

**EFFECT OF INTEGRATED YOGA MODULE ON EMOTIONS,
PERSONALITY , STRESS, VERBAL AGGRESSION, AND SATISFACTION
WITH LIFE OF HOME GUARDS IN BANGALORE – A WAIT LIST
RANDOMIZED CONTROL TRIAL**

Thesis submitted by

B.Amaranath

Towards the partial fulfilment of

DOCTOR OF PHILOSOPHY (YOGA)

December 2015



Swami Vivekananda Yoga Anusandhana Samsthana (SVYASA) Yoga University
(Deemed University)
19, Eknath Bhavan, Gavipuram Circle
Kempe Gowdanagar, Bangalore, 56019
Website: www.svyasa.org

**EFFECT OF INTEGRATED YOGA MODULE ON EMOTIONS,
PERSONALITY , STRESS, VERBAL AGGRESSION, AND SATISFACTION
WITH LIFE OF HOME GUARDS IN BANGALORE – A WAIT LIST
RANDOMIZED CONTROL TRIAL**

Thesis Submitted for the Award of

DOCTOR OF PHILOSOPHY (YOGA)

By

B.Amaranath.,B.Sc.,PGDMM.,MBA.,

UNDER THE GUIDANCE OF

Dr. H. R. Nagendra, M.E., Ph.D., D.Sc.

Dr. Sudheer Deshpande., Ph.D.



Swami Vivekananda Yoga Anusandhana Samsthana (SVYASA) Yoga University
(Deemed University)
19, Eknath Bhavan, Gavipuram Circle
KempeGowdanagar, Bangalore, 56019
Website: www.svyasa.org

C E R T I F I C A T E

This is to certify that B.Amaranath, has registered for Ph.D on August 12, 2010 by Swami Vivekananda Yoga Anusandhana Samsthana, Deemed University under the Division of Yoga and Physical Sciences, and has successfully completed the required 'training' in acquiring the prerequisites in philosophy, emotions, personality , stress, verbal aggression and satisfaction with life related to Yoga. As per the norms and regulations of the University, he has completed the required 'course of research' over two years to enable him to submit the thesis entitled **“EFFECT OF INTEGRATED YOGA MODULEON EMOTIONS, PERSONALITY , STRESS, VERBAL AGGRESSION, AND SATISFACTION WITH LIFE OF HOME GUARDS IN BANGALORE – A WAIT LIST RANDOMIZED CONTROL TRIAL”**.

We declare that the subject matter of the thesis entitled **“EFFECT OF INTEGRATED YOGA MODULEON EMOTIONS, PERSONALITY , STRESS, VERBAL AGGRESSION, AND SATISFACTION WITH LIFE OF HOME GUARDS IN BANGALORE – A WAIT LIST RANDOMIZED CONTROL TRIAL”** has not previously formed the basis of the award of any degree, diploma, associate-ship, fellowship or similar titles.

Dr. H.R. Nagendra, M.E., Ph.D.
Chancellor
SVYASA University
(Guide)

Dr.Sudeer Deshpande, Ph.D.
Former Registrar
S-Vyasa Yoga University
(Co-guide)

Bangalore:

Date:6-12-2015

DECLARATION

I, hereby declare that this study was conducted at Swami Vivekananda Yoga Anusandhana Samsthana (S-VYASA), Bangalore, under the guidance of Dr. H. R. Nagendra, Chancellor, Swami Vivekananda Yoga Anusandhana Samsthana, Deemed University, Bengaluru and Dr.Sudheer Deshpande, former Registrar, S-Vyasa Yoga University, Bengalure.

I also declare that the subject matter of my thesis entitled “**EFFECT OF INTEGRATED YOGA MODULE ON EMOTIONS, PERSONALITY , STRESS, VERBAL AGGRESSION, AND SATISFACTION WITH LIFE OF HOME GUARDS IN BANGALORE – A WAIT LIST RANDOMIZED CONTROL TRIAL**” has not previously formed the basis of the award of any degree, diploma, associate-ship, fellowship or similar titles.

Date: 06-12-2015

B.AMARANATH

Place: Bengaluru

(Candidate)

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

Words are not enough to express my sense of gratitude to the guides. I take this opportunity to acknowledge the incredible guidance and encouragement of Dr. H. R. Nagendra and Dr.Sudheer Deshpande. I have been highly inspired by their meticulousness, attention to minute details and energetic application to resolve any problem.

I whole heartedly thank to Dr.Nagarathna and Prof.N.V.Raghuram for their inspiration, support, unforgettable love and contribution for my development.

I would like to express my sincere gratitude to Dr. Ramakrishna and Sri.B.Raghavendra Shenoy for the motivation to pursue PhD work. With great pleasure, I thank the faculty members, Dr.Amritram, Registrar Dr. Subramanya Pailloor, Dr.Raghavendra Bhat, Associate Professor Dr. Judu Ilavarasu, Course Coordinator Dr. Rajesh SK, Dr. Sanjib Patra, Sri.Raghunandan and Dr. Balaram Pradhan and my friends Dr. Sushrutha, Dr. Padmavati, Sri.Kuldeep for their consistent help at different stages during this work. My heartiest thank to all the participants involved in this research work as subjects.

I am grateful to Swami Vivekananda Yoga Anusandhana Samsthana (S-VYASA) University, for its support in promoting research career.

I am highly indebted to my parents, my wife Ar.Triveni, my daughters Aditi and Keerthana for their inspiration, love and support.

Finally, I thank that unseen Divine without whose wish, this work wouldn't have been possible.

Date: 06-12-2015

Place: Bengaluru

B.AMARANATH

**STANDARD INTERNATIONAL TRANSLITERATION CODE USED TO
TRANSLITERATE SANSKRIT WORDS**

a	=	A	ia	=	'	ba	=	b
ä	=	Aa	ca	=	c	bha	=	É
i	=	#	cha	=	D	ma	=	m
é	=	\$	ja	=	j	ya	=	y
u	=	%	jha	=	H	ra	=	r
ü	=	^	ĩ	=		la	=	l
â	=	\	öa	=	q	va	=	v
è	=	§	öha	=	Q	ça	=	z
e	=	@	òa	=	f	ña	=	;
ai	=	@e	òha	=	F	sa	=	s
o	=	Aae	ëa	=	[ha	=	h
au	=	AaE	ta	=	t	kña	=]
aà	=	A<	tha	=	w	tra	=	Ç
aù	=	A>	da	=	d	jïa	=	}
ka	=	k	dha	=	x			
kha	=	o	na	=	n			
ga	=	g	pa	=	p			
gha	=	"pha	=)				

ABSTRACT

BACKGROUND

Yoga is an ancient science, which, when learnt and adopted as a way of life, has remarkable positive impact on all phases of life. The Sanskrit word *yoga* has the literal meaning of "yoke", from root *yuj* meaning to join, to unite, or to attach. Yoga (Sanskrit, Pāli: योग, *yoga*) is a physical, mental, and spiritual discipline, originating in ancient India. The goal of yoga is to attain the state of perfect spiritual insight and tranquility while meditating on the Hindu concept of divinity or Brahman.

Home Guards Organization (HGO) is an independent disciplined and uniformed body of volunteers. Home Guards (HGs), who work in the field, experience varied emotions and are required to cope up with varied situations. Yoga practice, may help to master such emotions, with significant improvement in personality, to manage their emotions and cope up different stressful situations, thereby, reduce the stress and attain satisfaction in life. Which otherwise takes toll on their physical and mental health to calm the mind and avoid verbal combat.

AIMS AND OBJECTIVES

To study the efficacy of Integrated Yoga Module (IYM) on Personality (*Gunas*) (*Yogic* personality measure) of HGs, on Emotions (Positive and Negative Affect) of Home Guards (HGs), on Perceived stress and Satisfaction with life of HG's and on Verbal Aggression of HG's.

METHOD

Participants

The Subjects were selected from HGs working in fields, from various parts of Bangalore Rural District. Consent was taken from all the subjects before enrolling them for this study.

Subjects were selected from 500 HGs working on field, from Bangalore Rural District who attended motivational lectures presented by the competent instructors. 148 HGs, volunteered to take part in the study were randomly divided into YG (n=75) and CG (n=73) using a Random number calculator [Internet], random number table was generated

Of the 75 subjects in YG and 73 subjects in CG, the age ranged between 20 and 50 years. There were 36 and 31 female in YG and CG respectively, similarly there were 39 and 42 male in YG and CG category. 49 were married both in YG and CG, 26 in YG and 24 in were unmarried. Educational qualifications ranged from Non-matriculate to graduate.

Design

This was a prospective, randomized, single-blind, control study to measure and compare the personality (*Gunās*) of the HGs allotted to YG and CG. Gruha Rakshaka Bhavan (HG Administrative office at Bangalore, Karnataka was the venue for Yoga classes).

Both groups continued performing routine work such as maintaining law and order, managing traffic and the public in different government organizations like RTO, Vidhana Soudha, etc, and participated in weekly mandatory parades as per HG schedules.

The YG Apart from normal routine work also did one hour of IYM practices, six days a week for eight weeks. Daily attendance was taken for all the subjects, *Yoga* experts taught *Yoga* to YG.

The CG only did their normal routine work, and the participants were given the option to join *Yoga* classes after completion of the studies.

Assessments

Following scales were used for Assessment

- **Personality –Vedic Personality Inventory: (VPI):**

The Vedic Personality Inventory was devised to assess the validity of Vedic Concept Of three Gunas.

- **Positive affect Negative affect scale (PANAS):**

Positive affect Negative affect scale (PANAS) is the standard scale generally used in various studies to evaluate mood which is in the form of self reported emotion. It has been used in various studies to measure positive effect and negative effect.(Watson D, Clark L, Tellegen SA, 1988).

- **Verbal Aggressiveness Scale (VAS):**

Verbal Aggressiveness Scale (VAS) is an interpersonal model and measure and is developed by Infante DA, Wigley CJ. in the year 1986 contains 20 items scored on a 5-point linear rating format with reverse scoring on ten out of 20 items (questions-1,3,5,8,10,12,14,15,17,20).

- **Perceived Stress Scale (PSS):**

The Perceived Stress Scale (PSS) is one of the most widely used psychological instruments for measuring the perception of stress.

- **Satisfaction with life scale (SWLS)**

Satisfaction with Life Scale (SWLS) is a short, 5-item instrument designed to measure the global judgment of life satisfaction, which is theoretically predicted to depend on a comparison of life circumstances to one's standards.

Evaluation:

The tests were administered by examiners before and after eight weeks of IYM in a disturbance free quiet room.

Masking:

The invigilators coded and saved the answered questionnaires response sheets (QRS) for scoring latter. A psychologist not involved in group formation or class supervision evaluated the coded QRSs. Another person blind to group membership decoded the QRSs only after noting the scores both before and after data was completed.

Intervention**Yoga Group:**

Yoga intervention mainly included an Integrated Yoga Module (IYM) which strengthen the body and immune system at physical level, channelizing prana by pranayama practice, calming the mind by meditation, counseling the intellect by notional correction and lectures.

Integrated Yoga Module was administered for a period of 2 months, with 60 minutes of practice a day, for 6 days a week. In addition, the participants were performing weekly parade on prescribed date which is mandatory for Home Guards.

Control group:

The control group was not given any yoga practice. However they were performing weekly parade on a prescribed date which is mandatory for Home Guards. Control group subjects can opt for yoga classes as part of the study after the study duration.

An attendance was maintained of the number of days of intervention attended by the participants, all efforts and motivation were given to achieve 100% attendance. Participants were encouraged to continue practice of yoga at home after the intervention.

Data Extraction

- **VPI** is a 56 item questionnaire having 3 domains of dealing *sattva guna*, *rajas guna*, *tamas guna*. Its 7 point Likert-type scale. 1 = Very Strongly Disagree, 2 = Strongly Disagree, 3 = Somewhat Disagree, 4 = Neutral, 5 = Somewhat Agree, 6 = Strongly Agree, 7 = Very Strongly Agree.
- **PANAS** questionnaire developed by Watson *et al.* The PANAS is a 20-item questionnaire designed to measure positive and negative affect, with ten questions each to measure positive and negative emotions, referred to as positive affect (PA) and negative affect (NA). Lakshmi *et.al* in her study has added nine (four positive and five negative) questions, which are referred as Other Positive Affect (OPA) and Other Negative Affect (ONA). The PANAS, OPA and ONA domain scores were analyzed and interpreted separately since the questions that were added had not been tested earlier for validity and reliability. The participants rated all questions on a 5-point scale of 0-4.(0-not at all, 1-a little, 2-moderately, 3-quite a bit, 4-extremely) All 29 questions were intermixed in the questionnaire.
- **VAS** -The Verbal Aggressiveness Scale (VAS) is an interpersonal model and measure. The VAS developed by Infante and Wigley contains 20 items scored on a 5-point linear rating format with reverse scoring on ten out of 20 items (questions: 1, 3, 5, 8, 10, 12, 14, 15, 17, 20). The scores can range from 20 to 100. The VAS gives a single overall score

that describes the disposition of an individual towards low, moderate, or high level verbal aggressiveness. Scores from 20-46 suggest low verbal aggressiveness, 47-73 suggest moderate verbal aggressiveness and 74-100 suggest high verbal aggressiveness.

- **PSS** scores are obtained by reversing responses (e.g., 0 = 4, 1 = 3, 2 = 2, 3 = 1 & 4 = 0) to the four positively stated items (items 4, 5, 7, & 8) and then summing across all scale items. A short 4 item scale can be made from questions 2, 4, 5 and 10 of the PSS 10 item scale.
- **SWLS**- A 5-item scale designed to measure global cognitive judgments of one's life satisfaction . Participants indicate how much they agree or disagree with each of the 5 items using a 7-point scale that ranges from 7 strongly agree to 1 strongly disagree.

Data analysis

Analyzed the data using R- Statistical software. Effect Size calculation was done using G power. Data at baseline was assessed for normal distribution using Shapiro-Wilk's test in both the groups. The independent sample t –test was performed to assess the significant difference between the groups and paired samples t-test for within the group.

Results and Discussion

VPI: Baseline scores for all domains for both groups did not differ significantly ($p > 0.05$, Shapiro-Wilk's test). *Sattva* in YG significantly increased from 39.87 ± 2.02 to 47.14 ± 7.22 whereas it decreased significantly from 43.66 ± 4.39 to 37.74 ± 10.26 in CG. *Rajas* in YG significantly decreased from 29.15 ± 0.98 to 27.46 ± 4.38 whereas it increased significantly from 28.60 ± 3.55 to

32.74±5.37 in CG. *Tamas* in YG significantly decreased from (30.98±1.04 to 25.40±5.11) whereas it significantly increased from 27.74±4.43 to 30.51±5.50 in CG.

This is a randomized, controlled, prospective study in normal HGs comparing the efficacy of *Yoga* with a control group for eight weeks on 148 normal adults on changes in their personality (*Guna*) as assessed by *Vedic Personality Inventory*. The results showed that there was an increase in *Satva* level ($P < 0.001$) in *Yoga* group and decrease in controlled group. There was significant decrease in *Rajas* in *Yoga* group and increase in controlled group. The *Tamas* level also decreased significantly in *Yoga* group but increased in controlled group. Further the data analysed based on the genders, educational qualifications and age. All the categories have shown similar trend which is as per the *Yogic* literature.

A similar study by Dasa conducted by the use of *Mahāmantra* in a three-armed, randomized prospective, controlled study on 62 volunteers showed that the *Mahāmantra* group had increased *Satva* and decreased *Tamas* with no significant change in *Rajas* scores on the VPI questionnaire after a month of chanting of *Mahāmantra*, 20 minutes daily for four weeks. In the present study, apart from an increase in *Satva* and decrease in *Tamas*, there is a significant decrease in *Rajas* which was not observed after *Mahāmantra*.

Another study was conducted by Deshpande et.al to compare the effect *Yoga (Y)* and Physical Exercise (PE) on *Gunās* and general health. It is observed that *Yoga* has shown a better effect on the *Sattva Guna* than Physical Education with a better effective size, the main difference between Y and PE practices attribute to be the effect on *Rajas Guna*. The reduction in this *Guna* was significantly higher in PE group than Y group. Thus, it is concluded that both physical activity (to reduce *Rajas* and *Tamas*) and *Yoga* (to improve *Sattva*) be recommended for harmonious

promotion of personality. But however, it is observed that by the integrated *Yoga* module, even *Rajas* can be decreased significantly in experimental group compared to controlled group.

PANAS: Positive Affect in YG had significantly increased ($p < 0.05$) whereas it had decreased significantly ($p < 0.05$) in CG. Other Positive Affect in YG had significantly increased ($p < 0.001$) whereas it had decreased significantly ($p < 0.001$) in CG. Negative Affect in YG had significantly decreased ($p < 0.001$) whereas it had significantly increased ($p < 0.001$) in CG. Other Negative Affect in YG had significantly decreased ($p < 0.001$) whereas it had significantly increased ($p < 0.01$) in CG. This is a randomized, controlled, prospective study in normal HGs comparing the efficacy of *Yoga* with a controlled group for eight weeks on 148 normal adults on changes in their Positive and Negative Affect as assessed by PANAS scale. The results showed that there is an increase in Positive Affect and Other Positive Affect level ($p < 0.001$) in *Yoga* group and decrease in controlled group. There is significant decrease in Negative Affect and Other Negative affect in *Yoga* group and increase in controlled group.

Lakshmi et.al in her study has added nine (four positive and five negative) questions for the study which are referred as Other Positive Affect (OPA) and Other Negative Affect (ONA) .

PSS & SWL; There was a significant decrease in Perceived stress level in the *Yoga* group ($p < 0.01$ paired samples t-test) with a significant decrease in the Control group. ($p < 0.04$ paired samples t-test). PSS was also found significantly improved in between groups $p < 0.001$. There was a significant increase in Satisfaction with Life level in *Yoga* group ($p < 0.001$ paired samples t-test) with a significant substantial decrease in the Control group. ($p < 0.001$ paired samples t-test). SWL was also found significant in between groups $p < 0.001$.

This is a randomized control prospective study in HGs comparing the efficacy of Yoga (Y) on Perceived stress level and Satisfaction with life. This study has demonstrated that an eight weeks' intervention of an integrated yoga module (IYM) has decreased stress level and increased the satisfaction in life in the yoga group compared to control group.

In one of the study samples, 35.33% of the police were found to be suffering from psychological stress, which is consistent with the stress reported by Rao *et al.* in 28.8% of CISF personnel. Other studies done by Geetha *et al.* on Bangalore police personnel found high stress levels in 60% of population, Deb *et al.* also found high stress in 79.4% of traffic constables in Kolkata. The higher levels of stress reported by these studies as compared to the present study could be because of socio-demographic and methodological differences in the studies. Several international studies in police personnel have also reported stress levels ranging 40–50% of the sample, but contrary to the present study, these studies have found higher psychological stress in female police persons. The reason for this could be the less number of females in the current study sample compared to males, with a M:F ratio of 9:1. As the ratio of females in Indian police is quite less as compared to males, a bigger sample size is required to get a true representation of their stress levels and other study parameters.

VAS; There is a significant decrease in verbal aggressiveness in the yoga group ($p < 0.01$ paired samples t-test) with a non significant almost at the same level in the controlled group. ($p < 0.8$ paired samples t-test). VAS is found significantly improved in between groups $p < 0.03$.

This is a randomized control prospective study in HGs comparing the efficacy of Yoga (Y) on verbal aggressiveness. This study has demonstrated that an eight weeks' intervention of an

integrated yoga module (IYM) has decreased verbal aggressiveness in the yoga group compared to control group.

There was a significant decrease in verbal aggressiveness in Yoga group compared to control group. Further it is noticed that all the HGs who were in the region of high verbal aggressiveness have completely shifted to either low verbal or moderate aggressiveness, where as 5 people have shifted from low or moderate aggressiveness to high verbal aggressiveness.

A study on the relationship between verbal aggressiveness and state of anxiety in sports by Alexandra *et al.* showed that male basketball players were more affected by verbal aggressiveness of their coaches compared to female basketball players as assessed by VAS administered immediately after the game. In their study, they also observed a positive correlation between their anxiety and VAS scores in male players. It is known that Yoga with its holistic approach uses several techniques to calm down the mind and reduce the anxiety state. Earlier studies have shown that in community home of girls and congenitally blind children, sympathetic tone reduced after Yoga practices, which resulted in significant decreases in resting heart rates and breath rates, thus reducing fear and anxiety.^[33] This may suggest that the reduction in aggressiveness in the present study could be due to the reduction in their baseline anxiety and sympathetic reactivity.

Conclusion

VPI:

This is a randomized controlled prospective study of normal HGs assessing efficacy of an IYM for eight weeks on 148 normal adults to change their personality (*Guna*) as assessed by VPI. Results have shown that there is an increase in Sattva level ($P < 0.001$) in YG and decrease in CG. There were significant decreases in *Rajas* and *Tamas* in YG and increases in CG. When data analysis was

subdivided by gender, educational qualification and age all categories showed similar trends as expected according to the *Yogic* literature.

There was an increase in *Sattva* in *Yoga* group whereas it had decreased in controlled group. *Rajas* and *Tamas* significantly decreased in *Yoga* group whereas it had increased in controlled group. Hence, integrated *Yoga* module can be suggested for Home Guards which are cost effective and helps them for coping up with stressful situations.

The improvement observed in *Yoga* group, after eight weeks of intervention in all variables, has shown that *Yoga* could be an equally effective and cost effective tool. It also points out the utility of the VPI as a tool for measuring the subtle dimensions of *Guna* described in traditional texts of *Yoga* that can measure the steps of growth of an individual.

PANAS:

The descriptive of negative emotions, 'Distressed' and 'Disappointed' showed 37.40% and 38.01% reduction respectively in *Yoga* group. Since the Home Guards are volunteers and they don't have job security, they were in a mood of distress and disappointment. The beneficial effect of the integrated *Yoga* module in unwinding the distress and disappointed feeling in HG's that too within a short period of time may be considered as an important contribution of this study. The results suggested that integrated *Yoga* module (IYM) can be useful for Home Guards to improve the positive effect and to decrease negative effect. Moreover, IYM is cost effective and helps HGs in coping up with their emotions in stressful situations.

PSS/SWL:

The study has shown that an 8 weeks intervention of IYM, decreased Perceived Stress Level in the yoga group and with no shift in the control group. Apart from this, the Satisfaction with Life level increased in Yoga group and decreased in control group.

The study has shown the efficacy of Yoga in decreasing the stress level and increase in satisfaction in life. Hence, Yoga may be recommended to Security forces to deal with the problem of violence among themselves and with others, which is still a live issue across all parts of the world.

VAS:

This study has shown that an 8 week intervention of IYM decreased verbal aggressiveness in the yoga group and with no change in the control group. This study has shown the efficacy of Yoga in decreasing verbal aggressiveness. Hence, Yoga may be recommended to Security forces to deal with the problem of violence among themselves and with others, which is still a live issue across all parts of the world.

All these results have shown that IYM has increased the positive affect in Home Guards and reduced the negative effect, increase in satva and reduction in rajas and tamas, reducing the stress, improvement in satisfaction in life and reduction in verbal aggression. Further *Yoga* is very cost effective and recommended to home guards. Hence, this study is a solution to train HGs to calm down their mind and help them to increase their positive thinking and decrease negative mind set. This shall help to improve the service to public apart from improving the image of the Department.

