria included

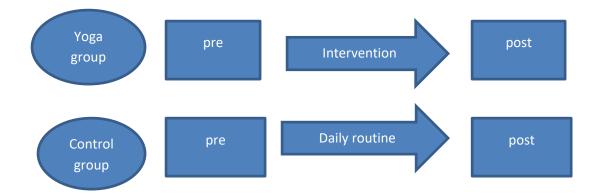
- (i) Who did not provide the consent form
- (ii) Any history of neurological or psychiatric disturbances
- (iii) learning disability if any (i.e., slow learner)

### **5.4 INFORMED CONSTANT**

Signed informed consent was obtained from the parents and guardian or the higher authority of the School.

### **5.5 DESIGN**

This was two group pre-post studies. Eligible subjects from the PDC camp at the yoga the yoga institution that was willing to participate in the study stratified based on age and assessed to the yoga group. The control group was assessed before and after 10 days.



### **5.6 INTERVENTION**

The 10-day "Personality Development Camp" (PDC) of 10 h per day was designed for children below 17 years of age. The 10-h routine was based on physical postures (*Asanas*), voluntary regulated breathing (*Pranayama*), meditation (*Dhyana*), relaxation techniques, internal cleansing practices (*Kriyas*), and reciting hymns from traditional *yoga* texts, music, *yoga* games, and happy assembly. *Kriyas* are yogic cleansing exercises, which are performed to cleanse the body and assist with the natural removal of waste products.

Table 2: Daily schedule of PDC

05:00 am	Wake up	
06:00 am to 07:45 am	Morning prayer	
	<ul> <li>Breathing practices</li> </ul>	<ul> <li>Hand stretch breathing</li> <li>Ankle stretch breathing</li> <li>SLR breathing</li> <li>Nava Sana breathing</li> <li>Sectional breathing</li> <li>Dog breathing</li> <li>Rabbit breathing</li> <li>Sasankasana breathing</li> <li>Pavanmuktasana breathing</li> <li>Bhujang asana breathing</li> <li>Setubandhasana breathing</li> <li>Baddhkonasana breathing</li> </ul>
	✤ Loosening practices	<ul> <li>Baddhkonasana breathing</li> <li>Spinal stretch</li> <li>Pada sanchalan</li> <li>Sit-ups</li> <li>Butterfly stretch</li> <li>Tiger stretch</li> <li>Clap jumping</li> <li>Makrasana cycling</li> <li>Cycling</li> <li>Baby walk</li> <li>Back stretch</li> <li>Namste rotation</li> </ul>
	<ul> <li>Shakti vikashaka</li> </ul>	<ul> <li>Anguli Shakti vikashaka</li> </ul>

	<ul> <li>Bhujabhanda sakti vikashaka</li> </ul>
	<ul> <li>Jangha Shakti vikashaka</li> </ul>
	<ul> <li>Pindli Shakti vikashaka</li> </ul>
	<ul> <li>Bhujangasana and parvatasana</li> </ul>
	<ul> <li>Kaphoni Shakti vikasaka</li> </ul>
<ul> <li>Yoga asana</li> </ul>	✓ Gomukhasana
	✓ Baddhkonasana
	✓ Ardhkatichakrasana
	✓ Makarasana
	✓ Virikshasana
	✓ Garudasana
	✓ Padhastasana
	✓ Ardhcakrasana
	✓ Padmasana
	✓ Ustrasana
	✓ Halasana
	✓ Vajrasana
	<ul><li>✓ Yoga mudra</li><li>✓ Trikonasana</li></ul>
	<ul><li>✓ Bhujangasana</li><li>✓ Sasankasana</li></ul>
	✓ Vajrasana
	✓ Ustrasana
	✓ Dhanurasana
	✓ Cakrasana
	✓ Virbhadrasana
<ul> <li>Pranayama</li> </ul>	<ul> <li>Nadi shuddhi</li> </ul>
	o Sitali
	<ul> <li>Sithkari</li> </ul>
	o Sadanta
	o Bhramari
	$\circ$ surya anulom vilom
	<ul> <li>namaskara with chantings</li> </ul>
	(A,U & M)
	• Candra anulom vilom
<ul><li>Bandhas \$ Mundras</li></ul>	Cin mudra
	븆 Cinmaya mudra
	📥 Adi mudra
	븆 Brahma mudra
	Uddiyana bandha

		<ul><li>♣ Agnisara</li><li>♣ Jalandarbhanda</li></ul>
	✤ Kriyas	Kapalabhati
07:45 am to 08:00 am	Chanting session	Geeta chanting
08:00 am to 8:45 am	Breakfast	
08:45 am to 09:30 am	Karam yoga	
09:30 am to 10:30 am	Bath & wash	
10:30 am to 11:30 am	Lecture	
11:30 am to 12:00 am	Song practice	
12 :00 pm to 01:00 pm	Lunch	
01:00 pm to 02:00 pm	Relaxtation technique	DRT
02:00 pm to 03:30 pm	Creativity	
03:30 pm to 04:30 pm	Happy assembly preparation	
04:30 pm to 05:00 pm	Milk & snacks	
05:00 pm to 06:00 pm	Krida yoga	1. Creativity development games
		2. Concentration development games
		3. Iq development games
		4. Memory development games
06:00 pm to 6:30 pm	Bhajan session	
06:30 pm to 07:30 pm	Dinner	
07:45 pm to 09:15 pm	Happy assembly	
09:15 pm to 09:30 pm	Dairy writing	
09:30	Nisha svasti	

#### **5.8** Assessment

#### ✓ Emotion Regulation

It is a complex process that involves initiating, inhibiting, or modulating one's state or behavior in

a giving situation (the free encyclopedia. Emotion self-regulation)

### 5.8.1 Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA):

Purpose— a revised version of ERQ-CA developed by Gullone (2010) was used to measure the

emotion regulation and is applied to individuals 9-16 years. It was comprised of 10 items, rated

on a 5-point Likert-type response scale. Higher scores on each scale indicate greater use of the corresponding emotion regulation strategy. The questionnaire had a high level of internal consistency a = .79 Reappraisal, .73 Suppression) and three-month test-retest reliability (r = .69 for both scales), as well as sound convergent and discriminate validity with both younger and older adults (Gullone et al., 2010).

 $\checkmark$  Attention

#### 5.8.2 Six Letter Cancellation Task (SLCT):

The six-letter cancelation task measures attention performance. It was a worksheet with six specified target letters, which were to be canceled and have a working section consisting of alphabets arrange randomly in 22 rows and 14 columns. Participants were asked to cancel the target letters as much as possible in 90 sec with any possible strategy. The total number of cancellations attempted, and the number wrongly canceled were counted. The the net score is obtained by deducting the latter from the former (Natu and Agarwal, 1997).

## **DATA EXTRACTION AND ANALYSIS**

## **6.1 DATA EXTRACTION**

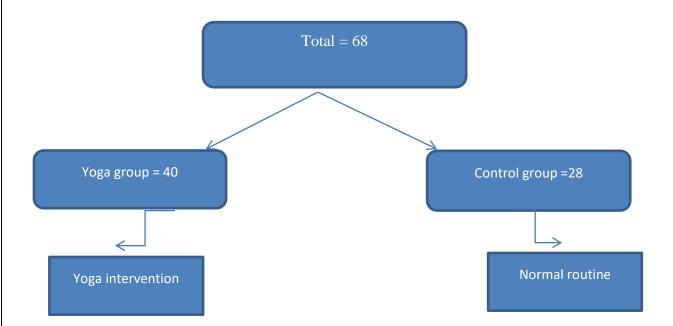
Data extraction was done following the instruction mentioned in the manual of the Emotion Regulation Questionnaire and Six Letter Cancellation Task (SLCT). The detailed procedure is mentioned in Chapter 5.7.

## **6.2 DATA ANALYSIS**

Data were analyzed by using SPSS version. Paired sample t-test and Independent sample test was performed to find out the within group and between-group differences respectively

## **RESULT**

This was a two-group pre-post study. Sixty-Eight students participated in this study. Yoga group was from a residential personality development camp in SVYASA University, Bangalore whereas the control group was from a school within the same locality. The yoga group was practiced asana, pranayama, breathing exercises for 10 days and control group was continuing with their daily routine. Both the groups were assessed on Emotional Regulation and attention before and end of the intervention. Emotion Regulation Questionnaire was used to measure for Emotional Regulation and Six letter cancellations Test to measure the attention.



## **Emotion Regulation**

At baseline, there was no significant difference between groups for the emotion regulation (p = 0.13).

Independent t-test showed a significant difference between post scores of both the groups in Emotion regulation (P < 0.001).