CONTENTS

Sl. No.	DETAILS	PAGE NO.
1.0	INTRODUCTION	1-17
1.1	HOME GUARDS	1-3
1.2	YOGA	3-10
1.3	PERSONALITY(GUNAS)	11-13
1.4	EMOTIONS	14-16
1.5	STRESS	16
1.6	VERBAL AGGRESSION	16
1.7	SATISFACTION WITH LIFE	17
2.0	LITRARY RESAERCH	17-77
2.1	AIMS AND OBJECTIVES	18
2.2	SOURCES	18
2.3	METHOD OF SEARCH- SLOKAS FROM SPIRITUAL LORE	18
2.3.1	Upanishad	19
2.3.2	Bhagavad Gita	19-20
2.3.3	Ramayana	21
2.3.4	Patanjali Yoga Sutra	22-23
2.4	CONCEPT OF GUNA	23
2.4.1	GUNAS ACCORDING TO YOGA	23-24
2.4.2	GUNAS IN VEDAS	25

2.4.3	CONCEPT OF MIND IN VEDAS	25
2.4.4	GUNAS IN BHAGAVAD GITA	26
2.4.4.1	Satvic Personality	27-29
2.4.4.2	Rajasic Personality	30-32
2.4.4.3	Tamasic Personality	32-34
2.4.5	GUNAS IN PURANAS AND OTHER SOURCES	35-36
2.4.6	GUNAS ACCORDING TO AYURVEDA	36-37
2.4.6.1	GUNAS OF MIND AS SAID IN AYURVEDA	38-41
2.4.6.2	EFFECT OF GUNAS IN MIND AND BODY AS PAR AYURVEDA	42
2.4.6.3	DESCRIPTION OF MIND BASED ON GUNAS AS MENTIONED IN AYURVEDIC TEXTS	43-44
2.4.7	DIFFERENT TYPES OF <i>SATVIKA</i> INDIVIDUALS	44-47
2.4.8	DIFFERENT TYPES OF <i>RAJASIKA</i> INDIVIDUALS	48-50
2.4.9	DIFFERENT TYPES OF <i>TAMASIKA</i> INDIVIDUALS	51
2.4.10	GUNA; QUALITIES	51-55
2.5	CONCEPT OF EMOTIONS	55
2.5.1	DEFINITION EMOTIONS	55
2.5.2	EMOTIONS & PSYCHOLOGY	56
2.5.3	EMOTION- JAMES-LANGE THEORY	57
2.5.4	CANNON-BARD THEORY	57
2.5.5	SINGER-SCHACHTER THEORY	57
2.5.6	CLASSIFICATION OF EMOTIONS	57

2.5.7	MODERN SCIENCE & EMOTIONS	57-58
2.5.8	YOGIC PERSPECTIVE OF EMOTIONS	58-60
2.5.9	EMOTION AND AFFECT	61-62
2.6	CONCEPT OF STRESS	63
2.6.1	CAUSES AND EFFECTS OF STRESS	63
2.6.2	MEDICAL AND YOGIC SOLUTIONS TO STRESS	64
2.6.3	YOGA – TREATING THE STRESS	65
2.6.4	STRESS AND MAINTENANCE OF PHYSICAL BODY WITH	65
2.6.5	SIMPLE ASANAS TO RELIEVE STRESS	65
2.6.6	POWER OF PRANAYAMA IN STRESS	66
2.6.7	STRESS ,RELAXATION AND CONCENTRATION THROUGH	67
2.6.8	STRESS AND CHANGE IN ATTITUDE AND LIFESTYLE	68
2.6.9	YOGIC LIFESTYLE AND STRESS	69
2.7	CONCEPT OF VERBAL AGGRESSION	70
2.7.1	AGGRESSION IN SOCIAL PSYCHOLOGY	70
2.7.2	DEFINITION OF AGGRESSION IN PSYCHOLOGY	71
2.7.3	VERBAL AGGRESSION TYPES	71
2.7.4	REASONS OR CAUSES FOR VERBAL AGGRESSION	72
2.7.5	VERBAL AGGRESSION EFFECTS	73
2.7.6	VERBAL AGGRESSION- CONSTRUCTIVE	73
2.7.7	VERBAL AGGRESSION - DESTRUCTIVE	74
2.8	CONCEPT OF SATISFACTION WITH LIFE:	75

2.8.1	LIFE SATISFACTION AND PERSONALITY	75
2.8.2	LIFE SATISFACTION –WHO, UNESCO	76-77
3.0	REVIEW OF SCIENTIFIC LITERATURE	79-91
3.1	PREVIOUS WORK DONE IN S-VYASA	79-82
3.2	STUDIES ON GUNA	83-84
3.3	STUDIES ON EMOTION	84-87
3.4	STUDIES ON STRESS/SATISFACTION WITH LIFE	87-88
3.5	STUDIES ON VERBAL AGGRESSION	89-91
4.0	AIMS AND OBJECTIVES	92
4.1	AIMS OF THE STUDY	92
4.2	OBJECTIVES OF THE STUDY	92
4.3	RESEARCH QUESTIONS	92
4.4	HYPOTHESIS & NULL HYPOTHESIS	92
4.4.1	HYPOTHESIS	92
4.4.2	NULL HYPOTHESIS	93

5.0	METHODS	93-94
5.1	PARTICIPANTS	93
5.1.1	SAMPLE SIZE	93
5.1.2	SELECTION CRITERIA	93
5.1.3	INCLUSION CRITERIA	93
5.1.4	EXCLUSION CRITERIA	94
5.1.5	INFORMED CONSENT	94
5.1.6	ETHICAL CONSIDERATION	94
5.2	DESIGN OF THE STUDY	95-96
5.2.1	STUDY OUTLINE	95
5.2.2	STUDY DESCRIPTION	95
5.2.3	EVALUATION	96
5.2.4	MASKING	96
5.3	INTERVENTION	97-105
5.3.1	YOGA GROUP	97-105
5.3.2	CONTROL GROUP	106
5.4	OUTCOME MEASURES/ ASSESSMENT	107-111
5.4.1	THE VEDIC PERSONALITY INVENTORY (VPI)	107-108
5.4.2	POSITIVE AND NEGATIVE AFFECT SCALE (PANAS):	108-109
5.4.3	THE VERBAL AGGRESSIVENESS SCALE (VAS)	110
5.4.4	PERCEIVED STRESS SCALE (PSS):	111
5.4.5	SATISFACTION WITH LIFE SCALE (SWLS)	111
6.0	DATA EXTRACTION AND ANALYSIS	112-114

6.1	DATA EXTRACTION	112-114
6.2	DATA ANALYSIS	114
7.0	RESULTS	115-135
7.1	SOCIO DEMOGRAPHIC RESULT	115
7.2	VPI - GUNA	116
7.2.1	SATVA	117-118
7.2.2	RAJAS	118-119
7.2.3	TAMAS	119-120
7.3	PANAS- EMOTIONS	121
7.3.1	POSITIVE AFFECT	122
7.3.2	OTHER POSITIVE AFFECT	123
7.3.3	NEGATIVE AFFECT	124
7.3.4	OTHER NEGATIVE AFFECT	124
7.4	VAS- AGGRESSION	127
7.4.1	CHANGE IN VERBAL AGGRESSION LEVEL	129
7.5	PSS- STRESS	130-132
7.6	SWLS- SATISFACTION WITH LIFE	133-135
8.0	DISCUSSIONS	136-145
8.1	VEDIC PERSONALITY INVENTROY (GUNA) VPI	136-139
8.2	POSITIVE AFFECT AND NEGATIVE AFFECT (EMOTIONS) PANAS	139-144
8.3	VERBAL AGGRESSION.(VAS)	144

8.4	PERCEIVED STRESS AND SATISFACTION WITH LIFE .PSS/SWLS	145
9.0	APPRAISAL - SUMMARY & CONCLUSION	146-149
9.1	VPI	146-147
9.2	PANAS	147
9.3	VAS	147
9.4	PSS/SWL	148
10.0	STRENGTH	148
11.0	LIMITATIONS	149
12.00	SUGGESTIONS FOR FUTURE STUDY	149
	REFERENCES	150-162
	APPENDICES	163-177
	APENDIX 1 :Informed Consent Form	163-165
	APENDIX 2:SOCIO DEMOGRAPHIC DATA SHEET	166-167
	APENDIX 3:THE VEDIC PERSONALITY INVENTORY	168-169
	APENDIX 4:POSITIVAFFECT NEGATIVE AFFECT QUESTIONNAIRE	170-174
	APENDIX 5:VERBAL AGGRESSIVE SCALE	175
	APENDIX 6:PERCEIVED STRESS SCALE	176
	APENDIX 7: SATISFACTION WITH LIFE SCALE	177
	DATA SHEET	178-206
	SOCIO DEMOGRAPHIC DATA SHEET	178-181

	THE VEDIC PERSONALITY INVENTORY	182-186
	POSITIVAFFECT NEGATIVE AFFECT	187-192
	VERBAL AGGRESSIVE SCALE	192-196
	PERCEIVED STRESS SCALE	196-201
	SATISFACTION WITH LIFE SCALE	201-206

1. INTRODUCTION

1.1.Home Guards:

Security and police personnel play very important role in monitoring law and order in the society and protected the country even in ancient days. (Srimadbhagavad gita ,1999).

Today Home Guards Organization (HGO) shares the above duty with security and police personnel. HGO is an independent disciplined and uniformed body of personnel constituted under Karnataka HGs Act 1962 under the Karnataka Home Department. HGs' Services have become indispensable during fairs, festivals, sports, elections and also for daily traffic control. Now-a-days Bangalore HGs assist Bangalore City Traffic Police, Regional Transport Office, Bangalore University, Food Corporation of India, Karnataka State Road Transport Corporation (KSRTC) and many similar Organizations. (Karnataka State HGs Mannual, 1962)

The training for Home Guards is conducted in 4 phases, namely. Basic Training, Refresher training. The Home Guards are given basic training in drill with and without arms, weapon training, firing range discipline, crowd control-field craft patrolling, map reading and Civil Defence training including fire fighting, rescue, first aid, flood relief etc. Subjects for Basic training to home Guards include P.T., Drill without arms and Drill with arms. The number of periods allotted for these subjects have been indicated with Training Syllabi and the instructions are contained in the Drill Manual. Advanced training outside their normal working hours with the training extending over a fairly long period generally at part-time parades.

The functions to be performed by Home Guards are:

- To serve as Auxiliary to the Police and generally help in maintaining internal security.
- To help the community in any kind of Emergency—such as on Air-raid precautions or during any natural Calamity.
- To function as an Emergency Force intended for special tasks directly or indirectly connected with defense of the country.
- To maintain functional units to provide essential services such as motor transport, Engineering groups, Fire brigade, Nursing and First Aid, Operation of Power supply, Water installations and Communication systems etc.
- The Border Wing of 18 battalions assists the Border Security Force.
- Marine Units function as an Indian Coast Guard auxiliary.
- The Fire Wing assists the Indian Fire service.

Home Guards life Style (in general): In the present system of work, a HG is characterized by the following behavioral pattern

- a) Sensitiveness to situation.
- b) Working atmosphere is in stress and not relaxed.
- c) Balancing behavior between family and work.
- d) Emotional control while handling the law and order.

These Home Guards working in stressful situation, find it difficult to face the realities of life. All categories of Home Guards, who work in field, experience varied emotions and requires coping

up with different situations. Therefore yoga training needs to be looked as a viable intervention to bring effective changes in their emotions, in their acquired and personality traits, and coping. This study hence aims to test the efficacy of yoga on the emotions, personality and coping of home guards, using a randomized controlled design.

This study is an attempt to determine that intervention like 'yoga' can help the newly joined men Home Guards to deal with their emotions, change their personality type and help them cope up with the stressors of their work life. In this background, some of the key concepts pertaining to the study are discussed in this chapter.

1.2.Yoga.

1.2.1. Yoga according to different sources

Yoga is an ancient, Indian science that has evolved over thousands of years. Yoga which is considered to be a tool for both physical and mental development of an individual is being recognized round the globe only in the last century although it was practiced in India over several centuries to promote positive health and well being (Nagendra HR, Nagarathna R, 1983) (can you cite your source for this statement?). For the restless mind it gives solace (Bloomfield, Cain, Jaffe, 1975). For the sick, it is a boon (Brena, Garde, 1975; Kuvalayananda, Swami, Venekar, 1971; Yogendra, 1972; Swami 1965). For the common man it is the fashion of the day to keep fit and beautiful (Pratinidhi, 1966). Some use it for developing memory, intelligence and creativity (Bloomfield, Cain, Jaffe, Denniston, Williams 1975). With its multifold advantages it is becoming a part of education (Denniston, Williams, Swami, 1975). Specialists use it to unfold deeper layers of consciousness in their move towards spiritual perfection. (Nirmala 1978;

Ramatirtha, Swami, 1956). It deals with the physical, mental, moral and spiritual wellbeing of an individual (Iyengar, 1968). The earliest systematic description of this practice was in the classic treatise, the “Yoga Sutras” of Patanjali, dating back to 900 B.C. (Taimini, 1986). This pragmatic description enumerates eight stages of yoga, which if practiced systematically allows one to attain a state of super consciousness (*Samadhi*).

According to Yoga philosophy, human life span has been divided into three stages (*avasthas*): (i) childhood (*balya*), (ii) adulthood (*prouda*) and (iii) old age (*vrudha*). A disciplined way of living and regular practice of yoga throughout the first two stages decides the nature of the last stage (Mukthibodhananda, 2001).

Yoga- Vāṣiṣṭa one of the useful texts on Yoga exhaustively portrays the essence of Yoga. Yoga is a skilful trick to calm down the mind (Nagarathna, Nagendra, 2003). Yoga is not mere *yogāsana*, *prāṇāyāma*, or acrobatics, but is a way of life (Swami Ramatirtha, 1956). Sage Aurobindo defines yoga as a technique to achieve an all-round personality development at the physical, mental, intellectual, emotional and spiritual levels. He means, Yoga is a methodical effort towards self-perfection by the development of the potentialities latent in the individual. It is a process by which the limitations and imperfections can be washed away resulting in a superhuman race (Satprem S, 1973, Nagarathna, Nagendra, 2003). Yoga is a term that has its root *Yuj* in *Saṁskṛta*, which means ‘to join’ (Nagarathna, Nagendra, 2003). According to the great sage Patañjali, Yoga is a conscious process of gaining control over the mind, which has two major steps. First step is ‘to gain the capacity to focus and concentrate’ and then go on to develop the ability to ‘defocus or silence’ the mind. By this mastery, man elevates himself consciously from the animal level to a normal man, a superman and ultimately reaches divinity itself (Nagarathna R, Nagendra HR, 2004) In action, yoga is dexterity in action which has been

told in Bhagavad Gita. (Gita 2.50) The scope of Yoga as portrayed in *Bhagavadgītā* and *Upaniṣads* is far more comprehensive. Swami Vivekananda defines yoga (Nagarathna R, Nagendra HR) as, “a means of compressing one’s evolution into a single life or a few months or even a few hours of one’s bodily existence”. In general, there is growth; that is the natural and instinctive characteristic of all animals. Man, endowed with the power to discriminate, a conscious thinking faculty *Buddhi* and well-developed voluntary controls, aspires to accelerate his growth. Yoga is that systematic conscious process which can compress the process of man’s growth greatly (Nagarathna, Nagendra, 2003). The aim of yoga is to keep mind and body healthy (Nagarathna, Nagendra, 2003). Yoga is a commonly practised mind-body approach that has components centering on postures, breathing and meditation (Brena SH. 1975). Yoga which encompasses several techniques including physical postures, breathing techniques (*prāṇāyāma*) and meditation has become very popular for its applications in health starting from better physical fitness to better QoL in cancer patients (Garde RK, 1975). *Hatha Yoga Pradipika*, an ancient yoga text prescribes several techniques to prevent and manage the problems related to aging and attain immortality (Mukthibodhananda, 2001).

1.2.2. The Four streams of Yoga

Further there are a large number of methods of yoga, catering to the needs of different persons in society to bring about the transformation of the individual. They are broadly classified into four streams. Swāmi Vivekānanda puts them as work and worship, philosophy and psychic control.

1.2.2.1. Karma Yoga - The path of work (Karma Yoga) involves doing action with an attitude of detachment to fruits of action. This makes man release himself from the strong attachments and thereby brings in him a steadiness of mind that verily is Yoga – ‘*Samavatvaṁ Yoga Ucyate*’

(Gita 2w.48). Instruments of action and understanding (Karmendriyās and Jnanendriyās) get cleansed.

1.2.2.2. Bhakti Yoga - The control of emotions is the key in the path of worship (Bhakti Yoga). In this modern world, man is tossed up and down due to emotional onslaughts. The path of Bhakti is a boon to gain control over emotional instabilities by properly harnessing the energy involved in it.

1.2.2.3. Jnāna Yoga - The age of science has made man a rational being. Intellectual sharpness is immanent. Analysis forms the tool. The path of Philosophy (Jnāna Yoga) is apt for the keen intellectuals and is concerned around the analysis of ‘happiness’, the vital contribution of Upaniṣadas. Also many other fundamental questions regarding the mind, the outside and inside world and the reality are taken up. Basic questions are raised even involving the intellect itself to reach the very basis of intellect.

1.2.2.4 Rāja Yoga - Culturing of mind is the key for success in almost all endeavours in our lives. The Yoga of mind culture or psychic control (Rāja Yoga) gives a practical and easy approach to reach higher states of consciousness. It is based on the Aṣṭāṅga Yoga of Patanjali’s yoga system.

Thus, the four streams of Yoga help main to develop the personality at four different levels – physical, mental, intellectual and emotional and simultaneously bring about spiritual progress.

Most of the other methods of Yoga – Laya Yoga, Japa yoga, Mantra Yoga, Hatha Yoga, Kundalini Yoga etc., are permutations and combinations of these basic methods of Yoga.

1.2.3. Yoga – Its usefulness

As per the available report, 15 million people practise yoga in USA amongst which majority are women (Laura, 2003). Yoga has been found to be useful for better physical health as demonstrated by increased physical stamina as measured by hand grip strength in healthy children and adults (Raghuraj, Nagarathna, Nagendra, Telles, (1997), better finger steadiness (Dash, Telles, 1999), better lung functions (Visweswaraiah, Telles, 2004) and autonomic stability (Orme-Johnson, 1973). Also yoga has been found to be useful for better performance in sports through stress reduction (Telles, Nagarathna, Nagendra, Desiraju, 1993).

Normal volunteers were shown to have a better sense of well-being following ten months of yoga physical postures (Ray, Mukhopadhyaya, Purkayastha, Asnani, Tomer, Prashad, Thakur, & Selvamurthy, 2001). Bera and Rajapurkar (1993) have shown that one-year yoga training in school students can improve ideal body weight, bone density and cardiovascular endurance along with a significant reduction in fat fold and body circumference measurements. Another study reported the effects of a combination of practices (śānti kriyā) on psycho physiological variables in eight middle aged healthy male volunteers. Following one month of training, there was a significant decrease in body weight, increased alpha activity of the brain, increased oral temperature and decreased respiratory rate suggesting that a combination of yoga practices including breathing and relaxation can induce a hypermetabolic state with calm mental state (Satyanarayana, Rajeswari, Rani, Krishna, & Rao, 1992).

Practicing yoga has also been shown to improve sensory perception in volunteers across diverse age groups. Some of these observations were based on studies of auditory evoked potentials, which demonstrated that specific components occurred sooner, following yoga practices such as

prāṇāyāmas (Telles, Joseph, Venkatesh, & Desiraju, 1992) or meditations (Telles, Nagarathna, & Nagendra, 1994). There was also improved performance in the temporal (frequency) component of the critical flicker fusion frequency assessment (Ramana Vani, Nagarathna, Nagendra, & Telles, 1997; Manjunath & Telles, 1999). Another measure of visual perception that has been shown to improve following yoga was the perception of geometric illusion (Telles, Nagarathna, Ramana Vani, & Nagendra, 1997). The error or degree of illusion was less following yoga training. Apart from sensory perception, motor skills also improved following yoga. Among these, a definite improvement was shown to occur in static motor performance or the ability to hold the hand steady (Telles, Hanumanthaiah, Nagarathna, & Nagendra, 1994). Tweezer dexterity, a measure of fine motor skills also improved, which further showed a positive correlation with motivation to learn yoga (Manjunath & Telles, 1999). Other abilities that were shown to improve following Yoga are chiefly related to cognitive tasks that include spatial memory (Naveen, Nagarathna, Nagendra, & Telles, 1997), verbal memory (Manjunath & Telles, 2004), planning (Manjunath & Telles, 2001) (based on the Tower of London test), and maze learning (Telles, Vempati RP, & Reddy, 2000).

Yoga has also been used to improve the psychological well-being of an individual. The antidepressant effect of rhythmic hyperventilation at different rates of breathing (*Sudarśana kriyā Yoga* or SKY) was studied in a prospective, open, clinical trial (Janakiramaiah, Gangadhar, Naga Venkatesha Murthy, Harish, Subbakrishna, & Vedamurthachar, 2000). This study compared the benefits of SKY with two standard treatments, viz. electroconvulsive therapy and imipramine, on untreated depressives. Even though it is not possible to conduct a double blind trial using yoga as one of the interventions (Singh, Wisniewski, Britton, & Tattersfeld, 1990) the

results suggested that SKY produced lesser benefits than electroconvulsive therapy but could be considered as a potential alternative to drugs in melancholia, as a first line of treatment.

1.2.4. Yoga and Health

Yoga has also been shown to be beneficial in life-style-related health problems such as Hypertension (McCaffre, Ruknui, Hatthakit, Kasetsomboon, 2005, Jayasinghe, 2004), Asthma (Sabina, Williams, Wall, Bansal, Chupp, Katz, 2005; Manocha, 2003; Manocha, Marks, Kenchington, Peters, Salome, 2002), Anxiety neurosis (Brown, Gerbarg, 2005, Shannahoff-Khalsa, Beckett, 1996) and Depressive illness (Jorm, Christensen, Griffiths, Rodgers, 2002), Diabetes (Bijlani et al, 2005, Sahay, 1986) etc., Considering these benefits of yoga, the present study was designed to find out whether yoga can provide benefits comparable to P.E on QoL in normal healthy adults.

1.2.5. Yoga and “Quality of Life”

Yoga is both a science and an art. Yoga is graceful and methodical effort towards self-perfection inside and outside. Yoga is the means for the fastest and the best growth and finally the goal itself. Hence, “Quality of life” through the practice of Yoga gets a quantum jump to the superlative degree of happiness and also all-round personality development at all levels: physical, mental, emotional, intellectual and spiritual. Further “Quality of Life” improves to an extent one could not imagine and wonder at the change that occurred within and the outside world (Nagarathna R, Nagendra HR, 2004)

Hence the present prospective, single blind, randomized control trial was designed to evaluate the effects of “Quality of Life” by using two complimentary ancient Indian sciences viz., Yoga and Physical Exercise in normal healthy volunteers.

Patanjali's writing also became the basis for a system referred to as "Ashtanga Yoga" ("Eight-Limbed Yoga"). This eight-limbed concept derived from the 29th Sutra of the second chapter and is a core characteristic of practically every Raja yoga variation taught today. The Eight Limbs are:

1. Yama (The five "abstentions"): Ahimsa (non-violence), Satya (Truth, non-lying), Asteya (non-covetousness), Brahmacharya (non-sensuality, celibacy), and Aparigraha (non-possessiveness).
2. Niyama (The five "observances"): Shaucha (purity), Santosha (contentment), Tapas (austerity), Svadhyaya (study of the Vedic scriptures to know about God and the soul), and Ishvara-Pranidhana (surrender to God).
3. Asana: Literally means "seat", and in Patanjali's Sutras refers to the seated position used for meditation. Misconception that ‘Yoga’ means only Asanas or physical postures gets cleared when the practitioner refers to ‘Patanjali Yogasutra’.
4. Pranayama ("Suspending Breath"): *Prāna*, breath, "āyāma", to restrain or stop. Also interpreted as control of life force or life breath.
5. Pratyahara ("Abstraction"): Withdrawal of sense organs from external objects.
6. Dharana ("Concentration"): Fixing the attention on a single object or point.
7. Dhyana ("Meditation"): Intense contemplation of the nature of the object of meditation.
8. Samādhi ("Liberation"): merging consciousness with the object of meditation.

In the view of this school, the highest attainment does not reveal the experienced diversity of the world as illusive. The everyday world is real. Furthermore, the highest attainment is the event of one of many individual selves discovering their Self; there is no single universal self shared by all persons.

1.3. Personality (Gunas):

The combination of characteristics or qualities that form an individual's distinctive character.

"Personality" can be defined as a dynamic and organized set of characteristics possessed by a person that uniquely influences his or her cognitions, emotions, motivations, and behaviors in various situations. The word "personality" originates from the Latin *persona*, which means mask. Significantly, in the theatre of the ancient Latin-speaking world, the mask was not used as a plot device to *disguise* the identity of a character, but rather was a convention employed to represent or *typify* that character. Personality may also refer to the patterns of thoughts, feelings and behaviors consistently exhibited by an individual over time that strongly influence our expectations, self-perceptions, values and attitudes, and predicts our reactions to people, problems and stress. In a phrase, personality is not just who we are, Gordon Allport (1937) described two major ways to study personality: the nomothetic and the idiographic. *Nomothetic psychology* seeks general laws that can be applied to many different people, such as the principle of self-actualization, or the trait of extraversion. *Idiographic psychology* is an attempt to understand the unique aspects of a particular individual.

The study of personality has a broad and varied history in psychology, with an abundance of theoretical traditions. The major theories include dispositional (trait) perspective,

psychodynamic, humanistic, biological, behaviorist and social learning perspective. There is no consensus on the definition of "personality" in psychology. Most researchers and psychologists do not explicitly identify themselves with a certain perspective and often take an eclectic approach. Some research is empirically driven such as the "Big 5" personality model whereas other research emphasizes theory development such as psychodynamics. There is also a substantial emphasis on the applied field of personality testing. In psychological education and training, the study of the nature of personality and its psychological development is usually reviewed as a prerequisite to courses in abnormal or clinical psychology.

The Indian approach to understanding the personality is based on the 'gunas'. In Samkhya philosophy, a *guṇa* is one of the three "tendencies": Tamas, Sattva, and Rajas. These categories have become a common means of categorizing behavior and natural phenomena in Hindu philosophy. *Guṇa* is the tendency and not action itself. For instance, *sattva* *guna* is the tendency towards purity but is not purity itself. Similarly *rajas* *guṇa* is that force which tends to create action but is not action itself. Each of the three *gunas* is ever present simultaneously in every particle of creation but the variations in equilibrium manifest all the variety in creation including matter, mind, body and spirit. (Maharishi Mahesh Yogi ,Bhagavad-Gita, 1969, p 128)

- *Sattva* (originally "being, existence, entity") has been translated to mean balance, order, or purity. Indologist Georg Feuerstein translates *Sattva* as "lucidity".(Alter,Yoga in Modern India ,2004, P55)
- *Rajas* (originally "atmosphere, air, firmament") is also translated to mean change, movement or dynamism. (Autobiography Of A Yogi, Paramahansa Yogananda, 1973, p.22) (Rajas is etymologically unrelated to the word raja)

- *Tamas* (originally "darkness", "obscurity") has been translated to mean "too inactive" or "inertia", negative, lethargic, dull, or slow. Usually it is associated with darkness, delusion, or ignorance. (Whicher, *Integrity of the Yoga Darśana*, p 110)
- A *tamas* quality also can refer to anything destructive or entropic. In his *Translation and Commentary on the Bhagavad-Gita*, Maharishi Mahesh Yogi explains "The nature of *tamo guna* is to check or retard, though it should not be thought that if the movement is upward *tamo guna* is absent". (Maharishi Mahesh Yogi ,*Bhagavad-Gita*, 1969)

Trigunatita or one who has transcended trinity of Gunas Shows no avarice to knowledge, activity, delusion, when any of them is dominant. No longing for them when they are absent. Remains like an unconcerned witness and is unperturbed by Guna-born sense objects. Knows that it is only Guna-born senses and mind that act and enjoy. Remains unwavering in all situations. Self-poised alike in Pleasure and in pain. Makes no difference whether it is stone, iron or gold. It is same towards loving and hating. Unmoved by praise and blame alike. Alike in honor and in humiliation. View a friend and a foe alike. There will not be any duality between the opposites. Has abandoned all sense of agency. Serves God through communion of unswerving and exclusive devotion and transcends Gunas.