Paired t' test; yoga group showed no significant change in total emotion regulation (P = 0.739). Control group also did not demonstrate any significant change in total emotion regulation (P = 0.611).

## Attention

At baseline, there was no significant difference between groups for the six letter cancelation test total attempt (p = 0.117).

Independent t-test showed no significant difference between post scores of both the groups in the six letter cancelation test total attempt (p = 0.323).

Paired t' test; yoga group showed a significant change in six letter cancelation test total attempt (p <0.001). Control group also demonstrate significant change in six letter cancelation test total attempt (p = 0.005). However, the score of total attempt improvement is higher (24.77 %) in yoga group as compared to control group (15.77%).

	Yoga				Control				Between-Group	
									P-1	value
Variables	Pre	Post	%change	P-value	Pre	Post	% change	P-value	Pre	Post
ER	33.23±4.649	33.48±4.032	0.75	.739	30.00±5.689	29.46±4.141	-1.8	.611	.013	.000
T.A	21.80±7.552	27.20±7.501	24.77	.000	25.11±9.593	29.07±7.817	15.77	.005	.117	32

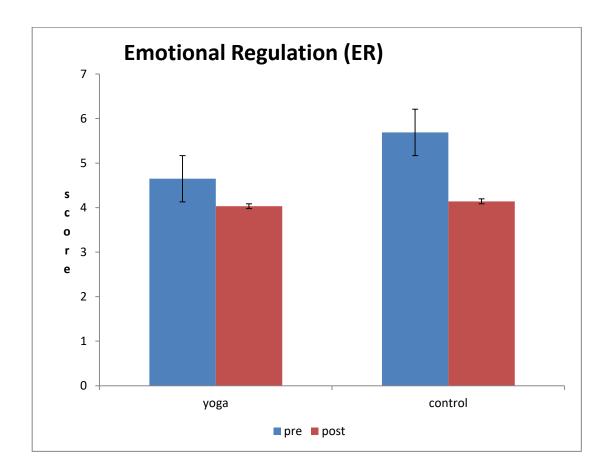


Figure 1: Comparison of Emotional Regulation (ER) test scores between the groups.

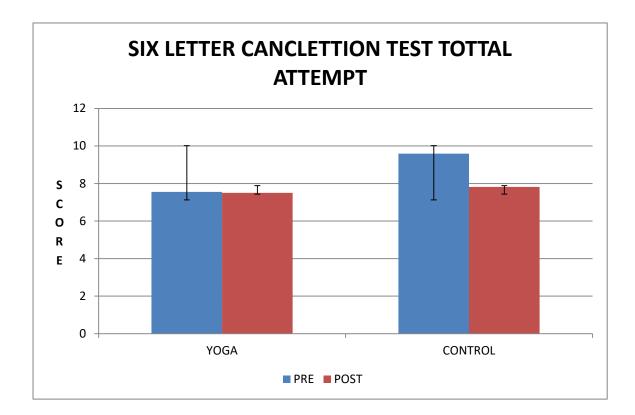


Figure 2: Comparison of six letter cancelation total Attempt test scores between the groups.

## DISCUSSION

This was a two-group pre-post study. Sixty-eight children aged 9- 15 years participated in this study. Yoga group (n=40) and physical exercise group (n=28). The participants for both the yoga were received the intervention for a duration of 10 days. And control group follow their daily routine. The within-group comparison showed a higher improvement for in yoga group in all the variables as compared to control group. The detail explanation is given below.

#### SUMMARY OF RESULTS

#### **Emotion Regulation**

In within-group comparison, both the groups did not show any significant improvement in the emotion regulation. The mean value increased from 33.23 to 33.48 in yoga group whereas the mean value decreased from 30.00 to 29.46 in control.

#### Compare with the previous study

In contrast to our study examined on 37 school students, aged 15-17 years at the baseline and after 16 weeks of intervention showed significant improvement in Emotion regulation in the yoga group as compared to the physical education group (Daly, Haden, Hagins, Papouchis, 2015).

#### Attention

In within-group comparison both the groups showed significant improvement in the attention. The mean value in yoga group increase from 21.80 to 27.20 And 25.11 to 29.07 in control group

#### Comparison

Earlier yoga studies on various cognitive functions such as on STROOP (Telles et al., 2013); DSST (Raghavendra & Telles, 2012), digit substitution forward and digit substitution backward (Chandla et al., 2013; Joshi & Telles, 2008; Talwadkar, Jagannathan, & Raghuram, 2014; Thakur, Kulkarni, & Pant, 2011), Trail Making Test (Prakash et al., 2010; Talwadkar et al., 2014) were aligned with present study.