1.4. Emotion:

Emotion is a natural instinctive state of mind derived from one's circumstances, mood, or relationships with others. Many particular feelings characterize such a state of mind, such as joy, anger, love, hate, horror, etc.

The word emotion includes a wide range of observable behaviors, expressed feelings, and changes in the body state. This diversity in intended meanings of the word emotion makes it hard to study. For many, emotions are very personal states, difficult to define or to identify except in the most obvious instances. Moreover, many aspects of emotion seem unconscious. Even simple emotional states appear to be much more complicated than states as hunger and thirst.

To clarify the concept of emotions, three definitions of various aspects of emotions can be distinguished:

1. Emotion is a *feeling* that is private and subjective. Humans can report an extraordinary range of states, which they can feel or experience. Some reports are accompanied by obvious signs of enjoyment or distress, but often these reports have no overt indicators. In many cases, the emotions we note in ourselves seem to be blends of different states.
2. Emotion is a state of *psychological arousal*, an expression or display of distinctive somatic and autonomic responses. This suggests that emotional states can be defined by particular constellations of bodily responses. Specifically, these responses involve autonomously innervated visceral organs, like the heart or stomach. This second aspect of emotion allows us to examine emotions in both animals and human beings .

3. Emotions are *actions* commonly "deemed" such as defending or attacking in response to a threat. This aspect of emotion is especially relevant to Darwin's theory of survival where his point of view was that of the functional roles of emotion. He said that emotions had an important survival role because they generated actions to dangerous situations.

Categories of emotions:

Some psychologists have tried to subdivide emotions in categories. For example Wilhelm Wundt, the great nineteenth century psychologist, offered the view that emotions consist of three basic dimensions, each one a pair of opposite states: pleasantness/unpleasantness, tension/release and excitement/relaxation. However, this list has become more complex over time.

Plutchik suggests that there are eight basic emotions grouped in four pairs of opposites:

1. joy/sadness
2. acceptance/disgust
3. anger/fear
4. surprise/anticipation

The Indian system of dance (Natyashastra) describes nine emotions of human behavior (better known as navarasas) which are: sringara (love), bhayam (fear), veerum (courage), roudram (anger), bhibhatsam (disgust), karunyam (compassion), hasyam (laughter), adbhutam (wonder), shantam (peace) [Ghosh, 2002]. Out of the above sringara, veerum, karunyam, hasyam, adbhutam and shantam are considered as positive emotions, whereas roudram, bhayam and bhibhatsam are considered as negative emotions.

To understand the personality-affect link (emotion), it is necessary to consider the ways in which personality may be described through various ancient psychological theories. Galen's theory of

temperament (Stelmack and Stalikas, 1991) dimensional models of individual differences in personality have consistently identified three (Eysenck and Eysenck, 1985) to five (Digman, 1990) broad dimensions of personality. Two of these dimensions in particular, extraversion (E) and Neuroticism (N) have been associated with individual differences in affective level (emotion-level;) and environmental responsiveness (Corr, 2008; Revelle, 1995). Due to this strong association between emotion (affect) and personality, this study also tests the effects of yoga on the change in personality type of Home guards. The following paragraphs will explain the details of the concept of personality from the western and Indian psychology models.

1.5. Stress:

Stress is our body's way of responding to any kind of demand. It can be caused both by good and bad experiences. When people feel stressed by something going on around them, their bodies react by releasing chemicals into blood. These chemicals give people more energy and strength, which can be a good thing if their stress is caused by physical danger. But this can also be a bad thing, if their stress is in response to something emotional and there is no outlet for this extra energy and strength. Stress has become an inevitable part of everyone's life, right from childhood to death. This has led to a category of diseases called the psychosomatic diseases. However stress can be managed by several methods involving the changes in the attitudes and lifestyle of the individual.

1.6. Verbal aggression:

Verbal aggression is a communication intended to cause psychological pain to another person, or a communication perceived as having that intent. The communicative act may be active or

passive, and verbal or nonverbal. Examples include name calling or nasty remarks (active, verbal), slamming a door or smashing something (active, nonverbal) and stony silence or sulking (passive, nonverbal).

1.7. Satisfaction with life:

Human is an objective creature always evaluating his life situation. He will feel no satisfaction until he attains his goals. Perhaps, it can be said that the final aspiration of every human being is to attain his goals and desires and this attainment leads to life satisfaction. Therefore, Life Satisfaction is the central aspect of human welfare. It is ultimate goal and every human being strives to attain this goal throughout the life.

Life satisfaction is a multidimensional concept related to psychological and environmental life conditions. The term life satisfaction can be split into two words - life and satisfaction.

Life- Life is the state of functional activity peculiar to organized matter and especially to the portion of it such as, constituting on animal or plant before death (Oxford Dictionary, 1990).

Life is what one's thinking makes it, one makes it human or hell through one's thinking (Bartlett, 1986).

Life is on object to which the effect or ambition is directed. In fact, no life can be without a goal.

4.AIM AND OBJECTIVES

4.1. AIM

To test the efficacy of Integrated Yoga Module (IYM) on the emotions, personality, stress, verbal aggression, satisfaction in life and coping capacity of home guards

4.2. OBJECTIVES

To assess the effect of yoga on(a) Verbal aggression , (b) Personality , (c) Emotions, (d) Stress and Satisfaction with life of Home Guards H Gs.

4.3. RESEARCH QUESTIONS

Is Integrated Yoga Module(IYM) will help in managing the emotions, developing personality, reduce the stress , satisfaction with life and coping up behavior in Home Guards.

4.4. HYPOTHESIS & NULL HYPOTHESIS

4.4.1. Hypothesis

Integrated Yoga module will help in managing the emotions, personality and coping up behavior in Home Guards as assessed by

$$H_a = \text{Pre} \neq \text{Post}$$

4.4.2. Null Hypothesis

Integrated Yoga Module will not help in managing the emotions, personality and coping up behaviour in Home Guards assessed by.

$$H_0 = \text{Pre} = \text{Post}$$

5. METHODOLOGY

5.1. SOURCE OF PARTICIPANTS

The Subjects were selected from field working HGs from various parts of Bangalore Rural District. The Informed consent was taken from all subjects before enrolling them in the study.

5.1.1. SAMPLE SIZE :

Subjects were selected from 500 field working HGs from Bangalore Rural District who attended motivational lectures given by deputed instructors. 148 who volunteered to join the study were randomly divided into YG (n=75) and CG (n=73) using a Random number calculators [Internet], random number table was generated. Effect size was calculated based on previous studies and G power.

The 75 subjects in YG and 73 subjects in CG had age ranges between 20 and 50 years. 36 in YG were female, and 31 in CG, 39 in YG, were male and 42 in CG. 49 were married in both YG and CG;26 in YG were unmarried, and 24 in CG. Subjects educational qualifications were upto SSLC, SSLC to PUC and graduates.

5.1.2. SELECTION CRITERIA

5.1.3 Inclusion criteria:

- a) Men or woman, (b) normal healthy field working HGs and (3) age between 20-45 years

5.1.4. Exclusion criteria are:

a) Any ailment, (b) consuming alcohol and smoking, and (c) those already practicing *Yoga*

5.1.5. Informed Consent form

Informed consent from the participants was obtained before the start of the intervention as per the format.

Oral Permission and Assent form taken from Director General of Police, Home Guards, for doing research at District Commandant Office, Home Guards, Bangalore Rural District , West of chord Road, Bangalore.

5.1.6. Ethical Consideration

S-VYASA ethical committee has approved the project.

1. The participants in the study were explained in detail about the nature of the study and the voluntary nature of participation.
2. Confidentiality was assured as a part of the research process.

5.2. STUDY DESIGN

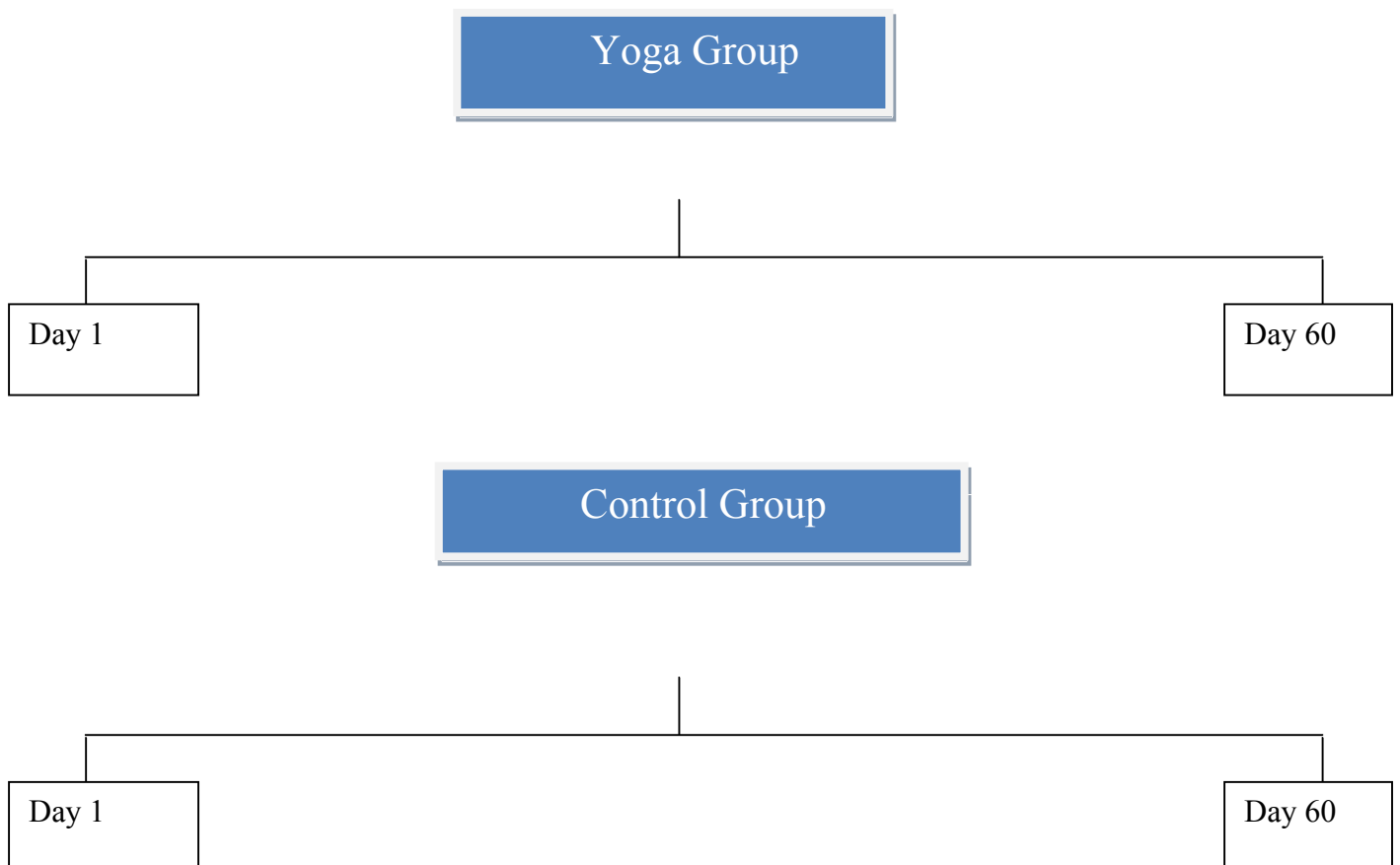
This was a prospective, randomized, single-blind, control study to measure and compare the personality (*Gunās*) of the HGs allotted to YG and CG. Gruha Rakshaka Bhavan (HG Administrative office at Bangalore, Karnataka was the venue for Yoga classes).

Both groups continued performing routine work such as maintaining law and order, managing traffic and the public in different government organization like RTO, Vidhana Soudha, etc.,.

Both groups participated in weekly mandatory parades as per HG schedules.

In addition to normal routine work the YG also did one hour of IYM practices, six days a week for eight weeks. Daily attendance was taken for all the subjects, *Yoga* trained experts taught *Yoga* to YG. The CG only did their normal routine work, but its participants were given the option to join *Yoga* classes after study completion.

5.2.1. STUDY OUTLINE



5.2.2. STUDY DESCRIPTION

This study was conducted in a Gruha Rakshaka Bhavan , Conference Hall, 6 days a week for 2 months. The data was collected on day 1 and on day 60.

5.2.3. EVALUATION:

The tests were administered by examiners before and after eight weeks of IYM in a disturbance free quiet room.

5.2.4. MASKING:

The invigilators coded and saved the answered questionnaires response sheets (QRS) for scoring latter. A psychologist not involved in group formation or class supervision evaluated the coded QRSs. Another person blind to group membership decoded the QRSs only after noting the scores both before and after data was completed.

8. DISCUSSIONS

8.1. Vedic Personality Inventory (Guna) VPI : This is a randomized, controlled, prospective study in normal HGs comparing the efficacy of *Yoga* with a control group for eight weeks on 148 normal adults on changes in their personality (*Guna*) as assessed by *Vedic Personality Inventory*. The results showed that there was an increase in *Satva* level ($P < 0.001$) in *Yoga* group and decrease in controlled group. There was significant decrease in *Rajas* in *Yoga* group and increase in controlled group. The *Tamas* level has also decreased significantly in *Yoga* group but whereas it has increased in controlled group. Further the data was analysed based on the genders, educational qualifications and age. All the categories have shown similar trend which is as per the *Yogic* literature.

A similar study by Dasa conducted by the use of *Mahāmantra* in a three-armed, randomized prospective, controlled study on 62 volunteers showed that the *Mahāmantra* group had increased *Satva* and decreased *Tamas* with no significant change in *Rajas* scores on the VPI questionnaire after a month of chanting of *Mahāmantra*, 20 minutes daily for four weeks. In the present study, apart from an increase in *Satva* and decrease in *Tamas*, there is a significant decrease in *Rajas* which was not observed after *Mahāmantra*.

Another study was conducted by Deshpande et.al.^[15] to compare the effect *Yoga (Y)* and Physical Exercise (PE) on *Gunās* and general health. It was observed that *Yoga* has shown a better effect on the *Sattva Guna* than Physical Education with a better effective size, the main difference between Y and PE practices seems to be the effect on *Rajas Guna*. The reduction in this *Guna* was significantly higher in PE group than Y group. Thus, it was concluded that both physical

activity (to reduce *Rajas* and *Tamas*) and *Yoga* (to improve *Sattva*) may be recommended for the harmonious promotion of personality. But however, it was observed in this study that by giving integrated *Yoga* module, even the *Rajas* has decreased significantly in experimental group compared to controlled group.

This is a randomized controlled prospective study of normal HGs assessing efficacy of an IYM for eight weeks on 148 normal adults to change their personality (*Guna*) as assessed by VPI. Results showed that there was an increase in *Sattva* level ($P < 0.001$) in YG and decrease in CG. There were significant decreases in *Rajas* and *Tamas* in YG and increases in CG. When data analysis was subdivided by gender, educational qualification and age all categories showed similar trends as expected according to the *Yogic* literature.

A study by Dasa^[26] conducted using the *Mahamantra* in a three-armed, randomized prospective, control study on 62 volunteers showed that the *Mahamantra* group increased *Sattva* and decreased *Tamas* with no significant change in *Rajas* scores on the VPI questionnaire after chanting of *Mahamantra*, 20 minutes daily for four weeks. In contrast, in addition to increase in *Sattva* and decrease in *Tamas*, the present study observed a significant decrease in *Rajas* not observed after *Mahamantra*. This difference could be because of the addition of *Asanas* and *Pranayama* to the Meditation technique used in the present study as compared to the *Mahamantra*.

The behaviour of a human being is an expression of a combination of different *Gunās*. *Tamas* (meaning darkness) is the grossest aspect of our personality characterized by excessive sleep, laziness, depression, procrastination, a feeling of helplessness, impulsivity, anger and

arrogance (packed up with vital energy). When we reduce *Tamas* through mastery over the mind, we become dynamic, sensitive and sharp to move towards *Rajas* (the shining one) characterized by intense activity, ambitiousness, competitiveness, high sense of Self importance, desire for sense gratification, little interest in spiritual elevation, dissatisfaction with one's position, envy of others and a materialistic cleverness.^[28] With further growth and mastery, one moves into *Sattva* dominance which includes the qualities of truthfulness, stability, discipline, sense of control, sharp intelligence, preference for vegetarianism, truthfulness, gravity, dutifulness, detachment, respect for superiors and staunch determination and stability in the face of adversity and also conscious action. Thus, we can see that although both *Rajas* and *Tamas* have both positive and negative qualities, they are the manifestation of a violent state of mind in which a person lacks mastery over personality or the ability to improve components of general health. The IYM increased *Sattva*. Hence, IYM which is more related to traditional practices in India and is cost-effective can be recommended for its additional benefits of promoting personality development.

Another study conducted by Deshpande et.al compared the effects *Yoga* and Physical Exercise (PE) on *Gunas* and general health. *Yoga* was observed to give better effects on the *Sattva* than PE, with a larger effective size, the main difference seemed to be in the effect on *Rajoguna*. Reduction in this *Guna* was significantly higher in PE group than Y group. Thus, it was concluded that both physical activity (to reduce *Rajas* and *Tamas*) and *Yoga* (to improve *Sattva*) may be recommended for harmonious development of personality. But the present study observed that giving IYM decreased *Rajas* significantly in YG compared to CG.

The strength of our design is IYM for HGs. The HGs work in very stressful situations during elections, when managing traffic and in other crowded places. It is essential in present day circumstances that they can manage their personalities (*Gunās*) and cope with stressful situations. Most of them succumb to smoking and drinking to overcome their stress. Hence, training them to calm their minds is an immediate need and to enable them to increase *Sattva* and decrease *Rajas* and *Tamas*. An interesting observation was that HGs in YG who were graduates showed increase in *Rajas* whereas all others in YG showed reductions. This may possibly be because only 6 people were in that category, and should be further studied with a larger number of HGs

The study demonstrates the utility of the VPI as a tool for measuring the subtle dimensions of *Gunās* described in traditional texts of *Yoga* as a measure of steps of individual growth.

8.2. Positive Affect and Negative Affect (Emotions) PANAS: This is a randomized, controlled, prospective study in normal HGs comparing the efficacy of *Yoga* with a controlled group for eight weeks on 148 normal adults on changes in their Positive and Negative Affect as assessed by PANAS scale. The results showed that there was an increase in Positive Affect and Other Positive Affect level ($p < 0.001$) in *Yoga* group and decrease in controlled group. There was significant decrease in Negative Affect and Other Negative affect in *Yoga* group and increase in controlled group.

Lakshmi et.al in her study has added nine (four positive and five negative) questions for his study which are referred as Other Positive Affect (OPA) and Other Negative Affect (ONA)

The descriptive of negative emotions, 'Distressed' and 'Disappointed' showed 37.40% and 38.01% reduction respectively in *Yoga* group. Since the Home Guards are volunteers and they don't have job security, they were in a mood of distress and disappointment. The beneficial effect of the integrated *Yoga* module in unwinding the distress and disappointed feeling in HG's that too within a short period of time may be considered as an important contribution of this study.

Integrated *Yoga* Module meant to develop better mastery over the modifications of the mind through introspective awareness to calm down the mind may have increased their level of confidence to make a resolve to change their lifestyle and approached to their life to overcome their guilt, shame and the related complexes. Similar changes have been reported in a study after Vipassana meditation in Tihar Jail. The inmates of the jail showed reduced hostility, anxiety and depression with improved sense of wellbeing and hope for the future in those with or without psychiatric problems. Reduction in aggressive behavior has been demonstrated in normal young volunteers after 12 weeks of integrated *Yoga* program similar to the practices used in this study.

In this study it has been noticed that negative emotions like fear, hatred, nervousness, which are other forms of anxiety which leads to stress have reduced drastically. Many studies have shown the stress reducing effect of *Yoga* which supports the observations of our study. The relaxation response after yoga may offer the ability to face the situations in a relaxed state of mind and perform with utter ease and effortlessness. *Yoga* is considered as a special skill of action in relaxation. This was observed with *Yoga* practices in musicians with the relative reduction in performance anxiety, musculoskeletal conditions, mood and flow experience. *Yoga*

practices prior to exams in medical students showed improved concentration, improved efficiency, increased attentiveness, and significant reduction in number of failures.

'Disappointed, upset, irritable, hostile' are different facets of anger resulting from unsatisfied desires or the inability to cope. All this is described in the *Bhagavadgita* as violent speed of mind resulting in anxiety or depression. These have shown reduction in this study. Benefits of *Yoga* practices for rapid stress reduction and anxiolysis among distressed women, betterment of mood in psychiatric inpatients, and reduction in symptoms of depression are reported.

The perception of vigor "Active" and 'Pleased' (q.25, 8) have increased by 9.85% and 25.35% respectively. The feeling of wellness was contributed by *Asanas* and loosening exercises which increases spinal flexibility, dexterity and stamina.

The integrated *Yoga* program taught in this camp included lectures and practice of bhakti *Yoga* (devotional sessions) that are meant for direct handling of emotions by nurturing the positive emotions of pure love and surrender to the divine as tools for stress reduction and positive health.^[53] Similar thinking is expressed by a study, which said that spirituality (faith, selfless service and pure love) promotes a healthier coping style. An increase in positive affect 'contentment' by 39.29% reflects the calming effect of yoga.

The increase in Positive affect and decrease in Negative Affect in *Yoga* group may be due to better mastery over modification of the mind and calming down of the mind. The yogic techniques have helped the Home Guards to increase their level of confidence and hence it has become easy for them to overcome negative affects.

The other aspect of yoga is relaxation which might have given the ability to the Home Guards to face the situation in the field in a relaxed state of mind and perform duty in relaxed and effectiveness way. which means relaxation in action and efficiency in outcome.

The results obtained in our study is almost similar to the results of one of the earlier studies Lakshmi et. All. ^[40]. The other 9 questions other positive affect and other negative affect which was taken from Lakshmi et.al. variable can be validated.

This is a randomized control prospective study in HGs comparing the efficacy of *Yoga* on Perceived stress level, Verbal Aggression and Satisfaction in life. This study has demonstrated that an eight weeks intervention of an integrated *Yoga* module (IYM) has reduced stress level Verbal aggression level and increased the satisfaction in life in the *Yoga* group compared to control group.

In this study, average 70% of the Home Guards in the sample were found to be suffering from psychological stress, which is consistent with the stress reported by Rao *et al.* in 28.8% of CISF personnel. Other studies such as that done by Geetha *et al.* a Bengaluru police personnel found high stress levels in 60% of population, Deb *et al.* also found high stress in 79.4% of traffic constables in Kolkata. The higher levels of stress reported by these studies as compared to the present study could be because of socio-demographic and methodological differences in the studies. Several international studies in police personnel have also reported stress levels ranging 40–50% of the sample, but contrary to the present study, these studies have found higher psychological stress in female police persons. The reason for this could be that the number of females in the current study sample was very less compared to males, with an M: F ratio of 9:1.

As the ratio of females in Indian police is quite less as compared to males, a bigger sample size is required to get a true representation of their stress levels and other study parameters.

According to the most widely used scriptural reference on *Yoga*, the sage Patanjali defines *Yoga* as a technique for developing mastery over the modifications of the mind and goes on to highlight many techniques that help in achieving this mastery. They are classified under eight major streams including injunctions for social and personal behavior (*Yama, Niyama*), body postures (*Asanas*), breathing (*Pranayama*), and meditation (*Pratyahara, Dharana, Dhyana, and Samadhi*) techniques that lead to mastery over any of the modifications in the mind. Furthermore, the sage *Vasishtha*^[28] in his famous work, *Yoga Vasishtha*, defines *Yoga* as a technique to slow down or calm the mind directly through deep internal awareness. Hence, it was hypothesized that stress level, one of the manifestations of an uncontrolled fast mind has decreased by the techniques of *Yoga*.

A study on the relationship between verbal aggressiveness and state of anxiety in sports by Alexandra *et al* showed that male basketball players were more affected by verbal aggressiveness of their coaches compared to female basketball players as assessed by VAS administered immediately after the game. In their study, they also observed a positive correlation between their anxiety and VAS scores in male players. It is known that *Yoga* with its holistic approach uses several techniques to calm down the mind and reduce the anxiety state. Our earlier studies have shown that in community home girls and congenitally blind children, sympathetic tone reduced after *Yoga* practices which resulted in significant decrease in resting heart rates and breath rates, thus reducing fear and anxiety. The sympathetic tone reduction could be a valuable treatment modality for reduction of anxiety. Another study on PT teachers also showed that *Yoga* reduced their sympathetic activity after three months of *Yoga* practices.^[31] A significant

reduction in anxiety scores was observed in patients with anxiety neurosis^[32] after a *Yoga* program. Based on these observations, we may suggest that the reduction in aggressiveness in the present study could be due to the reduction in their baseline anxiety and sympathetic reactivity.

In summary, this randomized, prospective, single-blind, comparative study has shown the efficacy of *Yoga* in decreasing verbal aggressiveness and stress and improving satisfaction with life level. Hence, *Yoga* may be recommended to Security forces to deal with the problem of violence among themselves and with others, which is still a live issue in all parts of the world

8.3. Verbal Aggression.VAS: This is a randomized control prospective study in HGs comparing the efficacy of *Yoga* (Y) on verbal aggressiveness. This study has demonstrated that an eight weeks' intervention of an integrated yoga module (IYM) has decreased verbal aggressiveness in the yoga group compared to control group.