## Mechanism

Yogic breathing techniques (*Prānāyāma*) have been found important in improving various Cognitive domains (Bhavanani, Madanmohan, & Udupa, 2003; Joshi & Telles, 2008) as it Regulates the autonomic functions by dominating sympathetic (Raghuraj et al., 1998; Telles et al., 2011; Veerabhadrappa et al., 2011) and parasympathetic nervous system (Pramanik, Pudasaini, & Prajapati, 2010; Raghuraj & Telles, 2008). The high-frequency yoga breathing Practice (*Kapālabhāti*) enhances blood flow to pre-frontal cortex (Bhargav et al., 2014) which is Associated with memory, attention, and executive functions (Gray et al., 2002; West, 1996). Earlier studies on specific breathing techniques have shown the beneficiary effect of *Kapālabhāti* and *Bhastrikā Prānāyāma* on auditory working memory, central neural processing and sensorimotor performance (Sharma et al., 2014) and *Bhrāmarī Prānāyāma* on inhibition response and cognitive control in healthy participants (Rajesh, Ilavarasu, & Srinivasan, 2014).

Trāţaka, yoga technique which improves the concentration of mental thought by focusing

Towards the given tasks. A recent study on *Trāțaka* showed enhancement on the tests of cognitive functions; Digit Span Test and TMT-B in elderly participants after one month of regular practice (Talwadkar et al., 2014). Yoga practices have been positively associated with acute increases in thalamic GABA levels and improvements in mood and reduction in anxiety and depressive symptoms (Streeter, Gerbarg, & Saper, 2012; Streeter et al., 2010). Maintaining awareness is a key component of yoga. In our study awareness was incorporated throughout all practices may develop the internal awareness which might have influenced the cognitive outcome measures in the present study.

## APPRAISAL

## 9.1 strength of the study

- **4** Two group pre-post study
- ↓ The inclusion of both girl and boy
- **4** the questionnaire was understandable for children
- **4** participants do not have any prior exposure to yoga in last six months
- 4 data were collected in systematically way from both groups

## 9.2 limitations

- $\checkmark$  The short duration of the training program
- ✓ No randomization
- ✓ Control group was from a different setup

## 9.3 Application of the study

- > The practice of yoga in children helps them to improve their emotional balance.
- > Yoga practices also help children to improve their attention.
- > May further potential applications of yoga are revealed

## 9.4 Future suggestion

- Studies can be done with increased the Intervention period.
- Further Randomized control studies should be incorporated to confirm the result of the current study.
- ✤ Yoga could be compared with physical exercise interventions.
- Replication or expansion of the current study would be ideal and valuable.

# CONCLUSION

The ability to regulate our emotion shapes the mind & directs it towards healthy living. Participant deeply observes their emotion regulation and check their attention power through the different type of questionnaire they can easily get to know about themselves.10 days of yoga practice gives them an improvement in their emotional level and attention power.

The present study shows that there are significant changes in attention in the yoga group 10 days of yoga based on personality development camp may help in improving the emotional regulation and attention in children.

## References

- Anderson, P. (2002). Assessment and development of executive function (EF) during childhood. *Child Neuropsychology*, 8(2), 71-82.
- Aram, D. (2005). Continuity in children's literacy achievements: A longitudinal perspective from kindergarten to school. *First Language*, 25(3), 259-289.
- Ballard, C. G., Aarsland, D., McKeith, I., O'Brien, J., Gray, A., Cormack, F., ... & Brown, R. (2002). Fluctuations in attention PD dementia vs DLB with parkinsonism. *Neurology*, 59(11), 1714-1720.
- Bhargav, H., Raghuram, N., & HR, N. (2014). Frontal hemodynamic responses to highfrequency yoga breathing in schizophrenia: a functional near-infrared spectroscopy study. *Frontiers in psychiatry*, 5, 29.
- Braver, T. S., & West, R. (2008). Working memory, executive control, and aging. *The handbook of aging and cognition*, *3*, 311-372.
- Colombo, A. L., Tobón, A., Restrepo, A., Queiroz-Telles, F., & Nucci, M. (2011). Epidemiology of endemic systemic fungal infections in Latin America. *Medical mycology*, 49(8), 785-798.
- Chandla, S. S., Sood, S., Dogra, R., Das, S., Shukla, S. K., & Gupta, S. (2013). Effect of the short-term practice of pranayama breathing exercises on cognition, anxiety, general wellbeing and heart rate variability. *Journal of the Indian Medical Association*, 111(10), 662-665.
- Cole, P. M., Michel, M. K., & Teti, L. O. D. (1994). The development of emotion regulation and dysregulation: A clinical perspective. *Monographs of the society for research in child development*, 59(2-3), 73-102.

- Dahl, R. E. (2004). Adolescent brain development: a period of vulnerabilities and opportunities.Keynote address. *Annals of the New York Academy of Sciences*, *1021*(1), 1-22
- Daly, L. A. (2015). Yoga and emotion regulation in high school students: The internal relationship (Doctoral dissertation, Long Island University, The Brooklyn Center).
- Daly, L. A., Haden, S. C., Hagins, M., Papouchis, N., & Ramirez, P. M. (2015). Yoga and emotion regulation in high school students: a randomized controlled trial. *Evidence-based complementary and alternative medicine*, 2015.
- Dash, M., & Telles, S. (1999). Yoga training and motor speed based on a finger tapping task.
- Dunn, J. (2003). Emotional development in early childhood: A social relationship perspective. *Handbook of affective sciences*, 332-346.
- Elizabeth Bergner Hurlock. (1997). Child development. (jo a Brewer, ed .) (2<sup>nd</sup> ed., pp. 600-69). Mexico: mc graw- hill.
- Feuerstein, G. (2011). The path of yoga: An essential guide to its principles and practices.Shambhala Publications.
- Fox, N. A. (Ed.). (1994). The development of emotion regulation: Biological and behavioral considerations (Vol. 59). Chicago: University of Chicago Press
- Gaddes W.H., & Edgell, D (1994) Learning Disability and Brain Function: A Neuropsychological Approach. New York: Springer-Verlag.
- Garnefski, N., Boon, S., & Kraaij, V. (2003). Relationships between cognitive strategies of adolescents and depressive symptomatology across different types of life event. *Journal* of Youth and Adolescence, 32(6), 401-408.

Gelow, S. (2013). Attention to emotion regulation. stockholm university

- Gullone, E., Hughes, E. K., King, N. J., & Tonge, B. (2010). The normative development of emotion regulation strategy use in children and adolescents: A 2-year follow-up study. *Journal of Child Psychology and Psychiatry*, 51(5), 567-574.
- Hasking, P. A., Coric, S. J., Swannell, S., Martin, G., Thompson, H. K., & Frost, A. D. (2010).Brief report: Emotion regulation and coping as moderators in the relationship between personality and self-injury. *Journal of Adolescence*, *33*(5), 767-773.
- J Davidson, R., Dunne, J., Eccles, J. S., Engle, A., Greenberg, M., Jennings, P., ... & Roeser, R.
   W. (2012). Contemplative practices and mental training: Prospects for American education. *Child development perspectives*, 6(2), 146-153.
- Joshi, M., & Telles, S. (2008). SHORT COMMUNICATION IMMEDIATE EFFECTS OF RIGHT AND LEFT NOSTRIL BREATHING ON VERBAL AND SPATIAL SCORES. Indian J Physiol Pharmacol, 52(2), 197-200.

Kendra cherry,(2017) emotion and types of emotional responses.

- Kerkeni, L., Serrestou, Y., Mbarki, M., Raoof, K., & Mahjoub, M. A. (2017, May). A review of speech emotion recognition: Case of pedagogical interaction in the classroom. In Advanced Technologies for Signal and Image Processing (ATSIP), 2017 International Conference on (pp. 1-7). IEEE.
- Levine, M. D. (1990). Keeping ahead in school: a student's book about learning abilities and learning disorders/Mel Levine.
- Madanmohan, V. P., Udupa, K., Bhavanani, A. B., & Prakash, E. S. (2003). Review of Shavasana Studies Conducted at JIPMER During 2001-2002. *Yoga Mimamsa*, 35(1&2), 26-34.
- Manjunath, N. K., & Telles, S. (2001). Improved performance in the Tower of London test following yoga. *Indian journal of physiology and pharmacology*, *45*(3), 351-354.

Nagendra, H. R. (2010). Yoga its basis and applications.