There was a significant decrease in verbal aggressiveness in *Yoga* group compared to control group. Further it was noticed that all the HGs who were in the region of high verbal aggressiveness have completely shifted to either low verbal or moderate aggressiveness where as 5 people have shifted from low or moderate aggressiveness to high verbal aggressiveness.

A study on the relationship between verbal aggressiveness and state of anxiety in sports by Alexandra *et al.* showed that male basketball players were more affected by verbal aggressiveness of their coaches compared to female basketball players as assessed by VAS administered immediately after the game. In their study, they also observed a positive correlation

between their anxiety and VAS scores in male players. It is known that Yoga with its holistic approach uses several techniques to calm down the mind and reduce the anxiety state. Our earlier studies have shown that in community home girls and congenitally blind children, sympathetic tone reduced after Yoga practices which resulted in significant decreases in resting heart rates and breath rates, thus reducing fear and anxiety. we may suggest that the reduction in aggressiveness in the present study could be due to the reduction in their baseline anxiety and sympathetic reactivity.

8.4. Perceived Stress and Satisfaction with Life .PSS/SWLS: This is a randomized control prospective study in HGs comparing the efficacy of Yoga (Y) on Perceived stress level and Satisfaction with life. This study has demonstrated that an eight weeks' intervention of an integrated yoga module (IYM) has decreased stress level and increased the satisfaction in life in the yoga group compared to control group.

In this study, average 70% of the Home Guards in the sample were found to be suffering from psychological stress, which is consistent with the stress reported by Rao *et al.* in 28.8% of CISF personnel. Other studies such as that done by Geetha *et al.* a Bengaluru police personnel found high stress levels in 60% of population, Deb *et al.* also found high stress in 79.4% of traffic constables in Kolkata. The higher levels of stress reported by these studies as compared to the present study could be because of socio-demographic and methodological differences in the studies. Several international studies in police personnel have also reported stress levels ranging 40–50% of the sample, but contrary to the present study, these studies have found higher psychological stress in female police persons. The reason for this could be that the number of females in the current study sample was very less compared to males, with an M: F ratio of 9:1.

As the ratio of females in Indian police is quite less as compared to males, a bigger sample size is required to get a true representation of their stress levels and other study parameters.

According to the most widely used scriptural reference on *Yoga*, the sage Patanjali defines *Yoga* as a technique for developing mastery over the modifications of the mind and goes on to highlight many techniques that help in achieving this mastery. They are classified under eight major streams including injunctions for social and personal behavior (*Yama, Niyama*), body postures (*Asanas*), breathing (*Pranayama*), and meditation (*Pratyahara, Dharana, Dhyana, and Samadhi*) techniques that lead to mastery over any of the modifications in the mind. Furthermore, the sage *Vasishta* in his famous work, *Yoga Vasishta*, defines *Yoga* as a technique to slow down or calm the mind directly through deep internal awareness. Hence, it was hypothesized that stress level, one of the manifestations of an uncontrolled fast mind has decreased by the techniques of *Yoga*.

9. APPRAISAL

SUMMARY & CONCLUSION

9.1. VPI:

This is a randomized controlled prospective study of normal HGs assessing efficacy of an IYM for eight weeks on 148 normal adults to change their personality (*Guna*) as assessed by VPI. Results showed that there was an increase in *Sattva* level ($P < 0.001$) in YG and decrease in CG. There were significant decreases in *Rajas* and *Tamas* in YG and increases in CG. When data analysis was subdivided by gender, educational qualification and age all categories showed similar trends as expected according to the *Yogic* literature.

There was an increase in *Sattva* in *Yoga* group whereas it had decreased in controlled group. *Rajas* and *Tamas* significantly decreased in *Yoga* group whereas it had increased in controlled group. Hence, integrated *Yoga* module can be suggested for Home Guards which are cost effective and helps them for coping up with stressful situations.

The improvement observed in *Yoga* groups, after eight weeks of intervention in all variables, has shown that *Yoga* could be an equally effective and cost effective tool. It also points out the utility of the VPI as a tool for measuring the subtle dimensions of *Guna* described in traditional texts of *Yoga* that can measure the steps of growth of an individual.

9.2. PANAS:

The descriptive of negative emotions, 'Distressed' and 'Disappointed' showed 37.40% and 38.01% reduction respectively in *Yoga* group. Since the Home Guards are volunteers and they don't have job security, they were in a mood of distress and disappointment. The beneficial effect of the integrated *Yoga* module in unwinding the distress and disappointed feeling in HG's that too within a short period of time may be considered as an important contribution of this study. The results suggested that integrated *Yoga* module (IYM) can be useful for Home Guards to improve the positive affect and to decrease negative affect score. Moreover, IYM is cost effective and helps HGs for coping up with emotions in stressful situations.

9.3. VAS: This study has showed that 8 week intervention of an IYM decreased verbal aggressiveness in the *yoga* group and it is same level in the control group. In this study has shown the efficacy of *Yoga* in decreasing verbal aggressiveness. Hence, *Yoga* may be recommended to Security forces to deal with the problem of violence among themselves and with others, which is still a live issue in all parts of the world.

9.4. PSS/SWL: This study has showed that 8 week intervention of an IYM decreased Perceived Stress Level in the yoga group and it is same level in the control group. Also Satisfaction with Life level increased in Yoga group and decreased in control group.

This study has shown the efficacy of Yoga in decreasing the stress level and increasing in satisfaction in life. Hence, Yoga may be recommended to Security forces to deal with the problem of violence among themselves and with others, which is still a live issue in all parts of the world.

All the results have shown that IYM has increased the positive affect in Home Guards and reduced the negative affect, increase satva and reducing rajas and tamas, reduce the stress, improve the satisfaction in life and reduce the verbal aggression. Further *Yoga* is very cost effective and recommended to home guards. Hence, this study is a solution to train HGs to calm their mind and help them to increase their positive thinking and decrease negative mind set. By this their service to public will improve and in turn the image of the Department will also go up.

10. STRENGTH

The strength of our design is IYM for HGs. This is the first systematic yoga interventional study in Home Gaurds. The HGs work in very stressful situations during elections, when managing traffic and in other crowded places. It is essential in present day circumstances that they can manage their personalities (*Gunās*), emotions, stress, satisfaction in life and cope with stressful situations. Most of them succumb to smoking and drinking to overcome their stress. Hence, training them to calm their minds is an immediate need and to enable them to increase *Sattva* and decrease *Rajas* and *Tamas*, manage their emotions , reduce the stress and satisfaction in life.

11. LIMITATIONS

- Limitation of this study, we have taken only subjective parameter like questionnaire, objective parameter like BP, ECG would have given concrete result.

12. SUGGESTIONS FOR FUTURE STUDY

The other positive affect and negative affect which was taken from Lakshmi et.al. variable can be validated.

An interesting observation was that HGs in YG who were graduates showed increase in *Rajas* whereas all others in YG showed reductions. This may possibly be because only 6 people were in that category, and should be further studied with a larger number of HGs.

5.3. INTERVENTION

5.3.1. YOGA GROUP:

5.3.1.1. Yoga training - The Yoga session was planned to include: physical activity, relaxation, regulated breathing and philosophical aspects of yoga. This was an integrated approach of yoga, derived from principles in ancient yoga texts that emphasize that yoga should promote health at all levels (Gambhirananda, 2002). This combination is believed to promote physical health (Asanas (physical postures), *Kriyas*, healthy yoga diet loosening exercises and relaxation techniques), normal functioning at the subtle energy level (breathing exercises, Prānāyama (voluntarily regulated breathing)), mental and emotional level (meditation and devotional sessions) and at the intellectual level (lectures on philosophy of Yoga). The Integrated yoga module was selected from the integrated set of yoga practices used in earlier studies on yoga for positive health. (Nagendra & Nagarathna, 1985).

Promotion of physical health by loosening exercises, Āsanas (physical postures), relaxation techniques, *Kriyas* and healthy yoga diet.

5.3.1.2. Physical exercises and Movements - Sithalikari Vyayama – Very simple physical movements to mobilise and activate the affected parts of the body. It looses the joints, stretch and relax the muscles , improve the power and develop stamina.

5.3.1.3. Asanas – Asana is the first part of hatha yoga. *Asana* is a specific position which opens the energy channels and psychic centres. *Asana* helps to develop steadiness of body and mind,

diseaselessness and lightness (flexibility) of the limbs. The body also becomes supple. It evokes the dormant

potentiality in man. It helps raise man from his animal nature to normalcy and raise him further up the steps to achieve the goal of total freedom. Flexibility of spine is taken care of and aims for positive health and overall personality development will take place.

5.3.1.3A. Standing Asanas

Ardha chakrasana – Makes the spine flexible, stimulates the spinal nerves, promotes circulation of blood into head. Strengthens the neck muscles. Expands chest and shoulders. Improves breathing.

Pada hastasana – Makes the spine flexible, strengthens the thighs. Helps preventing constipation and menstrual problems. Improves digestion. Enhances blood flow to the head region.

Parivrutta trikonasana – Gives rotational movements to the spine. Improves the functioning of kidneys and strengthens the thigh muscles.

5.3.1.3B. Sitting Asanas

Vajrasana, Supta Vajrasana – One of the meditative postures. Keeps the spine erect and prevents drowsiness. Stimulates Vajra nādi at the ankles which increases awareness. Helps in cases of Varicose veins. Prevents deep veins thrombosis. Makes the ankles flexible and prevents flat foot. The only posture which can be performed even after heavy food. Useful for heel pain.

Çaçaïkāsana – Enhances blood flow to the head, stimulates the brain, gives flexibility to the spine, ankles and knees. A good posture for breathing ailments.

Halsāsana or Mayürāsana – Makes the wrists flexible and the arms stronger. Improves digestion. Helps to clear constipation. Activates the pancreas. Beneficial for poor appetite, irritable bowel. Tones up abdomen, reduces fat on tummy, strengthens the forearms, wrists and elbows. Prevents accumulation of gases. Vitalizes the endocrines in the abdomen. Very good for diabetes.

Ardha sērsāsana or sērsāsana - Due to improved circulation to the brain, the whole nervous system becomes healthy. Memory improves. Endocrine glands such as the pituitary and the thyroid get revitalised. Helpful in hernia. Seminal weakness can be cured. Improves concentration power remarkably.

5.3.1.3C Prone Asanas

Dhanurāsana – Useful for diabetes patients. Removes gastro intestinal disorders, stimulates and helps in slimming the whole body. Gives good stimulation and flexibility to the back.

5.3.1.3D Supine Asanas

Sarvāṅgāsana - Stimulates and keeps the thyroid healthy. Influences the pelvic organs. Useful in varicose veins, piles, hernia and menstrual disorders.

Matyāsasana - Complementary to Sarvāṅgāsana, good for diabetes, asthmatics and other respiratory problems.

5.3.1.4 Deep Relaxation Technique – This practice is useful for developing body and mind awareness. Its effects influence the physical as well as the psychological structure. It is very useful in yogic management of high blood pressure, peptic ulcer, anxiety, hysteria, cancer and all

psychosomatic diseases and neuroses. It helps to bring up the latent impressions buried within the subconscious mind.

5.3.1.5. Kriyas - Cleanses the internal passages and builds up stamina on the basis of progressively increasing stimuli followed by rest; the background of progressively increasing relaxation and rest by other practices on a daily basis is essential. *Kriyās* activates and revitalizes the organs. Toning up their functions. Desensitization and development of deep internal awareness.

Jalaneti – It helps to clear nasal passages. Removes cold, hypersensitivity, headache, sinusitis, bronchitis and stimulates olfactory nerves.

Vamana Dhauti – It helps to remove hyper acidity, good for flatulence and dyspepsia (indigestion), cleanses the stomach of all its contents, promotes proper functioning of the stomach and prevents hyper acidity. It is very useful for gas trouble, and for curing Asthma and bronchitis to clear the air passages through reflex stimulation of *Udāna Prāna*.

Kapalabhati – Kapālabhāti is fine kriya which stimulates all-round activity throughout the body. The abdominal muscles are vigorously exercised to bring about flexibility and massaging of the abdominal organs. It washes away carbond dioxide from the lungs and increased oxygen concentration in the lungs. Increased heart rate pumps the blood throughout the system so that lethargy of the cells is eliminataed due to sedentary habits. Both exocrine glands gets stimulated. There is a marked improvement in the digestive process . The brain cells are invigorated continuously thereby revitalises the functionsof the brains. Memory cells and many other cells in

the brain are brought into action. It is beneficial for patients with diabetes, obesity, respiratory disorders, digestive problems etc.,

5.3.1.6. Healthy diet – The yogic concept of food takes into consideration the total dimension of human existence. Apart from the atoms and molecules with which our gross physical body is made of, we all possess Prāna, Mind, Intellect, Emotions and the Spiritual Dimension featured by Freedom. Yoga is that process by which we bring an integration of the entire personality at all these levels. The stamina of the body is to be developed, the Prāna should be brought to a nice balance, the mind should be calmed down, the emotion should be stabilized and the intellect should be under total control. A ‘Balanced Diet’, therefore, according to Yoga, is that diet which restores balance at all levels. Only such diets could aid in a Holistic Way of Living.

5.3.1.7. Breathing Practices – The objectives of the breathing practices are

1. Bringing into action all the lobes of the lungs for full utilization.
2. To normalize the breathing rate and
3. To make the breathing uniform, continuous and rhythmic.

5.3.1.8. Pranayama - Pranayama brings mastery over *Prana*.

Vibhagiya Pranayama – It brings more power and vitality.

Calmness in daily activities. Thinking and clarity of thought improve.

Nadisuddhi Pranayama – It promotes balance between the two nostrils apart from cleansing the nasal tract. It increases the vitality. Metabolic rate decreases. It increases the digestive fire

and appetite. It lowers the levels of stress and anxiety by harmonising the prānas. It is beneficial in respiratory disorders such as Bronchial asthma, Nasal allergy, Bronchitis etc., It induces tranquility, clarity of thought and concentration. It clears prānic blockages and balances Ida and Pingala nādis, causing Çuñumna nādi to flow which leads to deep states of meditation and spiritual awakening. It helps to maintain Brahmacharya which is a pre-requisite for spiritual progress.

Sitali Pranayama, Setakari Pranayama, Sadanta Pranayama – They induce muscular relaxatikon and an over-all cooling effect. They soothen the eyes, ears and purify the blood. They quench the thirst, appease hunger and generate a feeling of satisfaction. The taste buds and the mouth are sensitised. Allergies due to cold can be effectively overrcome by prolonged practice. They help in reducing tensions and stresses and induce mental tranquility. *Setkari, Sadanta* keep the teeth and gums healthy. They help reduce blood pressure and acidity in stomach. They cure chronic dyspepsia (indigestion), various chronic skin diseases and releases even very subtle tensions.

Expansion of awareness – a facet of spiritual growth takes place as you move from *Çitalé* (linear awareness) *Sitkari* to (surface awareness) and then to *Sadanta* (3-D awareness).

Bhramari Pranayama- Creates a soothing effect on the nervous system. Cultures the voice and increases the melody. Relieves stress and cerebral tension. Reduces anger, anxiety, insomnia and blood pressure. Good for all psychosomatic problems as it reduces the stresses and tension. Eliminates throat ailments (tonsils, pains etc.). Speeds up healing of tissue and so may be practised after surgery. Develop the 3-D awareness. It aids in expansion of the mind towards all

pervasive awareness. It induces a meditative state by harmonising the mind and directing the awareness inwards.

Nadanusandhana – It brings resonance all over the body. The resonant sounds act as stimulations and the post-resonance silence deepens the awareness and releases even very subtle tensions.

5.3.1.9. Meditation - Om meditation– Meditation is a Yogic process of providing deep rest to the system by allowing the mind to calm down to its basal states. It gives deep relaxation to all parts of the body, reduces metabolic rate, freshness, lightness and a feeling of expansion at mental level. It gives calmness, peace and serene bliss and continuous awareness. It improves concentration, memory, emotional equipoise and higher creativity.

5.3.1.10. Bhajans – Bhajans help to culture the emotions by harnessing the “Right Brain”, purify the emotions and elevate man to experience ecstatic bliss of Divinity. Heart becomes light and the gloom of unknown sorrow changes into a bright gleam of joy.

5.3.1.11. Notional correction

- A. **Lectures** – Series of 12 lectures on Integrated Approach of Yoga Therapy to unravel the concept of health according to WHO definition and its relation to Yoga; concept of body and disease according to modern medical science and yoga; happiness analysis; bhakti yoga and karma yoga
- B. **Yoga Counselling** – Having given the overall vision about Yoga, Health and IAYT for promotion of positive health through lectures interactions, questions and answers, yoga

counselling at individual level was used to concretise this wisdom and solve their psychological problems that may be contributing to their day to day hazzles and stresses.

Qualified yoga teachers taught yoga.

Table 4.6.1 Details of the practices

Sl no.	Duration	Names	Benefits
1	5 minutes	Breathing practices, Hands in and out breathing, Dog breathing, Tiger breathing, Straightlegsrise breathing.	Brings into action all the lobes of the lungs for full utilization. Normalizes the breathing rate Makes the breathing uniform, continuous and rhythmic.
2	5 minutes	Loosening Exercises Jogging, Forward and backward bending Side bending, Twisting <i>Pavanamuktasana kriya</i>	Prepares the joints for better flexibility to move on to postures
3	25 minutes	<i>Asanas :</i> Standing: <i>Ardha cakrasana,</i> <i>Pada hastasana.</i> Sitting: <i>Vajrasana, Supta vajrasana</i> <i>Halasana or Mayurasana.</i> Prone postures: <i>Dhanurasana</i> Supine postures: <i>Sarvaingasana,</i> <i>Matyasana, ArdhaSirsasana or</i>	Balance and harmony. Great speed in movement due to agility Makes body flexible, improves concentration, Relaxation in action and hence conservation of energy. Tranquility of mind and clarity of thought

INTERVENTION

		<i>Sirsasana</i>	
4	5 minutes	Deep Relaxation Technique	Deep rest to cells, Stress reduction Rejuvenates the tissues, Unfolds the latent impressions buried within the subconscious mind.
5	10 minutes	<i>Pranayama:</i> <i>Vibhageya pranayama, Nadicuddhi Pranyama, Çitale, Setkari, Sadanta Pranayama, Bhramari Pranayama</i> <i>Nadanusandhana</i> OR	Brings mastery over <i>Prana</i>
6		Meditation – <i>Om</i> Meditation	Provides deep rest to the system, calms down the mind. Reduces metabolic rate, blissful awareness, freshness, lightness expansion at mental level, improves concentration, memory, and creativity.
7	10 minutes	Lectures	Cultures the emotions. Removes ignorance and wrong notions. Stable personality.
8		<i>Kapalabhati</i>	Cleanses the body removes the toxins. It desensitizes the possible hyper sensitivity.

Yoga intervention mainly included an Integrated Yoga Module (ITM) which strengthen the body and immune system at physical level, channelizing prana by pranayama practice , calming the mind by meditation, counseling the intellect by notional correction and lectures.

Integrated Yoga Module was administered for a period of 2 months with 60 minutes of practice a day; 6 days a week. Further the participants were performing weekly parade on prescribed date which is mandatory for Home Guards.

5.3.2. Control group:

The control group were not given any yoga practice. However they were performing weekly parade on a prescribed date which is mandatory requirement for Home Guards. Control group subjects can opt for yoga classes as part of the study after study duration.

An attendance was maintained of the number of days of intervention attended by the participants and all efforts and motivation was given to achieve 100% attendance rate. Participants were encouraged to continue practice of the yoga at home after the intervention

2. LITERARY RESEARCH

2.1. AIMS AND OBJECTIVES

The present study was intended to obtain a greater understanding on present study of Home Guards, Security personnel as described in classical yogic texts and spiritual literature.

2.2. SOURCES

Ancient texts like Upanishads - 10 major *Upanishads*, *Srimad Bhagavad Gita*, *Yoga Vasistha*, *Mahabharata*, *Ramayana - Valmiki Ramayana*, *Astanga Hrudaya Shashtrani*, *Charaka Samhita*, *Dasa Rupakam* and *Shastrani* software.

2.3 METHOD OF SEARCH

The first step was to search for the keyword of Home Guards and different synonyms of Security and Security forces, *personality*, *emotion*, *stress and coping* from various scriptural texts for the current work. Various texts searched were: The 10 major *Upanishads*, The *Srimad Bhagavad Gita*. The yoga texts include, *Hatha Yoga Pradipika*, *Patanjali Yoga Sutra*, *Mahabharata* and *Ramayana (Valmiki)*.

SLOKAS FROM SPIRITUAL LORE

The aim of this part of research is to search and unearth the information related to Home Guards from our ancient books of Yoga and Spiritual lore.

2.3.1. Upanishads

The main concept to *Upanishads* is to know that ‘*I am Brahman*’ that means it is not the ego but to know the Self. Even *Shankaracharya* says अहं ब्रह्मास्मि *aham brahmāsmi* that means ‘*I am Brahman*’. When all the selfish desire vanishes and there is nothing else but only calmness in the mind then it will be ‘*I am that*’. There will be no duality in the mind. This is possible through *Yoga*.

2.3.2 . Bhagavad Gita

The security personnel and police personnel play a very important role in monitoring law and order in the society and protecting the nation. This can be noticed in one of the very famous text *Bhagavad-Gita*. The first chapter is full of arrangements of the army on both the sides.

The first chapter is *Arjuna vishaada yoga*, the despondency or grief of *Arjuna* to fight. This will be the case with HGs when they are working in the field and who will have lot of stress.

सञ्जय उवाच

दृष्ट्वा तु पाण्डवानीकं व्यूढं दुर्योधनस्तदा ।

अचार्यमुपसङ्गम्य राजा वचनमब्रवीत् ॥१.२॥

Sañjaya Uvāca

Dr̥ṣṭvā Tu Pāṇḍavānīkaṁ Vyūḍhaṁ Duryodhanastadā

Acāryamupasaṅgamyā Rājā Vacanamabravit̥ ||1.2||

Sanjya Said:

O King, having seen the *Pāṇḍava* army arranged in a military formation ready for battle, Prince Duryodhana approached his teacher and spoke the words.

It can be construed here that after viewing the great formation of *Pāṇḍava* army, he got frightened and approached his teacher to explain to him about the formation and presence of mighty warriors in *Pāṇḍava* army.

पश्यैतां पाण्डुपुत्राणामाचार्य महतीं चमूम् ।
व्यूढां दृपदपुत्रेण तव शिष्येण धीमता ॥१.३॥

*Paśyaitāṁ Pāṇḍuputrāṇāmācārya Mahatīm Camūm |
Vyūdhāṁ Dr̥padaputreṇa Tava Śiṣyeṇa Dhīmatā ||1.3||*

O Acharya, look at the military array arranged in a splendid military formation by your most skilled disciple the son of *Dr̥pada*

अत्र शूरा महेष्वासा भीमार्जुनसमा युधि ।
युयुधानो विराटस्त्व दृपदस्त्व महारथः ॥१.४॥

*Atra Śūrā Maheṣvāsā Bhīmārjunasamā Yudhi |
Yuyudhāno Virāṭasca Dr̥padasca Mahārathaḥ ||1.4||*

In this *Pāṇḍava* army, there are many extraordinary bowmen who are equivalent to *Bhīma* and *Arjuna* in skill and fighting ability. They are great warriors like *Yuyudhāna*, *Virāṭa* and also *Dr̥pada*.

This will be the thought provoking in mob's mind when they see the police, security and HG Force. The first chapter is *Arjuna vishaada yoga*, the despondency or grief of *Arjuna* to fight.

This will be the case with HGs when they are working in the field and who will have lot of stress.

2.3.3 . Ramayana, yuddakanda

लंकायं तु कृतं कर्म घोरं दृष्ट्वा भव आवहम् ।
राक्षस इन्द्रो हनुमता शक्रेण इव महात्मना ॥६.६.१ ॥
अब्रवीद् राक्षसान् सर्वान् हिया किञ्चिद् अवान् मुखः ।
धर्षिता च प्रविष्टा च लंका दुष्प्रसहा पुरी ॥६.६.२ ॥
तेन वानर मात्रेण दृष्टा सीता च जानकि ।
प्रसादो धर्षितः चैत्यः प्रवरा राक्षसा हताः ॥६.६.३ ॥
आविला च पुरी लंका सर्वा हनुमता कृता ।
मंत्र मूलं हि विजयं प्राहुर आर्या मनसिन्नः ॥६.६.४ ॥

laṅkāyaṁ tu kṛtaṁ karma ghoraṁ dṛṣṭvā bhava āvahaṁ |

rākṣasa indro hanumatā śakreṇa iva mahātmanā | 6.6.1 |

abravīd rākṣasān sarvān hriyā kiñcid avān mukhaḥ |

dharṣitā ca praviṣṭā ca laṅkā duṣprasahā purī | 6.6.2 |

tena vānara mātrena dṛṣṭā sītā ca jānaki |

prasādo dharṣitaḥ caityaḥ pravarā rākṣasā hataḥ | 6.6.3 |

āvilā ca purī laṅkā sarvā hanumatā kṛtā |

mantra mūlam hi vijayam prāhura āryā manasivnaḥ||6.6.4||

Soon after Hanuman finds Sita in Ashoka Vana and shows his might in the royal assembly and puts afire the city of Lanka, Ravana calls for a meeting of his ministers. Fearing the imminent attack by Rama and his army on Lanka, he states: Hanuman was only a monkey. He entered the impenetrable Lanka, found Sita and made the whole city of Lanka turbid. Our excellent soldiers were killed. Now, please tell me what I should do? Kindly tell me which one is proper and if attempted will be good for everyone?

What we have to observe here is regarding the action to be taken whenever any riot takes place and lot of public properties get destroyed. A detailed meeting inviting suggestions from all the participating forces to control the situation is required.

2.3.4 . Patanjali Yoga Sutra

Chapter 1: SAMĀDHI PĀDA

योगश्चित्तवृत्तिनिरोधः ॥ २ ॥

Yoga ścittavṛttinirodhaḥ (2)
(Yogaḥ + Citta + Vṛtti + Nirodhaḥ).

(Yoga is the restriction of transformations of the mind)

The mind is referred to as a monkey. There will be a constant activity going on in the mind. The only time the mind rests is during sleep. When the mind rests, the person will experience extreme happiness. Essentially, man wants to be happy all the time. However, man cannot afford to sleep all the time. Through Yoga one should learn how to rest the mind when awake. This practice is

referred to as `Sādhana` (practice). There are several *Sādhana* techniques. Sage Patañjali says controlling of mind is *Yoga*.

वृत्तिसारूप्यमितरत्र ॥ ४ ॥

Vṛttisārūpyamitaratra ॥ 4॥

(Vṛtti + Sārūpyam + Itaratra)

(When Citta is not under control or when one is not in a Samādhi state, he will experience happy and unhappy moments like others).

This Sūtra is self-explanatory

When the mind is working in its usual state i.e., where its transformations are not inhibited, man will experience all the dualities of life (happiness and unhappiness), just like others. Normally, we experience this during our wakeful state. Even during dream states, our body creates a subtle mind of its own and experiences these dualities.

Sage Patañjali keeps reminding us repeatedly to control the mind and to stay in our original state of Brahman and experience happiness.

2.4. CONCEPT OF GUNAS

2.4.1. Gunas according to yoga

India has been the land of saints and sages, scientists and founders of world's major religions, certain *yogic* and religious practices, help to attain steady state of mind. *Maharsi patanjali*, the father of modern concept of *yoga* and a great physician himself defined *yoga* as

complete mastery of mind and emotions. *Yoga* means union of body, mind and soul. It is a science, which shows us the way to unite the body and mind.

According to *Vedanta* treatise, the structure of man can be further divided into five material layers enveloping the atman. Atman is the core of personality. It is represented in the diagram by the mystic symbol. They are called sheaths or *kosas* in 'sanskrit'

First layers, *Annamaya kosa*, the gross body is made up of *Panchabhutas* - the five primordial elements i.e. *akasa* (space), *vayu* (air), *agni* (fire), *jala* (water) and *prthvi* (earth). It is directly under control of the next subtler body, the *pranamaya kosa* which consists of vital energy. The next three *kosas* - *manomaya*, *vijnanamaya* and *anandamaya* pertain to mental faculties of a person. The *manomaya kosa* receives all the sensory inputs, interprets them as good or bad and desires only the good. The feeling of 'me' and 'mine' and the faculty of intelligence and reasoning constitute the fourth or *vijnanamaya kosa*. The fifth or the *anandamaya kosa* means full of pleasure in the innermost *kosa* in close proximity of the soul.

When one considers the symptoms of depression, religious fervor is evident in the ideas of guilt and sin and their expiation by suicide act. Even lethargy and laziness is considered as a sign and symbol of devil and demons. In India, psychiatrists and psychologists use religion as psychotherapy, as it performs certain function like answering the question about the ultimate meaning. It gives emotional support, social cohesion sense of belonging and guidelines for life. A steady state of mind and sustenance of peace have been the aims of all philosophies. All these philosophies have originated from different sources and from different routes which propagated the concept of *Gunas* or personality in their own way. These sources are-

- a. *Vedas*.
- b. *Darsana - Sankhya*
- c. *Bhagavad Gita*
- d. *Puranas* and other sources

2.4.2. Gunas in Vedas

Mind is the cause for both bondage and liberation. The verse is an etymological *pun, manu*; Human is derived from man 'to think' milk on too rhymed that the mind is in its own place; it may make heaven out of hell or hell out of heaven. Mind, which should have been the source of joy '*ananda*', becomes a source of sorrow, *dukha*. In *atharvaveda*, mind has been called as sixth sense, which is made active in us by the Supreme Being.

The old civilization of India was a concrete unity of many sided development in arts, architecture, literature, religion and morals and sciences as far as it was understood in those days. But the important achievement of Indian thought was philosophy. It was regarded as the goal of all highest practical and theoretical activities and indicated the point of unity amidst apparent diversities.

2.4.3. Concept of mind in Vedas

Mind has been conceived to be a functional element of atman (soul which is Self) in *Vedas*, which are earliest written script of human race. In *Rig-veda* and *yajur-veda* there is mention of prayer. Through *mantras* noble thoughts come in the mind. It is mentioned that thoughts

determine facial appearance; thoughts can be purified through mantras and purified thoughts influence instincts. In *veda* there is emphasis on prevention of mental pain (depression).

In *Rig-veda*, the speed of mind, curiosity for methods of mental happiness, prayers for mental happiness and methods of increasing *medha* (intelligence) has been described. It is further stated in *Rig-veda* that purification of mind prevents diseases in human beings, therefore one should have noble thoughts. The power of mind in healing has also been described. First time the traits of personality - *Satva*, *Rajas* and *Tamas* were described and also-mental illness were independently identified along with physical illnesses not to destroy this body.

In *yajur-veda*, the mind has been conceptualized as the inner flame of knowledge. It describes perceiving knowledge in mind is for control of mind and they function under them. Vedic therapy emphasize upon *sātvika* diet, as diet produces great effect on man's temperament. Non-vegetarian food makes man lustful, revengeful, and furious; while vegetarian diet makes him kind, cool, soft. Also to enjoy the life, one has to leave lethargy and lead life of actions.

2.4.4. Gunas in Bhagavad Gita

In fact, the *yogic* conception of personality seems to be incomplete without reference to *Bhagavad Gitā*. As *samkhya* and *Bhagavad Gitā* believe, every manifested thing is the production of intercommunication of *guna*. *Guna* in *sanskṛta* has three meanings. Its first meaning does 'secondary', second constitute elements, and thirdly it refers to quality.

The study deals with the second meaning i.e., constituting element, because *prakṛiti* constitutes three *gunas*. The three *gunas* are – *Satva*, *Rajas* and *Tamas*. The *gunas* are said to

be extremely fine and subtle, their existence is inferred from their effects – pleasure, pain and indifference respectively. Since there is an essential identity between the effect and its cause, we know the nature of *gunas* from the very nature of their products. In other words, we can infer that the ultimate cause of things, must also have been constituted by the three elements of pleasure, pain and indifference. The *gunas* are always changing and work together for production of the world of effects, still they never coalesce. They are modified by mutual influence on one another or by their proximity. They evolve, join and separate. Not one loses its power, though the others may be actively at work. So, in the context of human personality, it is said that characteristic of a particular *guna* will determine a particular personality. In this, we find three types of personality on the basis of preponderance of *guna* -

1. Sattvic personality,
2. *Rajasic* personality, and
3. *Tamasic* personality

2.4.4.1. Sattvic personality: Etymologically, the word *satva* is derived from '*sat*', or which is real or existent. Since consciousness (*chaitanya*) is generally granted such existence, *satva* is said to be potential consciousness. In a secondary sense, '*sat*' also means perfection, and so the *satva* element is what produces goodness and happiness. It produces pleasure in its various forms, such as satisfaction, joy, happiness, bliss, contentment, etc., which are produced by things in our mind through operation of power of *satva* inherited in both of them. *Satva* has

been defined as "*satva*, is luminous and healthy because of its stainlessness. It is bound by attachment to happiness and by attachment to knowledge (*Géta* XIV, 6). Though *satva* is the most divine mental attitude, it still binds us and act as limitation on our divine nature. *Satva* binds the infinite to matter through attachment to 'happiness' and 'knowledge' which here means lowering the intellectual knowledge. When the mind is purified from all its agitations (*Rajas*) and the intellect is cleansed of its low passions and lusts (*Tamas*), the personality becomes purified. We can experience happiness and enjoy a greater share of subtle understanding and intellectual comprehension. The fruit of good action is *sattvic* and pure (*Bhagavad Gitä*, XIV-16). A thrilling joy of mental serenity is a state of minimum agitation. These are all indicated as the fruits of good actions. Knowledge arises from *satva*. The result of predominant *satva* in our mind is ultimately rediscovery of the Self, the experience of pure wisdom. In other words, when *satva* becomes predominant, *satva* awakens knowledge just as the Sun causes daylight. *Satva* enlightens the intellect.

तत्र सत्त्वं निर्मलत्वात् प्रकाशकमनामयम्।
सुखसङ्गेन बध्नाति ज्ञानसङ्गेन चा नघ ॥

tatra satvaà nirmalatvāt prakāśakama anāmayam|
sukhasaṅgena badhnāti jñānasaṅgena cā naghā||14-6||Bhagavad Gitā

O sinless one (*Arjuna*) of these three *gunas* the stainless *satva* gives enlightenment and health.

Nevertheless, it binds man through attachment to happiness and knowledge.

सर्वद्वारेषु देहेस्मिन्प्रकाश उपजायते ।

ज्ञानं यदा तदा विद्याद्विवृद्धं सत्त्वमित्युत.14-11.*Bhagavad Gitā*

sarvadvāresudehesminprakāśa upajāyate |

jñānam yadā tadā vidyādvivṛddham satvamityuta ||14-11||Bhagavad Gētā

One may know that *satva* is prevalent when the light of wisdom shines through all sense gates of the body. The spiritual man is master of his senses and uses them constructively. He perceives only good. All that he sees, hears, smells, tastes, and touches reminds him of God.

यदा सत्त्वे प्रवृद्धे तु प्रलयं याति देहभृत् ।

तदो त्तमविदां लोकान् अमलान् प्रतिपद्यते.14-14.*Bhagavad Gitā*

yadā sattve pravṛddhe tu pralayaṁ yāti dehabhrt |

tado ttamavidām lokān amalān pratipadyate ||14-14||Bhagavad Gitā

A man may exist in any one of the three *gunas* (modes) *Satva*, *Rajas*, and *Tamas*. *satva guna* by nature is immaculate. A man who dies with *satva* qualities predominant, rises to the taintless regions which dwell knower's of the highest.

2.4.4.2. Rajasic Personality: *Rajas* which literally means foulness, is the principle of motion or action. *Rajas* personalities are dynamic. It produces motion and it has the tendency to do work by overcoming resistance. So it always moves and makes other things movable. According to *Bhagavad Gita*, "*Rajas* is of the nature of passions, the source of thirst and attachment; it binds

fast, the embodied one, by attachment to action" (*Bhagavad Gita* XIV, 7). Passion expresses itself in a million different urges, desires, emotions and feelings, representing the two distinct categories; desire (thirst) and attachment. Human personality thirsts for the satisfaction of every desire that burns him down. Once the desire is fulfilled, a sense of attachment comes like vicious passions to smoothen all the peace and joy of the mind. "Desire is our mental relationship towards objects, which have not yet been acquired by us and attachment is the mental slavishness binding us to the objects so acquired". The characteristics that indicate the predominance of *Rajas* are described as 'greed, activity, undertaking of actions, restlessness – these arise when *Rajas* is predominant'. (*Bhagavad Gita*, XIV, 12). The passionate seeking of life and its pleasure arises from the dominance of *Rajas*. The fruit of *Rajas* is pain. *Rajasic* action brings disappointment and dissatisfaction. *Rajasic* activities are tainted by selfish desires. Thus, its fruit is pain. Greed arises from *Rajas*. Greed brings misery and pain. Greed is born out of *Rajas*.

रजो रागात्मकं विद्धि तृष्णासङ्गसमुद्भवम् ।

तन्निरुद्धाति कौन्तेय कर्मसङ्गेन देहिनम्, 14-7. *Bhagavad*
Géta

rajo rāgātmakam viddhi trsñānsagasamudbhavam|

tannibadhnāti kaunteya karmasaṅgena dehinam||14-7||Bhagavad Gitā

Understand that the activating *Rajas* is imbued with passion, giving birth to desire, disease and attachment. It strongly binds the embodied soul by a clinging to action.

The performance of worldly activity without wisdom, give rise to an unquenchable thirst of

longings for worldly things and attachments to material objects and egoistical satisfactions.

लोभः प्रत्तिरारम्भः कर्मणामशमः स्पृहा ।

रजस्येतानि जायन्ते विवृद्धे भरतर्षभ ॥14-12.

Bhagavad Gita

lobhah pravrttirārambhau karmanāmasamah sprhā

Rajas yetāni jāyante vivrddhe bharatarsabha ||14-12|| Bhagavad Gita

Preponderance of *Rajas* cause greed, activity, undertaking of works, restlessness, craving and desire when there is an increase in the mode of passion. The activity and the undertaking of work of the average man are ego-trained and hence accompanied by various grieves and disillusionments.

रजसि प्रलयं गत्वा कर्मसङ्गिषु जायते ।

तथा प्रलीनस्तमसि मूढयोनिषु जायते. 14-15. *Bhagavad*

G Rajasi pralayam gatvā karmasangisu jāyate |

tathā pralinas Tamasi mūdhayonisu jayate ||14-15|| Bhagavad Gita

When the *Rajas* prevails at the time of death, a person is reborn among those attached to activity. He who dies permeated with *Tamas* enters the wombs (environment, family, state of existence) of deeply deluded.

राजसास्तु दुःख बाहुलता ऽटनशीलताऽधृतिरहंकार अनृतिकत्वमकारुण्यं दम्बो मनोऽहर्षः कामः

क्रोधश्च ॥पद ॥सु ॥१४ ॥

rājasāstu duhkha bāhulatā 'tanasilatā'dhrtirahankāra anrtikatvamakārunyam

dambo mano'harsah kāmah krodhasca|pada||sru||14||

It is *upastambhaka* means initiates a thing and produces a movement (*chalatwa*) in it the predominance of *Rajas gunas* causes unhappiness, fickle minded, timid, proud, cruelty, superiority, falseness, favourism, selfishness, anger and miseries.

2.4.4.3. Tamasic Personality: *Tamas*, literally means darkness, is the principle of inertia. *Samkhya karika* states that *Tamasic* attributes are sluggish and obscuring. *Tamas* resists activity and produces the state of apathy or indifference (*vishada*). It leads to ignorance and sloth. According to *Bhagavad Gitā*, '*Tamas* is born out of ignorance, deluding all embodied beings, it binds fast by heedlessness, ignorance and sleep" (*Bhagavad Gita* XIV 9). Under the influence of *Tamas* man's intellectual capacity to discriminate between right and wrong gets veiled and he starts acting as if he is under some hallucination. When *Tamas* predominates, the symptoms are darkness (*aprakasa*), inertness (*apavrtti*), heedlessness (*pramadah*) and delusion (*moha*). It is the tendency of *Tamas* to escape all responsibilities, the sense of incapacity to undertake any endeavor and lack of enthusiasm to strive for and achieve anything in the world. Error, misunderstanding, negligence and inaction are the characteristic marks which indicate that *Tamas* is predominant. The aforesaid description of the *Yogic* theory, personality attempt was

made to discuss some of the prominent metaphysical features of the *gunas*. The *gunas* are not only viewed as being the ultimate stuff of the objective world, but they are also the ultimate physical stuff, which lie at the root of all sorts of experiences. *Satva guna* consists of goodness, *Rajas* of passion and *Tamas* of darkness or delusion. Goodness is of different variety, such as calmness, lightness, contentment, patience, happiness etc. Passion manifests itself as grief, distress, separation, excitement, attainment of what is evil etc. Darkness is of endless varieties, such as covering, ignorance, disgust, misery, heaviness, sloth, drowsiness, intoxication etc. From this point of view, the *yoga* Psychology unanimously holds the view that the three *gunas* give rise to pleasurable, painful and delusive cognitions.

तमस्त्वज्ञानजं विद्धि मोहनं सर्वदेहिनाम् ।

प्रमादालस्यनिद्राभिस्तन्निबध्नाति भारत.14,8.

Bhagavad Gitā

Tamas tv ajñānam viddhi mohanam sarvadehinām

pramādālasya nidrābhis tan nibadhnāti bhārata||14|8|| Bhagavad Gita

It is known that *Tamas* (mode of darkness or ignorance) arises from ignorance, deluding all embodied beings. It binds them by misconception, idleness, heedlessness, indolence, slumber and sleep.

Tamas is the quality in nature that causes misery of all kinds. It is the dark evolutes of the illusory power of *maya*, preventing divine realization and giving a seeming reality to the ego and matter as separate from spirit. The *Tamasic* man is full of wrong ideas. He is careless, indolent and oversleeping.

अप्रकाशोऽप्रवृत्तिश्च प्रमादो मोह एव च ।

तमस्येतानि जायन्ते विवृद्धे कुरुनन्दन ॥14-13. *Bhagavad*

Gitā

aprakāso'pravrttisca pramādo moha eva ca|

Tamasyetāni jāyante vivrddhe kurunandana||14-13||Bhagavad Gita

Tamas as the ruling *gunas* when there is an increase in the mode of ignorance, produces darkness, sloth, indiscrimination, inertness, un-illumination, heedlessness, neglect of duties and delusion. The *Tamasic* man becomes exhausted and inactive. Failing to develop his intelligence by performance of his proper duties, he exists in stagnation and bewilderment. A *Tamasic* person exists like an inert, lifeless stone.

रजसि प्रलयं गत्वा कर्मसङ्गिषु जायते ।

तथा प्रलीनस्तमसि मूढयोनिषु जायते ॥14-15. *Bhagavad*

Gita

Rajasi pralayam gatvā karmasangisu jāyate|

tathā pralinasTamasi mūdhayonisu jaayate||14-15||Bhagavad Gita

When the *Rajas* prevails at the time of death, a person is reborn among those attached to activity. He who dies permeated with *Tamas* enters the wombs (environment, family, state of existence) of deeply deluded.

2.4.5. *Gunas in Puranas and other sources*

Many *puranas* talk about the personality traits by comparing the quality of work done by different characters mentioned in that particular *purana*. But very few *puranas* like *varuna purana* talks specifically on *trigunas*.

संहृत्य च भुजौ श्रीमंस्तयैव च शिरोधराम् ।

तेजः सत्त्वं तथा वीर्यमाविवेश स वीर्यवान् ॥वा ॥ रा ॥ सुन्द.36.

saàhàtya ca bhujau srémaàstayarva ca sirodharäm|

tejaù satvaà tayä véryamävivesa sa véryavän||sré ||va|| rä|| sunda||36||

This verse describes the real properties of *Hanuman* – a mythological character: He is totally *satva* supplemented with adequate *Rajas* as active force to do *satva* work. In other words his *gunas* are well balanced as he controls and maintain them properly for correctly using as demanded by the time and location.

अय वैदूर्यवर्णेषु शद्वलेषु महाबलः ।

धीर सलिलक्लपेषु विचचार यथासुखम् ॥वा ॥ रा ॥ सुन्द.3.

aya vaidüryavarëënu çadvaleñu mahäbalaù|

dhéra salilaklpeñu vicacära yathäsukham||sré ||va ||rä|| sunda||3|

In this vese *Hanumän* is said to be a *mahäbala* which indicates the quality of *Rajas* and *dhra* is the quality of *satva* as he is having the quality of *satva* and *Rajas*. As *Rajas* motivates him to do

work and *satva* motivates in proper direction of work so that he is having a balanced state of *trigunas*.

तामसास्तु विषादित्व नास्तिक्यं अधर्मशीलता ।

बुद्धिर्निरोधो अज्ञानं दुर्मेदस्त्वकर्मशीलता निद्रालुत्वं चेति ॥पद ॥सु ॥15.

tāmasāstu viñāditva nāstikyamadharmāçélatā|

budhdirnirodho ajñānaà durmedastvakarmaçélatā nidrālutvaà ceti ||pada||sru||15||

Tamas is *guru* in nature and capable to control the movements (of *Rajasa*). It possesses the qualities like *avarodak* (obstructive), *āvartaka* (creates the false coverings over), *moha* (illusionary knowledge) *agyana avasada udaseenata* and causes *nishkriata mandata jadatha* (dullness) etc.

The predominance of *tamo guna* causes sorrowfulness, atheistic, liar, misbehaviour, uncleverness (stupid), laziness, sleepy mood, illusions, dullness and with suppressed knowledge or intelligency. It restricts the activities of *satva* and *Rajas*.

2.4.6. Gunas according to *ayurveda*

Just as *dosas* are essential components of the body, the three *gunas* - *Satva, Rajas, Tamas* - are the three essential components or energies of the mind.

The pathogenic factors in the body are *vayu, pitta* and *kapha* while those in the mind are *Rajas* and *Tamas*, the *satva* being non-pathogenic.

The *Tridoshas* are reconciled by therapies based on religious rites and physical propriety and

those by *Rajas* and *Tamas* by spiritual and scriptural knowledge, patience, memory and meditation.

It also provides a distinct description of people on the basis of their *manasa* (psychological) *Prakrti* (constitution). Genetically determined, these psychological characteristics are dependent on the relative dominance of the three *Gunas*. While all individuals have mixed amounts of the three, the predominant *Guna* determines an individual's *manasa prakrti*. In equilibrium, the three *Gunas* preserve the mind (and indirectly the body), maintaining it in a healthy state. Any disturbance in this equilibrium results in various types of mental disorders.

Satva, characterized by lightness, consciousness, pleasure and clarity, is pure, free from disease and cannot be disturbed in any way. It activates the senses and is responsible for the perception of knowledge. *Rajas*, the most active of the *gunas*, have motion and stimulation as its characteristics. All desires, wishes, ambitions and fickle-mindedness are the result of the same. While *Tamas* is characterized by heaviness and resistance, it produces disturbance in the process of perception and activities of the mind. Delusion, false knowledge, laziness, apathy, sleep and drowsiness are due to it.

Rajas and *Tamas*, as with the *dosas*, can be unbalanced by stress and negative desires as *Kāma* (lust), *Ērshyā* (malice), *moha* (delusion and hallucination), *Lobha* (greed), *Cintā* (anxiety), *bhaya* (fear) and *krodha* (anger). Each of these three properties is also comprised of sub-types and the particular sub-type to which one belongs to determine the qualities of that individual.

Satvika individuals are usually noble and spiritual in character, their nature determined as much

body type as their star constellation, having an element of *Kapha* in their constitution.

2.4.6.1. *Gunās of Mind as said in ayurveda*

आस्ति खलु सत्त्वमौपपादुकं यज्जीवं स्पृकशरिरेणाभिसंबध्नाति यस्मिन्नपगमनपुरस्कृते शीलमस्य व्यावर्तते भक्तिर्विपर्यस्यते सर्वेन्द्रियाण्युपतप्यन्ते बलं हीयते व्याधय आप्याय्यन्ते यस्माद्धीनः प्राणाञ्जहाति यदिन्द्रियाणामभिग्राहकं च मन इत्यभिधीयते तत्रिविधमाख्यायते शुद्धं रजसं तामसमिति । येनास्य खलु मनो भूयिष्ठं तेन द्वितीयामाजातौ संप्रयोगो भवति यदा तु तेनैव शुद्धेन संयुज्यते तदा जातेरतिक्रान्ताया अपि स्मरति । स्मार्तं हि ज्ञानमात्मनस्तस्यैव मनसोऽनुधादनुवर्तते यस्यानुवृत्तिं पुरस्कृत्य पुरुषो जातिस्मर इत्युच्यते । यानि खल्वस्य गर्भस्य सत्त्वजानि यान्यस्य सत्त्वतः संभवतः संभवन्ति तान्यनुख्यास्यामः तद्यथा भक्तिः शील शौचं द्वेषः स्मृतिर्मोहस्त्यागो मात्सर्य शौर्यं भयं क्रोधस्तन्द्रोत्साहस्तैक्षण्यं मार्दवं गाम्भीर्यमनवस्थितत्वमित्येवमादयश्चान्ये ते सत्त्वविकारा यनुत्तरकालं सत्त्वभेदमधिकृत्योपदेक्ष्यामः । नानाविधानि खलु सत्त्वानि तानि सर्वाण्येकपुरुषे भवन्ति न च भवन्त्येककालम् एकं तु प्रायोवृत्त्याऽऽह ॥ च ॥ सू ॥ ३ ॥ १३

āsti khalu satvamaupapādukaà yajjévaà spākaçarireëābhisambadhnāti
 yasminnapagamanapuraskāte çélamasya vyāvartate bhaktirviparyasyate
 sarvendriyāëyupatapyante balaà héyate vyādhaya äpyäyyante yasmādhénaù præëijahāti
 yadindriyāëāmabhigrāhakaà ca mana ityabhidhéyate tattrividhamākhyāyate çudhdaà Rajasaà
 tāmasamiti| yenäsya khalu mano bhüiyiññaà tena dvitéyāyāmājātau samprayogo bhavati yadā
 tu tenaiva çudhdena saâyujyate tadā jäteratikrāntāyā api smarati| smārtaà hi
 jñanamātmanastasyaiva manaso'nudhādanuvartate yasyānuvāttiā puraskātya puruño
 jātismara ityucyaro|yāni khalvasya garbhasya satvajāni yānyasya satvataù sambhavataù
 sambhavanti tänyanukhyāsyāmaù tadyathā bhaktiù çéla çaucaà dveñaù smätirmohastyago
 mätsarya çaurya bhayaà krodhastandrotsāhastāikñēyāà mārdayaà

*gāmbhéryamanavasyitatvamityevamādayaṣṣānye te satvavikārā yānuttarakālaā
satvabhedamadhikātyopadekñyāmau| nānāvidhāni khalu sattvāni tāni sarvāyēkapuruṇe
bhavanti na ca bhavantyekakālam ekaā tu prāyovāṭṭyā"ha||cha||sār||3||13*

Mind the connecting link connects the soul with the physical body. So on death, when the mind starts living the body, there occurs a change in the normal behavior and inclinations, the sense organs are disturbed, strength diminishes and living beings are attacked with diseases. Living beings being devoid of mind, breathe their last as the sense organs are devoid of inspiration from mind.