Natu, M. V., & Agarwal, A. K. (1997). Testing of stimulant effects of coffee on the psychomotor performance: An exercise in clinical pharmacology. *Indian Journal of Pharmacology*, 29(1), 11.

Patricia Broderick (2009) what is mindfulness and how its related to emotion regulation

- Prakash, R., Dubey, I., Abhishek, P., Gupta, S. K., Rastogi, P., & Siddiqui, S. V. (2010). Longterm Vihangam Yoga meditation and scores on tests of attention. *Perceptual and Motor Skills*, 110(3\_suppl), 1139-1148.
- Pramanik, T., Pudasaini, B., & Prajapati, R. (2010). The immediate effect of a slow pace breathing exercise Bhramari pranayama on blood pressure and heart rate. *Nepal Med Coll J*, *12*(3), 154-157.
- Raghavendra, B. R., & Telles, S. (2012). Performance in attentional tasks following meditative focusing and focusing without meditation. *The ancient science of life*, *32*(1), 49.
- Raghuraj, P., Ramakrishnan, A. G., Nagendra, H. R., & Telles, S. (1998). Effect of two selected yogic breathing techniques on heart rate variability. *Indian Journal of physiology and pharmacology*, 42, 467-472.
- Rajesh, S. K., Ilavarasu, J. V., & Srinivasan, T. M. (2014). Effect of Bhramari Pranayama on response inhibition: Evidence from the stop signal task. *International journal of* yoga, 7(2), 138.
- Razza, R. A., Bergen-Cico, D., & Raymond, K. (2015). Enhancing preschoolers' self-regulation via mindful yoga. *Journal of Child and Family Studies*, 24(2), 372-385.
- Reynolds, G. D., Courage, M. L., & Richards, J. E. (2010). Infant attention and visual preferences: Converging evidence from behavior, event-related potentials, and cortical source localization. *Developmental Psychology*, 46(4), 886.

- Rydell, A. M., Berlin, L., & Bohlin, G. (2003). Emotionality, emotion regulation, and adaptation among 5-to 8-year-old children. *Emotion*, 3(1), 30.
- Schacter, D. L., Gilbert, D. T., Wegner, D. M., & Hood, B. M. (2011). Psychology (European ed.).
- Sethi, J. K., Nagendra, H. R., & Ganpat, T. S. (2013). Yoga improves attention and self-esteem in underprivileged girl student. *Journal of education and health promotion*, 2.
- Sharma, V. K., Rajajeyakumar, M., Velkumary, S., Subramanian, S. K., Bhavanani, A. B., Madanmohan, A. S., & Thangavel, D. (2014). Effect of fast and slow pranayama practice on cognitive functions in healthy volunteers. *Journal of clinical and diagnostic research: JCDR*, 8(1), 10.
- Steiner, N. J., Sidhu, T. K., Pop, P. G., Frenette, E. C., & Perrin, E. C. (2013). Yoga in an urban school for children with emotional and behavioral disorders: A feasibility study. *Journal* of Child and Family Studies, 22(6), 815-826.
- Streeter, C. C., Whitfield, T. H., Owen, L., Rein, T., Karri, S. K., Yakhkind, A., ... & Jensen, J. E. (2010). Effects of yoga versus walking on mood, anxiety, and brain GABA levels: a randomized controlled MRS study. *The Journal of Alternative and Complementary Medicine*, 16(11), 1145-1152.
- Streeter, C., Gerbarg, P., & Saper, R. (2012). P01. 31. Yoga therapy associated with increased brain GABA levels and decreased depressive symptoms in subjects with the major depressive disorder: a pilot study. *BMC complementary and alternative medicine*, *12*(S1), P31.
- Talwadkar, S., Jagannathan, A., & Raghuram, N. (2014). Effect of trataka on cognitive functions in the elderly. *International journal of yoga*, 7(2), 96.
- Telles, S., Raghuraj, P., Arankalle, D., & Naveen, K. V. (2008). An immediate effect of high-frequency yoga breathing on attention.