The objects of senses are of three types, viz. *sātvika*, *Rajasika*, and *Tamasika*. The mind dominated by any of the above mentioned attributes in one's life follows in the subsequent life as well. When an individual is endowed with *sātvika* type of mind from his previous life, he can recall things even beyond that life (that is he can recall the events of his past life).

We shall hereafter describe those aspects of the individual which are derived from mind and which are manifested because of the existence of mind. They are likings, conduct, purity, enmity, memory, attachment, detachment, matsarya (stronger desire not to part with), valour, fear, anger, drowsiness, enthusiasm, sharpness, softness, seriousness, instability and such other manifestations of the mind which will be described later while discussing various types of mind. All of them occur in the same man but all of them are not manifested at the same time. An individual is said to belong to that particular type of mind by which he is dominated.

अतीन्द्रियं पुनर्मनः सत्त्वसंज्ञकं चेतः इत्याहुरेके

तदर्याखत्मसंपदायत्तचेष्टं चेष्टाप्रत्ययभूतमिन्द्रियाणाम् ॥ च ॥ सू.8.4.

atëndriyaà punarmanaù satvasaijjiakaà cetaù ityähureke

tadaryätmasampadäyattaceñöaà ceñöäpratyayabhütamindriyäääm|cha||

süt|8|4.

Mind, on the other hand transcends all sense perception. It is known as *satva*; some call it ‘cetas’.

Its action is determined by its contacts with its objects (like happiness, misery etc) and the soul;

this acts as a driving force for all the sense faculties.

रजस्तामोभ्यां हि मनोऽनुबद्धं ज्ञानं विना तत्र हि सर्वदोषाः ।

गतिप्रवृत्त्योस्तु निमित्तमुक्तं मनः सदोषं बलवच्च कर्म ॥ च ॥

सू ॥2.38

Rajastämobhyäà hi mano'nubaddhaà jñanaà vinä tatra hi sarvadoñäù |

gatipravãttyostu nimittamuktaà manaù sadoñaà balavacca karma||cha||sär||2||38

The mind is constantly associated with *Rajas and Tamas*. In the absence of knowledge, *Rajas*

and Tamas cause all morbidity; the morbid mind and strong action. In the association of impure

mind the soul enters into the world bondage and also diseases.

तत्र त्रयं शरीरदोषा वातपित्तश्लेष्माणः ते शरीरं दूषयन्ति द्वौ पुनः सत्वदोषौ रजस्तमश्च तौ सत्त्वं दूषयतः ।

ताभ्यां च सत्त्वशरीराभ्यां दुष्टाभ्यां विकृतिरुपजायते नोपजायते चाप्रदुष्टाभ्याम् ॥ च ॥ सू ॥4.34.

tatra trayaà çaréradoñä vätapittaçleñmäëaù te çaréraà dññayanti dvau punaù

satvadoñau Rajastamaçca tau satvaà dññayataù| täbhyäà ca satvaçaréräbhyäà

duñöäbhyäà vikätirupajäyate nopajäyate çäpraduñöäbhyäam|| cha||sut||4||34||

Now there are three physical dosas (vitiating elements) viz. vāta, pitta and kapha. They vitiate the body. Again there are two mental dosas viz *Rajas and Tamas* they vitiate the mind. Vitiating of body and mind result in manifestation of diseases. There is no disease without their vitiating.

शरीरं सत्त्वसंज्ञं च व्याधीनामाश्रयो मतः ।

तथा सुकानां योगस्तु सुखानां कारणं समः ॥च ॥सू.1.55.

çaréraà satvasaijñā ca vyādhīnāmāśrayo mataù|

tayā sukānā yōgastu sukhānā kāraṇā samā||cha||sūt||I||55||

The body and mind (*satva*) constitute the substrate of disease and happiness (i.e. positive health). Balanced utilization of *satva, Rajas, and Tamas* (of time, mental faculties and objects of sense organs) is the cause of health and happiness.

निर्विकारः परस्त्वात्मा सत्त्वभूतगुणेन्द्रियैः ।

चैतन्ये कारणं नित्यो द्रष्टा पश्यति हि क्रियाः ॥च ॥सू ॥1,56.

nirvikāraù parastvātmā satvabhūtaguṇēndriyaiù|

caitanye kāraṇā nityo draṣṭā paśyati hi kiyāù||cha||sūt||I||56||

The soul is essentially devoid of all pathogenicity. He is the cause of consciousness through *satva* mind and the specific qualities of basic element she is eternal. He is an observer of all activities.

वायुःपित्तं कफश्चोक्तः शारीरो दोषसंग्रहः ।

मानसः पुनरुहिद्दि रजश्च तम एव च ॥ च ॥ सू. 1.57.

vāyupittaà kphaççoktaù çäréro doñasaìgrahaù|

mānasaù punaruhiñddi rajaçca tama eava ca||cha||süt||1||57||

Pathogenic factors in the body are *vāyu*, *pitta* and *kapha*, while those in the mind are *Rajas* and *Tamas*. This being mainly internal medicine, emphasis here is on the description of *vāta*, *pitta* and *kapha* as pathogenic factors of the body. *Rajas* and *Tamas* which constitute pathogenic factor of mind and are of psychological importance have just been briefly described in the work.

Out of the three qualities (*gunas*) of mind Viz., *satva*, *Rajas* and *Tamas*, it is only the latter two cause vitiation of the mind and the former one being non-pathogenic.

2.4.6.2. Effect of *Guna* s in mind and body as per *Ayurveda*

स्वार्थेन्द्रियार्थसङ्कल्पव्यभिचरणाच्चानेकमेकस्मिन् पुरुषे सत्त्वं रजस्तमःसत्त्वगुणयोगच्च न चानेकात्वं नह्येकं ह्येककालमनेकेषु प्रवर्तते तस्मन्नैककाला सर्वेन्द्रियप्रवृत्तिः ॥च ॥ सू.8.5.

Svārtendriyārtasaikalpavyabhicaraëäccānekamekasmin puruñe satvaà

Rajastamaùsatvaguëayogacca na cānekātvaà nahyekaà hyekakālamanekeñu

pravartate tasmannaikakälä sarvendriyapravãöattiù||cha|| süt||8||5||

In one and the same individual, the mind appears to be multiple in character due to variations relating to the experience of its objects, perception of the objects of the sense faculties, its disposition and also its contact with *Rajas*, *Tamas* and *satva* qualities. Similarly it takes various forms due to its contact with *Rajas*, *satva* and *Tamas* qualities. For example, if the mind is dominated by *Rajas* it is anger, if the mind is dominated by *Tamas* it will be

ignorance, fear, etc., and if it is dominated by *satva* it imbibes truthfulness, cleanliness etc. All these *gunas* support the apparent multiplicity of the mind.

यद्गुणं चाभीक्षणं पुरुषमनुवर्तते सत्त्वं तत्सत्त्वमेवोपदिशन्ति मुनयो बहुल्यानुशयात् ॥च ॥सू॥8.6

*yadguṇā cābhēkṣāṇāṃ puruṣāmanuvartate satvaṃ tatsatvamevopadiṣanti
munayo bahulyānuṣayāt||cha||sūt||8||6*

According to *Ācharyas* the mind of the person is qualified on the basis of the type of his repeated action; it is because that the quality must be predominating in him. How it is that an individual is known as *Sātvika*, *Rajasika* or *Tamasika* in nature? The mental condition of every individual is flexible; sometimes, it is *Rajasa*, sometimes it is *sātvika* and sometimes *Tamasa*. But in spite of every changing state of the mind, there is one and only one quality predominating in an individual. This predominance is judged by the frequency of a given quality in an individual. So, if somebody frequently displays the quality of *satva* (even though occasionally he might be displaying *Rajasa* and *Tamasa* qualities) will be known as a man of *satvaika* nature. That is to say, the quality of *satva* would be the general rule for him, *Rajas* and *Tamasa* would be treated as exceptions.

2.4.6.3. Description of Mind Based On *Gunas* as mentioned in *ayurvedic* texts

त्रिविधं खलु सत्त्वं शुद्धं राजसं तामसमिति । तत्र शुद्धमदोषमाख्यातं कल्याणांशत्वात् राजसं सदोषमाख्यातं रोषांशत्वात् तामसमापि सदोषमाख्यातं मोहांशत्वात् । तेषां तु त्रयाणामपि सत्वानामेकैकस्य भेदाग्रमपरिसङ्घथेयं तरतमयोगाच्छरीरयोनिविशेषेभयश्चान्योन्यानुविधानत्वाच्च । शरीरं ह्यपि सत्त्वमनुविधियते सत्त्वं च शरीरम् । तस्मात् कतिचित्सत्त्वभेदाननूकाभिनिर्देशेन निदर्शनार्थमनुव्याख्यास्यामः ॥ च ॥ श ॥4.36.

*trividhaà khalu satvaà çuddhaà rājasaà tāmasamiti|tatra çuddhamadoñamākhyātaà
kalyāēāçatvāt rājasaà sadoñamākhyātaà roñāāçatvāt tāmasamāpi sadoñamākhyātaà
mohāāçatvāt| teñāā tu trayāēāmapi satvānāmekaikasya bhedāgramaparisaikhatheyaà
taratamayogāccharāyoniviçēñebhayaçcānyonyānuvidhānatvācca| çarēraà hyapi
satvamanuvidhiyate satvaà ca çarēram| tasmāt katicitsatvabhedānanūkābhinirdeçena
nidarçanārthamanuovyākhyāsyāmaù|cha|sar|4|36*

Mental faculty is of three types *sātvikaa*, *Rajasik* and *Tamasik*. The *sātvika* one is free from defects as it is endowed with auspiciousness. The *Rajas* type is defective because it promotes wrathful disposition. The *Tamas* one is similarly defective because it suffers from ignorance.

Each of the three types of mental faculty is in fact of innumerable varieties by permutation and combination of various factors relating to the body following the mind and vice versa. So we shall now explain some of the varieties of mental faculties briefly by way of illustration.

The body follows the mind e.g. if the mental faculty is pure then one gets a divine body. Similarly, the mind also follows the body e.g. the mind in the bodies of animals, human beings and Gods are *Tamasa*, *Rajasa* and *sātvika* respectively.

2.4.7. Different Types of *Satvika* Individuals:

तद्यथा-शुचिं सत्याभिसन्धं जितात्मानं संविभागिनं ज्ञानविज्ञानवचनप्रतिवचनसंपन्नं स्मृतिमन्तं
कामक्रोधलोभमानमोहेष्याहर्षामषपितं समं सर्वभूतेषु ब्राह्मं विद्यात् ॥ च ॥ श.4.37.1

*tadyathā-çuciā satyābhisandhaà jītātmānaà saāvibhāginaà
jīānavijīānavacanaprativacanasampanna smātimantaà
kāmakrodhalobhamānamoherñyāharñāmarñāpetaà samaà sarvabhūteñū
brāhmaà vidyāt||ca||sar||4||36-1||*

This stanza means, “purity, love for truth, self-control, power of discrimination, material and spiritual knowledge, power of exposition, memory, freedom from passion, anger, greed, ego, ignorance, jealousy, dejection and intolerance and equally favorable disposition for all the creatures are the characteristics of *sātvikas*”.

#ज्याध्ययनव्रतहोमब्रह्मचर्यपरमतिथिव्रतमुपशान्तमदमानरगद्वेषमोहलोभरोषं

प्रतिभावचनविज्ञानोपधारणशक्तिसंपन्नमार्षं विद्यात् ॥ च ॥ श ॥4.37.2.

ijyādhyayanavratāhomabrahmacaryaparamatithivratamupaçāntamadamānarāgadveṇāmohalobha

roṇāà pratibhāvācanavijñānopadhāraēaçaktisampannamārṇāà vidyāt||cha||sha||4|| 37|| (2)||

“Devotion to sacred rituals, study of scriptures, sacred vows, oblations and celibacy, hospitable disposition of hatred, ignorance, greed and anger, intellectual excellence and eloquence and power of understanding and retention”.

ऐश्वर्यवन्तमादेयवाक्यं यज्वानं शूरमोजस्विनं तेजसोपेतमक्लिष्टकर्माणं दीर्घदर्शिनं धर्मार्थकामाभिरतमैन्द्रं विद्यात् ॥ च ॥

श ॥4.37..3.

aiçvaryavāntamādeyavākyaà yajvānaà çüramojasvinaà tejasopetamakliṣṭakarmāēāà

dérghadarçinaà dharmārthakāmābhiratamaindraà vidyāt||cha||sha||4|| 37|| (3)||

“Lord-ship and authoritative speech, performance of sacred rituals, bravery, strength, splendor freedom from mean acts, far sightedness and devotion to virtuous acts, earning of wealth and proper satisfaction of desires”.

लेखास्थवृत्तं प्रासकारिणमसंप्रहार्यमुत्थानवन्तं स्मृतिमन्तमैश्वर्यलम्बिनं व्यापगतरगेष्यद्विषमोहं याम्यं विद्यात् ॥

च ॥श.4.37.4.

lekhāsthavāṭṭāḥ prāptakāriṅamasamprahāryamutthānavantāḥ

smātimantamaiçvāryalambhinaḥ vyāpagatarāgerṅyādveṅamohaḥ yāmyāḥ

vidyāt||cha||sha||4|| 37|| (4)||

“Observance of propriety of action, initiation of action in time, non-violability, readiness for initiating action memory and lordship, freedom from attachment, envy, hatred and ignorance”.

शूरं धीरं शुचिमशुचिद्वेषिणं यज्वानमम्भोविहाररतिमक्लिष्टकर्माणं स्थानकोपप्रसादं वारुणं विद्यात् ॥ च ॥

श ॥4.37..5.

çūraḥ dhēraḥ çucimaçucidveṅiḥāḥ yajvānamambhovihāraratimakliṅṅakarmāḥāḥ

sthānakopaprasādaḥ vāruḥāḥ vidyāt||cha||sha||4|| 37|| (5)||

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

स्थानमानोपभोगपरिवारसंपन्नं धर्मार्थकामनित्यं शुचिं सुखविहारं व्यक्तकोपप्रसादं कौबेरं विद्यात् ॥ च ॥ श ॥4.37..6.

sthānamānopabhogaparivārasampannaḥ dharmārthakāmanityāḥ çuciḥ sukavihāraḥ

vyakatkopaprasādaḥ kauberaḥ vidyāt||cha||sha||4|| 37|| (6)||

Possession of station, honour, luxuries, attendants, constant liking for virtuous acts, wealth, and satisfaction of desires, purity and liking for pleasures of recreation.

प्रियनृत्यगीतवादित्रोल्लापकश्लोकाख्यायिकेतिहासपुराणेषु कुशलं गन्धमाल्यानुलेपनवसनस्त्रीविहारकामनित्यमनसूयकं गान्धर्वं
विद्यात् ॥ च ॥ श.4.37..7.

*priyanātyagétavāditrollāpakaṣṭhlokaḥyāyiketihāsapurāṇēṣu kuṣalaà
gandhamālyānulepanavasanastré vihārakāmanityamanasūyakaà gāndharvaà
vidyāt||cha||sha||4|| 37|| (7)||*

Fondness for dancing, singing, music, praise expertness in poetry, stories, historical narrations, epics constant fondness for scents, garlands, unguents apparel, association of women and passion.

इत्येवं शुद्धस्य सत्त्वस्य सप्तविधं भेदांशं विद्यात् कल्याणांशत्वात् तत्संयोगात्तु ब्राह्ममत्यन्तशुद्धं व्यवस्येत् ॥ च ॥
श ॥4.37.

*ityevaà çuddhsya satvasya saptavidhaà bhedāāçaà vidyāt kalyāēāāçatvāt tatsaāyogāttu
brāhmamatyantaçuddhaà vyavasyet||cha||sha||4||(37)||*

The *sātvik* type of mental faculty is auspicious , the one likened to *Brahma* is the purest. *Satva* is the quality of intelligence, virtue and goodness and creates harmony, balance and stability. It is light (not heavy) and luminous in nature. It possesses an inward and upward motion and brings about the awakening of the soul. *satva* provides happiness and contentment of lasting nature. It is the principle of clarity, wideness, and peace, the force of love that unites all things together.

2.4.8 Different types of *Rajasika* individuals:

शूरं चण्डमसूयकमैश्वर्यवन्तमौपधिकं रौद्रमननुक्रोशमात्मपूजकमासुरं विद्यात् ॥ च ॥ श ॥4.38..1.

çūraà caèòamasüyakamaiçvaryavantamaupadhikaà

raudramananukroçamätmapüjakamäsuraà vidyät||cha||sha||4||36||(1)||

Bravery, cruelty, envy, lordship, movement in disguise, terrifying appearance ruthlessness, indulgence in self-praise.

अमर्षिणमनुबन्धकोपं छिद्रप्रहारिणं क्रूरमाहारातिमात्ररुचिमामिषप्रियतमं स्वप्नायासबहुलमीर्ष्युं राक्षसं विद्यात् ॥ च ॥
श ॥4.38.2.

amarñiëamanubandhakopaà chidraprahäriëaà krüramähärätimätrarucimämiñapriyatamaà

svapnäyäsabahulamérñyaàu räknäsaà vidyät||ch||sha||4||36||(2)||

Intolerance, constant anger, violence at weak points, cruelty, gluttonous habits and fondness for non-vegetarian food, excessive sleep, indolence and envious disposition.

महाशनं स्त्रैणं स्त्रीरहस्काममशुचिं शुचिद्वेषिणं भीरुं भीषयितारं विकृतविहाराहारशीलं पैशाचं विद्यात् ॥ च ॥

श ॥4.38.3.

mahāçanaà straiëaà strérahaskāmamaçucià çucidveñiëaà bhérua bhéñayitāraà

vikātavihārähāraçélaà paiçācaà vidyät||ch||sha||4||36||(3)||

Gluttonous habits, fondness for women, liking for staying with women in lonely place, unclean habits, disliking for cleanliness, cowardice, terrifying disposition, resorting to abnormal diet and regimens.

क्रुद्धशूरमक्रुद्धभीरुं तीक्ष्णमायासबहुलं संत्रस्तगोचरमाहारविहारपरं सार्पं विद्यात् ॥ च ॥ श ॥4.38.4.

*kruddhçüramakruddhbhéruà tékñëamäyäsabahulaà santrastagocaramähärahäraparaà
särpaà vidyät||ch||sha||4||36||(4)||*

Bravery when in wrathful disposition, cowardice when not in wrathful disposition, sharp reaction, excessive indolence, walking, taking food, and resorting to other regimens with a fearful disposition.

आहारकाममतिदुःखशीलाचारोपचारमसूयकमसंविभागिनमतिलोलुपमकर्मशीलं

प्रैतं विद्यात् ॥ च ॥ श ॥4.38.5.

*ähärakämamatiiduùkhaçéläcäropacäramasüyakamasaàvibhäginaamatilolupamakarmaçélaà
praitaà vidyät||ch||sha||4||36||(5)||*

Excessive desire for food, excessively painful disposition in character and past times, enviousness and actions without discrimination, excessive greediness and inaction.

अनुषक्तकाममजस्रमाहारविहारपरमनवस्थितममर्षणमसंचयं शाकुनं विद्यात् ॥ च ॥ श ॥4.38.6.

*anuñaktakämamajasramähärahäraparamanavasthitamamarñäëamasaïcayaà
çäkunaà vidyät||ch||sha||4||36||(6)||*

Attachment with passion, excessive food, regimen, unsteadiness ruthlessness and unacquisitive.

इत्येवं खलु राजसस्य सत्त्वस्य षड्विधं भेदांशं विद्यात् रोषांशत्वात् ॥ च ॥ श ॥4.38.

ityevaà khalu räjasasya satvasya ñaòvidhaà bhedäàçaà vidyät roñäàçatvāt||cha

||sha||4||(38)||

Those are the qualities of *Rajasika* type mental faculty which represents wrathful disposition with greed, cruelty, self praise, anger, etc., are stated above. *Rajas* is the quality of change, activity, and turbulence. It introduces a disequilibrium that upset an existing balance. *Rajas* motivates to act, ever seeking a goal or an end that gives it power. It possesses outward motion and causes self-seeking action that leads to fragmentation and disintegration. While in the short term, *Rajas* is stimulating and provides pleasure, owing to its unbalanced nature it quickly results in pain and suffering. It is the force of passion, which causes distress and conflict.

2.4.9. Different types of *Tamasika* individuals:

निराकरिष्णुममेधसं जुगुप्सिताचाराहारं मैथुनपरं स्वप्नशीलं पाशवं विद्यात् ॥ च ॥ श ॥4.39.1.

nirākariñṅumamedhasaà jugupsitācārāhāraà maithunaparaà svapnaçélaà pāçavaà

vidyāt||cha||sha||4|| 39|| (1)||

Forbidding disposition, lack of intelligence, hateful conduct and food habit, excessive sexual indulgence and sleep.

भीरुमबुधमाहारलुब्धमनवस्थितमनुषक्तकामक्रोधं सरणशीलं तोयकामं मात्स्यं विद्यात् ॥ च ॥ श ॥4.39.2.

bhérumabudhamāhāralubdhamanavasthitamanuñaktakāmakrodhaà saraëaçélaà

toyakāmaà mätasyaà vidyāt||cha||sha||4||39||(2)||

Cowardice, lack of intelligence, greediness for food, unsteadiness constant passionate, w r a t h f u l disposition and fondness for constant movement and desire for water.

अलसं केवलमभिनविष्टमाहारे सर्वबुद्धयङ्गहीनं वानस्पत्यं विद्यात् ॥ च ॥ श ॥4.39.3.

*alasaà kevalamabhinivîṣṭamāhāre sarvabuddhyaṅgahēnaà vānaspatyaà
vidyāt||cha||sha||4||39||3||*

Indolence, indulgence in food and deficiency of all the intellectual faculties.

इत्येवं तामसस्य सत्त्वस्य त्रिविधं भेदांशं विद्यान्मोहांशत्वात् ॥ च ॥ श ॥4.39.4.

*Ityevaà tāmasasya satvasya trividhaà bhedāṅgaà
vidyānmohāṅgaṭvāt||cha||sha||4||39||4||*

The *Tamasika* type of mental faculty represents laziness, dull, dirty and ignorant. *Tamas* is the quality of dullness, darkness and inertia and is heavy, veiling or obstructing in its action. It functions as a force of gravity that retards things and holds them in specific limited forms. It possesses a downward motion that causes decay and disintegration. *Tamas* brings out ignorance and delusion in the mind and promotes insensitivity, sleep and loss of awareness. It is the principle of materiality or unconsciousness that veils consciousness.

2.4.10. GUNA; QUALITIES;

1	Cheerful: A Sattvic quality discussed by Lord Krsna and various other Upanisads, characterized by Luminous and Harmonious due to their purity. Having a feeling of ‘I am happy, I am full of Knowledge; enslaves one to mood of joy and happiness. Has higher goals leading to regeneration.
2	Disgusted: A Tamasic quality, characterized by strong dislike, keen disappointment failure to fulfill, defeat ones own hopes, feel aversion to, etc.
3	Attentive: A Rajasic quality, characterized by a sharp focused attitude. Feeling of ‘I am doer; Enslaves one to activity, avarice, extroversion, ceaseless planning and execution of works, restlessness, and desire for enjoyments.
4	Bashful: A Tamasic quality, characterized by sheepish, shy, coyness, avoiding observation, lacks sociability, elusive, evasive in nature, avoids and lacks efforts, evil tendencies leading to one’s degeneration.

5	Sluggish: A Tamasic quality, characterized by sleepiness, lethargy and slothful enslaves one to negligence and laziness, lack of intelligence, lack of effort and delusive evil tendencies leading to degeneration. Parasitic attitude.
6	Daring: Usually, a Rajasic quality, characterized by aggressiveness, well marked, boldness, venturesome, courageousness, adventurous, and impudence for any purpose, defies. It could also be explained under daivi Guna like fearlessness, freedom from all kinds of bondages, clarity in approach, steadfast in conviction knowing that conviction is important than convenience.
7	Surprised: A Rajasic quality, characterized by unprepared, unexpected, wonderful, emotion excited by any sudden event.
8	Strong: Usually a Rajasic quality, characterized by power of resistance, tough, firm, healthy, belief in one's own potency, capable of defending himself from any adversities, eventualities, etc. It is also a Daivi Guna, unconcerned witness and is unperturbed by Guna-born sense objects, fortitude, courage in pain or adversity.
9	Scornful: Asuri characteristic depicting disdain, contempt, derision. Hankering for sensual pleasure, hatred, infatuation, and anger dominate in their personality. There is no place for God. Lack for due regard for established and time-tested facts.
10	Relaxed: A Daivi Guna, Purity of heart, fearless, Spiritual aspiring, Honest in their approach, Truthfulness, Aversion to slander, Loving, gentleness, Modesty, Sympathy, Courteousness, Civility, Freedom from anger, Considerate, Compassion to living beings, Chastity, self-controlled (Control of senses) Devotion in their approach, steadfastness in knowledge. Worship and study of scriptures, Austerity, Renunciation, Tranquility, Uprightness, Freedom from sensuality, generous, Truthful, Benevolent, Free from pride and vanity. Non-violence, Vigor, Patience and fortitude.
11	Irritable: Asuri Guna, Showing up: restlessness, lack of patience, easily annoyed, state of being excited, inflammable, getting angry, easily kindled, Provocable, afire.
12	Delighted : Sattvic quality, characterized by highly pleasing and taking great pleasure in action. Having a feeling of 'I am happy, I am full of knowledge; Enslaves one to mood of joy and happiness. Has higher goals leading to regeneration.
13	Inspired: Sattvic quality emphasizing influence by elevated feeling, actuated by influence, infuse thought or feeling into. Has higher goals leading to regeneration. A great planning for future.
14	Fearless: Uprightness, Freedom from sensuality, Generous, Truthful, Benevolent, Free from pride. A Daivi Guna. Purity of heart, Fearless, Spiritual aspiring, Honest in their approach, Truthfulness, Aversion to slander, Loving Gentleness, Modesty, Sympathy, Courteousness, Civility, Freedom from anger, Considerate, Compassion to living beings, Chastity, Self-controlled (Control of senses) Devotion in their approach, Steadfastness in knowledge, Worship and study of scriptures. Austerity. Renunciation, Tranquility, from pride and vanity. Non-violence, Vigor, Patience and fortitude.
15	Disgusted : Tamasic quality, characterized by strong dislike, keen disappointment, failure to fulfill, defeat ones own hopes, feel aversion to, etc.
16	Sad : Tamasic quality, characterized by sorrow, gloomy, grief, painful mind, feeling of distress, deflated, melancholy, dejection, lowness of spirits, depression, etc.
17	Calm : A Trigunatita, shows tranquility, no avarice to knowledge, activity, delusion, when any of them is dominant. No longing for them when they are absent. Remains like an

	unconcerned witness and is unperturbed by Guna-born sense objects. Knows that it is only Guna-born senses and mind that act and enjoy. Remains unwavering in all situations. Self-poised alike in pleasure and in pain. Makes no difference - stone, iron, and gold are same, towards loving and hating. Unmoved by praise and blame alike. Alike in honor and in humiliation. View a friend and a foe alike. Has abandoned all sense of agency. Serves God through communion of unswerving and exclusive devotion and transcends Guna.
18	Afraid: Tamasic Guna, characterized by alarmed, frightened, timid, noticing danger, sensing warning sound, exciting fear.
19	Tired: Exhaustible energy, being indisposed, fatigue, weariness after exertion shrunk, feeble, diminish and decay by use.
20	Amazed: An emotional upsurge characterized by perplexity, wonder, surprise, astounds, amaze, and astonish, puzzled state.
21	Shaky: Tamasic quality , depicting unsteadiness, infirm, tottering, trembling, rock, vibrate, move violently, oscillate as if about to fall, weakness, horrified, etc.
22	Happy: Sattvic nature, characterized by Luminosity, feeling of lucky contentedness, glad, pleased, joyful, cheerful. Harmonious due to their purity. Having a feeling of ‘I am happy, I am full of knowledge; Enslaves one to mood of joy and happiness. Has higher goals leading to regeneration.
23	Timid: Tamasic guna. Characterized by alarmed, frightened, timid, noticing danger, sensing warning sound, exciting fear, infirm tottering, tremble, rock, vibrate, move violently, oscillate as if about to fall, weakness, horrified, etc.
24	Alone: Tamasic quality, natured by single, solitary, away, apart, lonely, unfrequented.
25	Alert: Rajasic quality, depicting watchfulness, lively, hyper active, feeling of ‘I am doer; Enslaves one to active, avarice, extroversion, ceaseless planning and execution of works, restlessness, and desire for enjoyments.
26	Upset: Rajasic nature featuring disturbed, break quietude, disorganize, restlessness, un-composed nature.
27	Angry: Rajasic quality, featuring excited, inflamed, restlessness, lack of patience easily annoyed, state of being excited, inflammable, getting angry, easily kindled, Provocable, afire
28	Bold: Usually, a Rajasic quality, characterized by aggressiveness, well marked, boldness, venturesome, courageousness, adventurous, and impudence for any purpose, defies It could also be explained under Daivi Guna like fearlessness, freedom from all kinds of bondages, clarity in approach, steadfast in conviction. Knows that conviction is important than convenience.
29	Blue: Tamasic Guna exhibiting depressed feelings, keen disappointment, failure to fulfill, defeat ones own hopes, fell aversion to, melancholy, etc
30	Shy: Tamasic Guna characterized by avoiding observation, bashful,, elusive, evasive, avoiding social gatherings coupled with timidity, etc.
31	Active: Rajasic quality, showing lively, busy and effective temperaments. Diligent in approach, active vivid, full of life, industrious, etc.
32	Guilty: Asuri Guna, characterized by culpability, crime, wickedness, blameworthy, at fault, sin, punishable by law.
33	Joyful: Sattvic nature, characterized by Luminosity, feeling of lucky, contentedness, glad, pleased, joyful, cheerful. Harmonious due to their purity. Having a feeling of ‘I am happy. I am full of knowledge; Enslaves one to mood of joy and happiness. Has higher goals

	leading to regeneration.
34	Nervous: Tamasic quality, depicting unsteady, infirm, tottering, tremble, rock, vibrate, move violently, oscillate as if about to fall, weakness, horrified, etc.
35	Lonely: Tamasic quality, characterized by single solitary, away, apart, lonely, unfrequented.
36	Sleep: Tamasic quality characterized by sleepiness, lethargy, slothful. Enslaves one to negligence and laziness, Lack of intelligence. Lack of effort. Delusion. Evil tendencies leading to degeneration. Parasitic attitude.
37	Excited: Rajasic quality, showing state of being stirred up, sympathetic arousal, roused or called for actions, stimulated, set in motion, and move to strong emotions.
38	Hostile: Asuri quality showing enmity, opposed, foe, opponent, hatred, etc.
39	Proud: Rajasic quality, showing arrogance, haughty, feeling that “T am doer” Self centered, overbearing etc.
40	Jittery : Tamasic quality, depicting nervousness, afraid, unsteady, infirm, tottering, tremble, rock, vibrate, move violently, oscillate as if about to fall, weakness, horrified, etc.
41	Lively: Rajasic quality, showing lively, busy and effective temperaments. Diligent in approach, active, vivid, full of life, industrious, etc.
42	Ashamed: Tamasic, exhibiting shame, abashed, an expression of un worthy for not being able to rise up to occasion, not being able to do one’s duty effectively.
43	At ease: Gunatita - character showing comfort, relief in attitude, composure, balanced relaxed, equipoise, consolation, equanimity, etc.
44	Scared: Tamasic quality, depicting nervousness, afraid, unsteady, infirm, tottering, tremble, rock, vibrate, move violently, oscillate as if about to fall, weakness, horrified, etc
45	Drowsy: Tamasic quality characterized by sluggish, dozing, sleepiness, lethargy, slothful, Enslaves one to negligence and laziness. Lack of intelligence. Lack of effort. Delusion. Evil tendencies leading to degeneration. Parasitic attitude.
46	Angry at self : Tamasic quality, at one’s own behavior – inflamed, restlessness, lack of patience, easily annoyed, state of being excited, inflammable, getting angry, easily kindled, Provocable, afire.
47	Enthusiastic: Rajasic quality, showing lively, busy and effective temperament Diligent in approach, active, vivid, full of life, industrious, eager to act, etc
48	Downhearted: Tamasic, showing despondency, dejection of spirit, lose hope or heart, incapable of executing one’s duty owing to disappointment – Arjuna’s state of mind on seeing kiths and kin in battle field.
49	Sheepish: Tamasic quality characterized by bashful, foolishly diffident, shy, coyness avoids and lacks efforts, attitude of slavery, evil tendencies leading to one’s degeneration.
50	Distressed: Tamasic quality, exhibiting mental pain, pressure, agony, mentally exhausted, breakdown, down-hearted, low sprits, etc.
51	Blameworthy : Tamasic, exhibiting shame, abashed, an expression of unworthy for not being able to rise up to occasion, not being able to do one’s duty effectively, low spirited, etc
52	Determined: Rajasic quality, exhibiting fixed in approach, resolute, decisive, zeroed in, resolve, stationary in approach, unmoved by affecting factors, etc.
53	Frightened : Tamasic quality, depicting nervousness, afraid, unsteady, infirm, tottering tremble, rock, vibrate, move violently, oscillate as if about to fall, weakness, horrified,etc.

54	Astonished: Rajasic quality exhibiting amazement, surprise, puzzled, wonder, perplexity, astound, etc.
55	Interested: Rajasic quality showing deep concern, exhibiting willingness to participate, willing to venture in activity, show zeal in involvement, ready to invest time, money and efforts.
56	Confident : Rajasic quality characterized by trusting firmly, being positive, having full faith, fully assured, ready to rely, readiness to execute with firm resolution, etc.
57	Energetic: Rajasic quality exhibiting full of energy, operative, enthusiasm, zeal, vigor, strength of mind and body to execute role expected.
58	Concentrating : Sattvic quality characterized by focused attitude, able to invest unwavering mind, be able to avoid mental modification, etc.
59	Dissatisfied with self: Tamasic quality, exhibiting abashed, an expression of unworthy for not being able to rise up to occasion, not being able to do one's duty effectively, low spirited, etc.

2.5. Concept of Emotions:

2.5.1 Definition Emotions:

The English word 'emotion' is derived from the French *émotion*, from *émouvoir* 'excite', based on Latin *emovere* where e- (variant of ex-) means 'out' and movere means 'move' (8)

An emotion is a mental and physiological state associated with a wide variety of feelings, thoughts, and behaviors. It is prime determinant of the sense of subjective well-being and appears to play a central role in many human activities. (8)

Many researchers distinguish feeling and emotion, where feeling refers to the subjective experience of the emotion. Some believe that emotions can occur unconsciously, and hence that emotion is a more general phenomenon than its subjective feeling. Feelings may also more narrowly refer to the experience of bodily changes. (8)

2.5.2. Emotions & Psychology:

Psychology defines emotions as feelings that generally have both physiological and cognitive elements that influence behavior. It probably encompasses cognitive element: our understanding and evaluation of the meaning of what is happening promotes our feeling of happiness.

How are emotion caused and perceived?

To understand this, various theories are put forward:

2.5.3. James-Lange theory;

William James along with Carl Lang put forward the theory that a changed situation leads to a changed bodily state that is emotional experience. As James says ‘the perception of bodily changes as they occur IS the emotion.’ James further claims that ‘we feel sorry because we cry, angry because we strike, afraid because we tremble, and not that we cry, strike, or tremble, because we are sorry, angry, or fearful, as the case may be.

The James-Lange theory, conversely, asserts that first we react to a situation (running away and crying happen before the emotion), and then we interpret our actions into an emotional response.

In this way, emotions serve to explain and organize our own action to us.

2.5.4. Cannon-Bard theory --- Different emotions cannot be associated with specific physiological changes. According to this, two things happen simultaneously: seeing danger stimulate autonomic nervous system to produce physiological changes involved in emotions (increased heart rate, rapid breathing) and send message to your cerebral cortex, where experience of emotion is perceived. But in some emotions both phenomenon may not happen e.g. .fear, anger, and sadness are associated with increased heart rate, but disgust is not.

2.5.5. Singer-Schachter theory –According to this theory body, mind and environment play a role. Emotion is determined by physiological arousal and cognitive labeling. However, which comes first depends upon the type of emotion. Some of our emotions are instantaneous (detecting a snake) while anger towards a friend involve cognitive appraisal.

2.5.6. Classification of emotions: Robert Plutchik (1980) classifies them on a wheel as color chart. Every color of the spectrum can be produced by mixing the primary colors same he describes with emotions. He believes emotions have four dimensions.

- Positive and Negative.
- Primary or Mixed.
- Polar opposites.
- Vary in intensities.

2.5.7. Modern science & Emotions:

According to modern science emotions arise in brain. The frontal lobe and limbic cortex are involved during play of emotions. The increased activity in these areas stimulate hypothalamus which triggers autonomic nervous system and the endocrine system leading to various physiological changes required to cope with demanding situation caused by emotions. Apart from hypothalamic map the amygdale also plays important role in emotional responses and hence behavior. The right brain has centers which help in conveying emotion through speech. Emotional experiences have shown to play important role in determining autonomic balance.

Thus emotion starting from triggering either by external or internal cause, stimulate neo-cortex hypothalamus, ANS and endocrine system. At the conclusion of entrees or distress (positive or negative emotion), the system returns to normalcy. Often our system does not return to normalcy because of factors like.

- 1) Large number of demanding situation
- 2) Perfectionist attitude
- 3) Highly sensitized organ & system.
- 4) Inmate greed & strong anguish.

The system is triggered again and again and keeps up the imbalance and would lead to manifestation of ailment .

Most of the neurophysiologists and brain scientists have started accepting the fact that there is some creative entity deep within us called consciousness which governs the function of the higher centre of brain.

2.5.8. Yogic perspective of Emotions:

Most neurophysiologists and brain scientists researching the brain have started accepting the fact that there is some creative entity deep within us: call it the consciousness or the mind, which governs the functions of the highest centers of the brain .

Is there a relation between mind, thinking and emotions? Emotions are often understood as power thoughts. Building intensity into thought converts them into emotions: the energy content of such emotions is enormous. Power thoughts as emotions last longer and build deeper impressions, which go deep into the subtle layers of the consciousness and form our basic personality traits.

According to Yoga and Upanishads we all possess five bodies or layers of existence. The gross body is (Annamaya Kosha); in order of subtlety they are Pranamaya, Manomaya, Vijnanamaya and Anandmaya Koshas. The emotions arise in Manomaya Kosha, while thinking starts at Vijnanamaya Kosha. In Vijnanamaya Kosha thinking starts, discrimination is maximized with a

total knowledge base governing all actions. The emotions are in their most purified form in tune with cosmic reality. In Manomaya Kosha the emotions become gross, thinking gets intensified and actions often get governed by our likes and dislikes rather than what is right and what is wrong. Anandmaya Kosha is the abode of lasting happiness. Ananda is beyond thinking, the causal state of thinking itself. Call it silence or fullness. It is the state of bliss, freedom and power.

The Bhagavad-Gita describes this process dramatically as follows.

The man dwelling on sense objects develops attachment for them: from attachment springs up desire and from desire (unfulfilled) ensue anger. From anger arises infatuation, confusion of memory: from confusion of memory, loss of reason, and from loss of reason, one goes to complete ruin (2.63-Bhagavad-Gita also talks about three gunas and their interplay in personality types creating various emotions.

Yoga vasistha describes emotions are perceived by internal instrument called Antahkarna which is an instrument of thinking, discriminating and willing. It is an internal instrument of perception and consists of

- manas- the thinking mind
- buddhi- the intellect which discriminates and decides
- ahankaara – ego manifests as I
- Citta –the seat of memory from this birth and previous birth
- All the knowledge derived from memory is vasana that are “mental impressions” of previous birth and samskara of present birth. Vrittis are modifications of mind, the forms that arise from this citta and result into emotions. (sloka 6 and 7 of chapter 23 of the essence of yoga vasistha.

hatha Yoga pradiplika verse 77 says, “Thoughts, emotions and desires are not the mind. They are modifications of the mind and like waves on the ocean. Thoughts are the result of ‘vrittis’ or modification, mental movements in the sub- conscious and unconscious mind. All mental activities are due to the external or internal experiences which arouse due to the samskara or vasana .

In hatha Yoga pradiplika verse 5 says:

Above manipura, in the proximity of the heart, is ‘anahata cakra’ with twelve blue petals. It is connected to the cardiac plexus, heart, respiration and thymus gland and is responsible for emotions of love, hate, compassion, cruelty, etc. anahata is also connected to the sense of touch and hands

Sage Patanjali clarifies the five basic vrittis or modifications from which all thoughts and emotions originate. They are: Right knowledge (pramana), wrong knowledge (viparyaya), Fancy (vikalpa), Sleep (nidra), and Memory (smritayah). As long as there is identification with these modifications, you can only experience mundane Existence and individuality, but if all these modifications are blocked then there is no Individual experience.

Viveka cudamani talks about Panchikarna which leads Panchtanmatras turning into various sense organs and their inputs which plays important role in emotions. It also talks about five-layer body .

2.5.9. EMOTION and AFFECT

Our body is quite literally point of expression for our emotions as they journey in this physical plane. *Not everything that counts can be counted and not everything that can be counted counts*¹². Power of human mind, intellect and energy are largely guided by emotions. If one puts this energy to study and practice of fine arts one will be known as an artist. If one directs it towards music one will be known as a musician. If one puts it towards scientific research, in understanding laws of nature, one will be known as a scientist. Same energy, when employed for exploration of unseen powers and laws of nature within oneself, is known as yoga, says Swami Sathyananda Saraswati¹³. Other way is also true. The same energy is expressed for violence and intimidation it is terrorism, brutality, viciousness, cruelty. If they are guided towards noble causes, yoga – says, Ramana Maharshi. All these are largely guided by emotions.

Within the context of this study, “Affect” is used as synonymous with emotion. Specifically what is measured in present study is the affective of emotional State as experienced by the yoga practitioner “in past week” and self rated on a five point scale, called positive and Negative Affect Scale (PANAS).

CONCLUSION

Human beings are tossing in relentless swings of moods and emotions. Present century is virtually seeing after effects and miserable conditions of human beings owing to such uncontrolled swings of moods and behavior. No aspect of our life goes untouched with the effect of emotions as we are exposed to various uncontrolled, spontaneous emotional upsurges, day in day out, having long lasting impact on mental as well as bodily changes. Some are positive; some are negative emotions in us. Though mind knows difference, body fails to

differentiate them and responds alike in both cases (Eg: Eustress V/s Distress). Modern medical science, with all its advancement in technology, has miserably failed to provide a positive solution to such despondent state of affairs. It is able to diagnose problem with all its sophisticated gadgets but it cannot provide any solution.

A vast and vivid explanation is available in both scriptural and non-scriptural literature on theory of emotions, Gunas, (Character types) which are inherently opposite tendencies. Psychology, psychiatry and other behavioral sciences are also not lagging behind. No branch of behavioral sciences can claim independence. Interactive, interplay, intricate networking is developing among these behavioral sciences in explaining human emotions. But all are emphatic in their view that emotions play integral role in either constructing or destroying him. For some, these emotions have gone to the extent of deciding their very existence, as could be seen in suicidal tendencies we see in the contemporary world! It is do or die situation for them owing to emotional imbalances, accumulated over a considerable length of time. There is no escape to man from merciless onslaught of these emotions, unless he surrenders to eternal truth given in Scriptures.

Thus, it can be concluded that growth or evolution is through control of instincts and not by submission to them. Latter is path to degradation and spiritual death through growth of demonic nature, while former is way to rise in spiritual scale through acquisition of *Daivisampat* or Godly nature. But sad part of story is most men are not inward looking enough to be benefited by such considerations. It is also interesting to note that all texts in Sanskrit are not scriptures. There are many Sanskrit texts written in varying times, (Smrtis of Hindus), which are not compatible with scriptures. Some of these have advocated untouchability, strict cast systems, etc, which go against values prescribed for contemporary world. They are virtually incompatible to changing

times. Hence, in application of these principles to life, one can form a code of conduct for oneself in their light, and keep that as a norm, an objective criterion for regulating one's life. Thus pure subjectiveness involved in acceptance of conscience can be avoided. That should propel ones spirits, ones actions.

2.6. CONCEPT OF STRESS:

According to Indian philosophy the stress is not due to outside events. There is a major part of stress already accumulated in us. This, the scriptures call as Anadi avidya, or mula avidya, or the basic stress level. Restlessness and boredom is the way this basic stress manifests in us. This property of restlessness is the cause for the hyperactivity and violence. Deep-rooted restlessness is also the cause of inner disharmony and manifestation of this at the physiological level results in various stress-related disorders such as bronchial asthma, hypertension etc. On top of basic stress the external disturbances and stress cause the total stress. The contribution of basic stress in total stress is far higher compared to the external stresses. So yoga suggests removing the basic stress.

Stress, long considered alien to the Indian lifestyle, is now a major risk factor for various cardiac and non-cardiac ailments. The victims are not just high-pressured executives but also slum dwellers, working women, businessmen, professionals and even children. With the fast pace of modern life, stress-related disorders such as heart attacks, peptic ulcers, arthritis, allergies, sexual problems, bowel disorders and so on are greatly on the raise.

People across the country are in search of measures to cope with this menace. That is why more and more stress management workshops are being organized for executives, yoga and meditation

centres are mushrooming and the demand for anxiolytic and antidepressant drugs has been escalating.

What is stress?

Selye and Levi have defined stress as a non-specific, conventional phylogenetic basic response pattern, the primary function of which is to prepare the body for physical activity such as fight or flight (this is eustress). If, however, the subject lacks the means of resorting either to fight or flight, i.e. of relieving the stress reaction, eustress develops into distress, which manifests in the form of psychosomatic symptoms or disorders. There are two types of stress as distinguished by Selye and Levi: eustress (healthy, essential stress) and distress (morbid stress), e.g. mental or physical strain, anger, frustration, tension, all seemingly without hope.

2.6.1. Causes and effects of stress

The causes of stress may be (a) physical: accidents, burns, major surgery, infections; (b) psychological: conflicts, wrong notions, doubts; and (c) emotional: fear, anxiety, hate, greed, anger. Irrespective of the cause, the effects of stress are seen at the highest level in the brain and travel down the body causing imbalances in the autonomic nervous system and in the endocrine system.

2.6.2. Medical and yogic solutions to stress

Stress hazards decrease the quality of life and can lead to many ailments. Four distinct stress attack stages or phases are recognized: psychic, psychosomatic, somatic and organic. Anxiolytic/antidepressant drugs are available to treat the somatic and organic phases of stress,

while yoga is most useful in controlling and treating the psychic and psychosomatic phases, thereby nipping the cause in the bud in the early stages itself.

2.6.3. Yoga – treating the cause

The basic aim of the yogic approach towards stress is not to deal with the manifest symptoms (like fear, anger, palpitation, sleeplessness, etc.) but rather to eliminate the root cause. According to yoga, stress is an imbalance at the mental, physical or emotional level. Stress is not the cause of our ills; the cause is our inability to cope with a changing condition.

What is the key here? Do we need to fight a stressful situation or do we need to develop and enhance our potential and capacity to cope with the situation? The reason why various stress management programs do not bring any lasting relief from the burden of stress is because their approach is to counteract the external influences, whereas the actual cause is internal. Stress management can be achieved by making attitudinal changes and other modifications in life.

Yogic methods of stress management include maintaining the physical body through the practice of asana, awakening the vital energy through pranayama and relaxation through yoga nidra.

2.6.4. Stress and Maintenance of physical body with asana

Yoga balances, harmonizes, and brings integration between physical and mental health. The definition of asana, in traditional texts, is 'Sthiram sukham asanam'. The word sthiram means homeostasis, balance; sukham means pleasure; and asanam means physical posture. It is the posture that produces homeostasis in the system – restores endocrinal balance, balances the inhibitors and stimulator circuits, regulates secretions and optimizes the functions of the entire

system of the body. 'Sukham' also relates to the state of mind, which is relaxed. Muscles contain stretch receptors; the stretching movements of asanas send relaxing impulses to the brain, which induce a relaxed state of mind.

2.6.5. Simple asanas to relieve stress

When we stand or sit for prolonged periods in chairs, our muscles accumulate stress and consequently lactic acid, which causes a feeling of stiffness when we wake up in the morning. To remove this stiffness the practice of simple asanas like tadasana, tiryaka tadasana, kati chakrasana, and pawanmuktasana part I are very useful. These postures stretch the muscles and massage the joints. As a result circulation improves and toxins are drained away. Thus asanas activate, tone and revitalize the organs, massage the joints, stretch and relax the muscles, optimize endocrine gland secretions, develop stamina and promote internal awareness. Concentration, awareness and relaxation are integral parts of performing asanas. Asanas are not just mechanical performances.

2.6.6. Power of pranayama

Pranayama is generally defined as breath control. Although this interpretation may seem correct in view of the practices involved, it does not convey the full meaning of the term. The word pranayama is comprised of two roots: 'prana' plus 'ayama'. Prana means 'vital force' or 'life force' and ayama is defined as 'extension' or 'expansion'. Thus, the word pranayama means 'extension or expansion of the dimension of prana'. The techniques of pranayama provide the method whereby flow of prana in the nadis is regulated, activated and purified, inducing physical and mental stability.

Pranayama and lifestyle

Physical activities such as exercise, work, sleep, intake of food and sexual relations all affect the distribution and flow of prana in the body. Faculties of mind such as emotion, thought and imagination affect the pranic body even more. Irregularities in lifestyle, dietary indiscretions and stress deplete and obstruct the pranic flow. This results in what people experience as being drained of energy. Depletion of energy in a particular prana leads to devitalization of the organs and limbs which prana governs and ultimately to disease or metabolic dysfunction. The techniques of pranayama reverse this process, energizing and balancing different pranas within the pranamaya kosha. Pranayama practices should be performed after asana.

2.6.7. Stress ,Relaxation and concentration through yoga nidra

One of the prime needs of today is to learn how to relax. Sleep is not relaxation. According to yoga, sleep is willfully and consciously becoming aware of how the mind and consciousness are interacting with the body, senses and objects and experiences. Yoga aims to achieve and maintain clarity of mind and awareness (sajagata). When we attain this awareness then naturally existing turbulences and distractions will settle down. In yoga, the experience of relaxation means moving from outside to inside, becoming aware of this introversion and maintaining balance and stability. Psychology indicates that activity and stimulation is the nature of mind. Relaxing the disturbed, agitated mind can be achieved through relaxation practice of yoga nidra.

It is therefore evident from the above discussion that asanas relax the body and mind, and through meditation (yoga nidra) one attains relaxation, concentration and awareness.

Scientific findings on yoga nidra

In 1988 a study was carried out at Charing Cross Medical School, London, by Dr A.K. Ghosh (Swami Mangaltirtham Saraswati), which showed that meditation (especially yoga nidra) can modify stress-induced EEG patterns and bring about progressive and systematic relaxation by inducing a high degree of alpha brain wave rhythms. Yoga nidra has the capacity to induce deep sleep in only twenty minutes.

2.6.8. Change in attitude and lifestyle

Change in attitude and modification of lifestyle are the two pillars on which the management of stress through yoga is based. Attitude change can be achieved by developing positive attitudes. This is explained in yogic literature on the basis of asakti (attachment), anasakti (non-attachment) and vairagya (detachment).

Asakti literally means attraction with expectation and ego involvement towards certain individuals or objects. This leads to raga (attraction), dwesha (repulsion) and ahamkara (ego involvement), which often manifest as insecurity, aggression, a high need for recognition, possessiveness and anxiety. As a result, a person high in asakti often suffers from frustration, tension, psychological stress and other neurotic tendencies. On the other hand, vairagya is the height of the nivritti way of life. It means detachment or non-dependence on worldly material things and personalized relationships. This is very difficult for the average householder to achieve. Devoted saints and seers may be able to achieve vairagya. However, for most people, who live normal social and family lives, anasakti (non-attachment) is the middle path which may

be followed in order to improve the quality of life and social well-being. This provides lasting happiness and peace without being disturbed by asakti (attachment).

A person high in anasakti performs all his duties and acts with a sense of responsibility and task involvement without any additional expectation. He performs a task or serves a person or institution in the spirit of a karma yogi. Similarly, he does not decri any material benefit or support such as a good house, furniture or conveyance, yet he is not attached to these conveniences. Living in an air-conditioned house with modern amenities or in a mud house on a mat does not make any difference to him. He feels happy and satisfied in either condition. It is therefore evident that by practicing anasakti (non-attachment) no stressful situation will harm or affect any individual. Probably this is the best way to remain calm, contented and happy.

2.6.9. Yogic lifestyle

Living according to the laws of the body and the laws of nature is the concept of yogic lifestyle. This includes diet, sleep, relaxation, exercise and a daily work schedule. The best way to learn the yogic lifestyle is to spend a few days in a yogashram. Yogic lifestyle does not mean just adding the practice of a few asanas and/or pranayama to one's daily schedule of activities. It actually means living a self-disciplined life of anasakti.

Short sessions of twenty minutes each after taking bath in the morning, then in the afternoon and at bedtime can be devoted to yoga practice. The effect of yoga is never evident immediately, rather it is experienced slowly. Slowly one will start to experience that one's power of concentration and relaxation has increased. The mental and emotional tensions that are generated in day to day life slowly start settling down. It is here that yoga begins. Yoga does not begin by

standing upside down or by wearing guru clothes. Yoga begins by becoming aware of the self (sajagata – Self-awareness).

2.6.10. Conclusion

According to yoga one becomes a victim of stress not on account of a stressful situation but on account of one's inability to cope with it. Do not fight stress and in the effort fall prey to alcohol, cigarettes or anxiolytic drugs, rather develop and enhance your potential and capacity to cope with stress. Learn to alter your attitude and lifestyle. Practice asana, pranayama and yoga nidra regularly to bring about a change in attitude and to correct imbalances at the mental, physical and emotional levels. Anxiolytic/antidepressant drugs do not bring lasting relief; they only help manage some of the somatic and organic phase symptoms of stress, while yoga is most useful in controlling and treating stress in early psychic and psychosomatic phases.

2.7. Concept of Verbal Aggression:

Verbal aggressiveness is an assault on another's self concept, rather than his/her position. Individuals who rely on verbal aggressiveness are viewed as less credible, have less satisfying relationships, and resort to physical aggression more often.

2.7.1. Aggression in social psychology

In psychology and other social and behavioral sciences, aggression refers to behavior that is intended to cause harm or pain. Aggression can be either physical or verbal, and behavior is classified as aggression even if it does not actually succeed in causing harm or pain.

2.7.2. Definition of aggression in psychology

Aggressive behavior is a behavior that causes physical or emotional harm to others, or threatens to. It can range from verbal abuse to destruction of a victim's personal property. People with aggressive behavior tend to be irritable, impulsive, and restless.

Verbal aggressiveness in communication has been studied to examine the underlying message of aggressive behavior and to gain control over occurrences. Infante and Wigley(1986) defined verbal aggressiveness as "a personality trait that predisposes persons to attack the self-concepts of other people instead of, or in addition to, their positions on topics of communication".^[1] Verbal aggressiveness is thought to be mainly a destructive form of communication, but it can produce positive outcomes. Verbal aggressiveness consists of offset constructive types which can produce satisfaction in relationships and destructive types that have a negative impact on relationships. Infante and Wrigley (1986) defined aggressive behavior in interpersonal communication as “a joint product of the individual's aggressive traits and the way the person perceives the aggressive inhibitors and disinhibitors in the given situation.”

2.7.3. Verbal Aggression Types:

- Character attacks
- Competence attacks
- Physical appearance attacks
- Self-concept attacks
- Intentionally vague or ambiguous yet implicit threats
- Insults

- Malediction
- Scolding
- Teasing
- Mockery
- Verbal use of force
- Profanity
- Verbal abuse
- Nonverbal emblems

2.7.4. Reasons or causes for verbal aggression:

There are four primary reasons or causes suggested by Infante, Trebing, Shepard, and Seeds (1984), which are:

- Frustration—in which a goal is blocked by someone or having to deal with an individual deemed "unworthy" of one's time
- Social learning—in which the aggressive behavior has been learned from observing other individuals
- Psychopathology—in which an individual attacks other persons because of unresolved issues
- Argumentative skill deficiency—in which an individual lacks verbal skills to deal with an issue, and therefore resorts to verbal aggressiveness

These motivators of verbal aggressiveness contribute to an individual with a verbally aggressive personality trait.

More recently Shaw, Kotowski, Boster, and Levine (2012) demonstrated that verbal aggression may be caused by variation in prenatal testosterone exposure. They conducted two studies in which they measured the length of the second and fourth digits (2D:4D) on each hand of participants, an indicator of amount of prenatal androgen exposure, and conducted a questionnaire to determine the verbal aggressiveness of participants. A negative correlation between 2D:4D and verbal aggressiveness was determined.

2.7.5. Verbal Aggression and Effects

Self-concept damage is the most fundamental effect, which can cause long lasting and more harmful results than the temporal effects. The more temporal and short term effects are: hurt feelings, anger, irritation, embarrassment, discouragement, humiliation, despair, and depression. Verbal aggressiveness that harms an individual's self-concept can follow an individual throughout their life. For instance, Infante and Wigley (1986) state "the self-concept damage done by teasing a child about an aspect of physical appearance can endure for a lifetime and exert an enormous impact on the amount of unhappiness experience".^[4] Verbal aggressiveness is also a major cause of violence. When verbal aggressiveness escalates, it often turns into physical violence.

2.7.6. Verbal Aggression -Constructive

The constructive traits which produce satisfaction and increase relationship contentment by helping to increase understandings between the different positions are assertiveness and argumentativeness. Assertiveness is often confused with aggressiveness, but assertive individuals often possess traits like dominance, independence, and competitiveness. Infante and Rancer (1982) define argumentativeness as the "trait-like behavior that predisposes an individual

to take a stand on controversial issues and attack the positions that other people take".Argumentative individuals focus on the topic rather than attacking an individual. Productive argumentativeness can produce positive outcomes in communication through challenging and defending standpoints through justification. This allows for reasoning between individuals to resolve issue and terminate the disagreement. Argumentative encounters such as this have a positive correlation to relational satisfaction.^[6]

2.7.7. Verbal Aggression- Destructive

The destructive traits, hostility and verbal aggressiveness, lead to dissatisfaction in communication and relationship deterioration. Destructive verbal aggressiveness is used for revenge, teasing, and to manipulate others. Verbal aggressiveness is destructive and links to the hostility trait. Unlike argumentativeness, verbal aggressiveness is focused on defending one's identity and attacking others; not trying to resolve the dispute but instead attacking individual's self-concept. Also, verbally aggressive individuals often do not provide as much evidence to support their standpoint. In many cases these individuals possess verbally aggressive traits because they lack the skills to argue rationally and effectively, and therefore use verbally aggressive messages as their defense mechanism. Individuals with argumentative skill deficiency often see violence as their only alternative. These aggressive tactics cause a digression by using personal attacks which do not allow for the disagreement to ever be resolved.

2.8. Concept of Satisfaction with life:

Life satisfaction is an overall assessment of feelings and attitudes about one's life at a particular point in time ranging from negative to positive. It is one of three major indicators of well-being: life satisfaction, positive affect, and negative affect (Diener, 1984).

Life satisfaction is the way persons evaluate their lives and how they feel about where they are going in the future. It is a measure of well-being and may be assessed in terms of mood, satisfaction with relations with others and with achieved goals, self-concepts, and self-perceived ability to cope with daily life. It is having a favorable attitude of one's life as a whole rather than an assessment of current feelings. Life satisfaction has been measured in relation to economic standing, amount of education, experiences, and residence, as well as many other topics.

2.8.1. Life satisfaction and personality

One of the most studied concepts of personality is big five model with dimensions of openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. In a research carried out by Deneve and Cooper in 1998, multiple studies were analyzed and certain personality questionnaires that linked subjective well-being (SWB) and personality measures. They found that neuroticism was the strongest predictor of life satisfaction and negative affect while the personality measure 'openness to experience' correlated equally to life satisfaction and positive affect. Amongst other personality traits chrono type has been consequently related to life satisfaction; morning oriented people (*larks*) showed higher life satisfaction than evening oriented individuals (*owls*).

2.8.2. Life satisfaction-WHO, UNESCO

Life satisfaction can reflect experiences that have influenced a person in a positive way. These experiences have the ability to motivate people to pursue and reach their goals. There are two kinds of emotions that may influence how people perceive their lives. Hope and optimism both consist of cognitive processes that are usually oriented towards the reaching of goals and the perception of those goals. Additionally, optimism is linked to higher life satisfaction, whereas pessimism is related to symptoms in depression. The Satisfaction with Life Scale (SWLS) is a single scale that is used by UNESCO, the CIA, the New Economics Foundation, the WHO, the Veenhoven Database, the Latinbarometer, the Afrobarometer, and the UNHDR to measure how one views his or her self-esteem, well-being and overall happiness with life. Previous modeling showed that positive views and life satisfaction were completely mediated by the concept of self-esteem, together with the different ways in which ideas and events are perceived by people. Several studies found that self-esteem plays a definite role in influencing life satisfaction. There is also a homeostatic model that supports these findings. A person's mood and outlook on life can also influence their perception of their own life satisfaction.

According to Seligman, the happier people are those who are less focused on the negative thinking. Happier people also have a greater tendency to like other people, which promotes a happier environment, which then correlates to a higher level of person's satisfaction with his or her life. However, others have found that life satisfaction is compatible with profoundly negative emotional states like depression.

Life-review therapy using Autobiographical Retrieval Practice for older adults with depressive symptoms, in a study carried out by Serrano JP, Latorre JM, Gatz M, and Montanes J, Department of psychology at Universidad de Castilla-La Mancha, demonstrated that, with

increased specificity of memories, individuals show decreased depression and hopelessness and increased life satisfaction. The test was designed to measure participants' ability to recall a specific memory, in response to a cue word, while being timed. Thirty cue words; including five words classified as 'positive' (e.g., *funny, lucky, passionate, happy, hopeful*), five as 'negative' (*unsuccessful, unhappy, sad, abandoned, gloomy*), and five as 'neutral' (*work, city, home, shoes, family*); were presented orally in a fixed, alternating order to each member of a focus group. To ensure that the participants understood the instructions, examples were provided of both 'general' memories (e.g., summers in the city) and 'specific' memories (e.g., the day I got married). For each cue word, participants were asked to share a memory evoked by that word, of an event that should have occurred only once, at a particular time and place, and that lasted no longer than a day. If the person could not recall a memory within 30 seconds, then that cue instance was not counted. Two psychologists served as raters and independently scored the responses of each participant. Each memory was tagged either as 'specific' – if the recalled event lasted no more than one day – or, otherwise, as 'general'. The raters were not informed regarding the hypotheses of the study, the experimental (control) group's membership, nor the content of the pretest or post-test.

2.9. CONCLUSION:

The above studies and search revealed that the need for management of emotion, coping and personality is very much essential among the forces like Police, Military and Home Guards. As it would not only help the individuals and their family but also the entire society. However there is no literature available to study the efficacy of emotions, personality and coping behavior of Home Guards.

3. SCIENTIFIC LITERATURE REVIEW

3.1. PREVIOUS WORK DONE IN S-VYASA

In his master's dissertation of 2004, Shri Mallikarjun has brought out the concept of *triguna*, and *tridosha*. These two are compared to give an understanding of holistic and the nature of psychosomatic diseases. In his study he has analyzed several Ayurvedic and other *Yoga* texts like *Bhagavadgītā* and has analyzed the *Sankhya* philosophy in detail. Highlight of this dissertation is that for a complete understanding of an individual's nature, both *guna* and *dosha* need to be considered.

In another master's dissertation presented in 2008 by Mr. Mohan, analysis is on attitude using concept of *Gunas*. Here also, the basis is *Bhagavadgītā* and *Sankhya* philosophy. Various attributes of attitude from the perspective of *triguna* for designing a suitable attitudinal change is the scope of this study.

Further, in another master's dissertation by Mr. Tripathi in 2012 the title used is "*Gunas According to Yoga and Ayurveda- A comparative study*". In this, a detailed account of *Gunas* is brought out from the perspective of Ayurveda. To show the parallel and contrasts, many comparisons are brought out against *Yoga*. The other important scriptures referred in this are *Rāmāyaṇa*, *Bhagavadgītā*, *darśana*.

In one of the studies made by Rao in 2013, he has given an entirely new approach to correlate the natural flux of *Gunas* in the nature with the Random Event Generator's (REG) output bit-stream.

REG is an instrument which generates random bit streams and it seems to be influenced by various events happening around involving human minds. This study was attempted to explore some recognizable patterns in the apparently random bit streams. The title of this study is "Measuring *Guna* Prevalence with REG - A Pilot Study".

In a Ph.D. thesis, by Khemaka in 2012, the title used is "Development of Human Potential through Yogic Practices assessed by Psychological and Health Variables", In this study, *Guna* was proposed as one of the pillars of the model of full human potential.

In another Ph.D. thesis by Deshpande in 2008 having title "A randomized control trial of the effect of Yoga on *Gunas* (personality) and Health in normal healthy volunteers" the quality of life was assessed. In this thesis, *Gunas* were taken as one of the main variables to assess the quality of life.

In yet another Ph.D. thesis by Kumari S in 2010 the emotional intelligence was assessed. Title of this study is "Effect of SMET yoga module on emotional dynamics of managers". *Guna* and *gunatita avastha* were taken as better emotional stability.

In another Ph.D. study by Chaudhar N in 2013, the nature of health was explained taking note from ancient texts. The title of this thesis is "Effect of Yoga based life style program on Polycystic Ovarian Syndrome (PCOS)". Concept of health as per Ayurveda, yoga and yoga system was broadly explained in this study. In these studies, scriptures were extensively

reviewed and the concept of Health, *Guna*, and Emotional Intelligence are illustrated at length. Summary of earlier work with their strength and limitations are presented in the following table:

TABLE 1

Authors & Year	Summary	Strength	Limitations
Mallikarjun, 2004 (M.Sc. Dissertation)	Explained the concept of <i>Triguna</i> and <i>Tridosha</i> to elucidate the holistic health concept and nature of psychosomatic diseases.	1. Comparisons of Ayurveda and Yoga concepts 2. Comprehensive Approach towards holistic health 3. Highlight use of <i>Triguna</i> & <i>Tridosha</i> for complete ascertainment of individual nature	1. No theoretical model 2. Experimental work different from literary search
Mohan, 2008 (M.Sc. Dissertation)	Highlighted challenges due to modern lifestyle, and their influence in attitude formation. <i>Triguna</i> concept presented to suggest methods to overcome poor lifestyle and develop a better attitude towards life.	1. Presentation of <i>Triguna</i> concept from practical perspective of life management	1. No theoretical model 2. Experimental work different from literary search
Tripathi, 2012 (M.Sc. Dissertation)	A detailed comparison is made between yoga and ayurveda in understanding the concept of <i>Triguna</i>	1. Parallels and contrasts in <i>Triguna</i> according to yoga and ayurveda texts 2. Major ayurvedic texts and yoga texts were referred	1. No theoretical model was proposed related to experimental work 2. Experimental work different from literary search
Rao, 2013 (M.Sc. Dissertation)	Attempted a novel method to understand the basic equilibrium pattern in the <i>prakruti</i> , the universe. Randomness in nature due to human interaction	1. Concise review of relevant verses needed to support theoretical ideas 2. New application of theory of <i>triguna</i>	Major focus on study of <i>guna</i> in inanimate <i>Prakruti</i> (i.e., external environment)

	(<i>guna</i> flux) was studied using the Random Event Generator (REG).	3. Theoretical Frameworks proposed related to experimental Work 4. Introduction of the concept of <i>gunagraphy</i>	
Deshpande, 2008 (Ph.D. Thesis)	Quality of life was studied from various dimensions, having <i>Triguna</i> as one of the main components of study.	1. Used <i>Triguna</i> as the major tool for assessing personality 2. Extensive review from major <i>upanishads</i> , yoga and ayurveda texts	1. Major focus on quality of life, <i>Triguna</i> being a part of the whole study 2. No theoretical model proposed related to experimental work
Khemka, 2012 (Ph.D. Thesis)	The study of development of human potential through practice of yoga and assessment of the changes using psychological and health variables.	1. Theoretical model proposed for development of human potential	Major focus on human potential model, <i>Triguna</i> being a part of the whole study
Sony, 2010 (Ph.D. Thesis)	In long run, only such value based business, industries can succeed and get sustained . So, E.I. should refer to that value based <i>daivi sampad</i> Intelligence.	1. Compared <i>guna</i> with EI. 2. <i>Gunatita sthiti</i> is explained.	Search was limited to one scripture.
Nidhi, 2013 (Ph.D. Thesis)	The process of maintaining state of health is ‘Swastha’ which according to yoga is ‘Samatvam’. An unhealthy lifestyle, including our habits, the food we eat and our thoughts, can lead to loss of physiological balance or homeostasis.	Good understanding of from scriptures.	Only health aspect was focused

3.2. STUDIES ON GUNA:

As there are no studies involving Home Guards, studies on police and military personnel are reviewed because in police and military, personnel undergo similar kind of problems as faced by Home Guards.

Previous studies on police have commented on the high stress levels in police and its association with physical and mental ill-effects. High psychological stress is seen to have a negative impact not only on their ability of work, but also in personal and interpersonal spheres of their lives.

A study by Dasa conducted using *Mahamantra* in a three-armed, randomized perspective, on 62 volunteers showed that the *Mahamantra* group increased *Satva* and decreased *Tamas* with no significant change in *Rajas* scores on the VPI questionnaire after chanting of *Mahamantra*, 20 minutes daily for four weeks.

Another study conducted by Deshpande et.al compared the effects of *Yoga* and Physical Exercise (PE) on *Gunas* and general health. Practice of *Yoga* was observed to give better effects on *Sattva Guna* than PE with a larger effective size. The main difference seemed to be in the effect on *Rajas Guna*. Reduction in this *Guna* was significantly higher in PE group than Y group.

3.3. STUDIES ON EMOTION:

Lakshmi et.al in her study has added nine (four positive and five negative) questions for her study which are referred as Other Positive Affect (OPA) and Other Negative Affect (ONA)

Deb *et al.*, in a study on traffic constables under Kolkata Police, disclosed that 79.4% of them were moderately or highly stressed.

A study by Rao *et al.* on Central Industrial Security Force (CISF) personnel found 28.8% of them scoring positive for high stress on GHQ-30. The study also found higher psychiatric morbidity in the high-stress group.(Rao GP, 2008)

Very few studies have been done using PANAS to measure changes in emotions after the practice of yoga.

In one of the research studies, Emily A. Impett Jennifer J.Daubenmier Allegra L.Hirschman (1992) Studied potential of yoga against harmful effects of self-objectification as well as to promote embodiment (i.e., body awareness and responsiveness) and well-being in a sample of 19 participants enrolled in a 2-months yoga immersion program. Results showed that after Yoga, women in the study objectified their own bodies to a lesser degree and both men and women, showed increased body awareness, positive affect, and satisfaction with life, as well as decreased negative affect.

In yet another study, Yeung RR and Memsley DR analyzed the effects of Personality and acute exercise on mood states, using PANAS Scales. During the study, it was found that exercise did enhance mood more than a period of quiet rest. However, manipulation of expectations failed to show significant effects on mood. Finally, personality factors were found to influence the mood effects of exercise .

Deborah R. Cohen of University of Pennsylvania in a Comparative Study of Effects of Hatha Yoga and Seated Meditation on Mood Elevation found were mixed, but interesting findings suggested that, hatha yoga had a stronger effect on improving mood than meditation after first eight weeks of practice. It was observed that hatha yoga improved mood and meditation was more effective at improving cognition. During two weeks break, those subjects practicing hatha yoga suffered bodily discomfort and mental unrest. Those practicing meditation did not experience these adverse symptoms. They experienced more of a carry-over. When subjects practiced meditation as a second practice with hatha yoga as the base, they too experienced an improvement in mood, and both groups experienced a significant improvement in quality of life.

In a study on Positive and Negative Affect Scale to investigate Acute Mood Changes during Deep Brain Stimulation (DBS) for movement disorders, Gokul K of Emory University Department of Psychiatry US, found that there is a strong correlation between PANAS scores and other validated tests such as HAMD-17, GDA, and IDS. There was no correlation between PANAS score changes in Motor exam score changes after first DBS adjustment. Their study validates use of PANAS, which is brief and easier to use and measures acute changes in effect, in Parkinson's disease and other movement disorder patients by correlating it to mean scores of other three tests mentioned above. In addition, their study showed that changes in PANAS scores after DBS adjustment were not necessarily affected by changes in motor exam scores. Thus physical act of DBS programming may be having a direct effect on acute mood changes in brain.

In another study to understand influence of yoga on mood states, distress, quality of life and immune outcomes in early breast cancer patients undergoing surgery, Raghavendra M Rao, HR

Nagendra, Nagarathna Raghuram, C Vinay, S Chandrashekara, KS Gopinath, BS Srinath of Swami Vivekananda Yoga Anusandhana Samsthana, Bangalore, India found that there was a significant decrease in the state and trait of anxiety, depression, symptom severity, distress and improvement in quality of life in yoga group as compared to controls. There was also a significantly lesser decrease in CD and lower levels of serum IgA in yoga group as compared to controls following surgery. Results suggest possible benefits for yoga in reducing postoperative distress and preventing immune suppression following surgery.

This is supported by another study on Alterations in Brain and Immune Function Produced by Mindfulness Meditation. Davidson RJ et al found significant increase in antibody titers to influenza vaccine among subjects in meditation compared with those in wait-list control group. The magnitude of increase in left-sided activation predicted magnitude of antibody titer rise to vaccine. These findings demonstrated that a short program in mindfulness meditation produced demonstrable effects on brain and immune function with positive mood changes in normal healthy volunteers. These findings suggest that meditation will definitely help in changing brain and immune function in positive ways.

In another study that assessed the impact of a weekly yoga based practice of body awareness and intentional relaxation on self rated affect and perceived stress levels in adolescent girls, the results are as under:

Intervention group (n=47) participated in six 50 minute Yoga based sessions over a seven week period. Dependent variable scores were compared to a control group (n=40) over the same time

period. Both groups completed Positive and Negative Affect Scale (PANAS) and Perceived Stress Scale (PSS) one week prior to and one week after intervention sessions. Perceived stress scores of adolescent girls who practiced yoga based practice, decreased significantly over time as compared to control group. Positive affect scores improved over time in intervention group but only in those adolescent girls who participated in five or more sessions. Negative affect scores did not change significantly over time in either control or intervention groups.

3.4. STUDIES ON STRESS;

Collins *et al.* in a cross-sectional study on county police constables and sergeants in the United Kingdom found that the high-stress group constituted 41% of the population and showed significant association with having negative job perception. Lippfound 43% of senior Brazilian police officers under significant stress. (Collins, 2003)

Zukauskas *et al.* identified in their study on police officers the consequences of stress included depression, alcoholism, physical illness, and suicide. Kohan *et al.* correlated job stress with high substance use among police. (Kohan, 1983)

Thus, we need to examine ways to reduce psychological stress to ensure that the police personnel and HGs feel physically and mentally competent to do their duty efficiently and alertly.

There is a lot of research material on external and occupational sources of stress in police work, emphasizing on the organizational and operational problems. These stressors include lack of organizational support, excess workload, inadequate leave, political pressures, no time for family, frequent transfers, negative public image, and exposure to duty related traumatic events.

However, though most of the police personnel are exposed to the same external occupational and organizational stressors, all of them do not develop psychological morbidity. This is because a person's vulnerability to stress is also based on an individual's appraisal and response to difficult situations. Personality and coping both play an interactive and independent role in influencing adjustment to stress.

Cabarkapa, in a study on military aviation crew, found neuroticism as a personality trait in correlation to job-related stress and concluded that stress evaluation and examination of certain personality characteristics can be used for development of basic anti-stress programs and measures. (Cabarakap, 2009)

Gershon *et al.* reported that the most important risk factor in a police officer's perceived work stress was maladaptive coping behavior and exposure to critical incidents. (Violanti JM, 2011)

A study involving different ranks of police personnel by Ranta reported that enhancing the coping behavior of subjects using Indian psychological techniques resulted in a significant reduction in job stress. (Gershon, 2007)

Personality traits and coping methods have also been linked to development of suicide ideation in police personnel. Thus highlighting the need for further research and work on these two aspects.

A study conducted by Violanti JM aims at Police organizational stress and its impact on negative discipline