- Telles, S., Singh, N., Bhardwaj, A. K., Kumar, A., & Balkrishna, A. (2013). Effect of yoga or physical exercise on physical, cognitive and emotional measures in children: a randomized controlled trial. *Child and Adolescent Psychiatry and Mental Health*, 7(1), 37.
- Thorne, G., & Thomas, A. (2007). What is attention?
- \_ Van de Weijer-Bergsma, E., Wijnroks, L., & Jongmans, M. J. (2008). Attention development in infants and preschool children born preterm: a review. *Infant Behavior and Development*, *31*(3), 333-351.
- Veerabhadrappa, S. G., Herur, A., Patil, S., Ankad, R. B., Chinagudi, S., Baljoshi, V. S., & Khanapure, S. (2011). Effect of yogic bellows on cardiovascular autonomic reactivity. *Journal of cardiovascular disease research*, 2(4), 223-227.
- Weinberg, A., & Klonsky, E. D. (2009). Measurement of emotion dysregulation in adolescents. *Psychological Assessment*, 21(4), 616.

# CHAPTER 12

## APPENDIX

## **Consent form:**

## INFORMED CONSENT TO PARTICIPATE IN RESEARCH SWAMI VIVEKANANDA YOGA ANUSANDHANA SAMSTHANA



Vivekananda Road, Kallabalu Post, Anekkal Taluk, Jigani, Bengaluru

research@svyasa.org; Phone: 080-22639983

# Title of the Project:EFFECT OF YOGA BASED PERSONALITY DEVELOPMENT CAMP ONEMOTIONREGULATION AND ATTENTION IN CHILDREN"

Principal investigator: Laxmi

Organization: Swami Vivekananda Yoga Anusandhäna Samsthäna

## This informed consent has two parts:

- ↓ Information sheet (to share information about the research)
- ↓ Certificate of Consent (for signature if you allow conducting this study )

## You will be given a copy of fully informed consent form.

Your institution is being invited to participate in a research study. This form is designed to provide you with information about this study. The principal investigator or representative will describe this study to you and answer any of the questions. If you have any questions or complaints about the informed consent process or the research study.

There may be some words that you do not understand. Please ask the Principal investigator or the representative to stop as you go through the information in case of any doubts. If you have questions later you can ask during the study

## **Purpose of the Research:**

• The aim of this study is to assess the emotional regulation and attention in the children

## **Participant selection:**

• Children between the age group of 9 to 15, and those who are willing to participate in the study. From the study children who are having any serious illness or under medication will be excluded.

## What will be the children asked to do if I agree to do the study?

• Children will be into yoga practices. Children will be asked to fill 2 sets of questionnaires before and 2 sets of the questionnaire after the intervention. Yoga will be taught to the experimental group for 10 days 120 minutes per day, and Data will be collected from the experimental group.

## Are there any benefits for taking part in this research study?

• This research study does not have any financial binding. All benefits out of the practice of yoga will be there.

## What are the dangers?

• There are no potential dangers by participating in the study. You are free to withdraw from the study at any point in time.

## How will you keep the information confidential?

• The assessment sheets will be coded with a number. The code number will be kept confidentially with the principal investigator. All information obtained in this study will be kept confidential unless disclosure is required by law.

## What if anyone wants to leave the study?

• Participants have the right to withdraw from the study at any point in time, without penalty.

## **Details of intervention**

Experimental group:

S.NO.	PRACTICE	TIME (IN MIN.)
1	Starting prayer and preparation	2
2	Breathing practices, loosening, yoga postures	48
3	DRT	8
4	Closing prayer	2

## Whom to contact:

• If you have any questions, you may ask them now or later, even after the study has started. If you wish to ask the questions later, you may contact

Researcher – Laxmi

## Mobile: 8971900390

Email- priyachaudhary659@gmail.com

Guide - Dr. Soubhagyalakshmi

## Voluntary consent by the head of the organization

By signing this consent form, I am agreeing that I have read, or it has been read to me and I fully understand the contents of this document and I am openly willing to consent to conduct this study in our organization. In case of any problem or clarification, I may contact the mentioned persons.

I agree I do not agree

Name of the head of the institution:

Signature of the head of the institution:

Date:

#### Statement by the researcher/person taking consent:

I have accurately read out the information sheet to the head of the organization, and to the best of my ability made sure that he understands that the following will be done:

1. Fill in 2 questionnaires before the intervention

2. Fill in 2 questionnaires after the intervention

I confirm that the head of the institution was given an opportunity to ask questions about the study, and all the questions have been answered correctly and to the best of my ability. I confirm that the participants have not been forced into giving consent, and the consent has been given freely and voluntarily.

A copy of this ICF has been provided to the head of the institution.

Name of Researcher/person taking the consent:

Signature of Researcher /person taking the consent:

Date:

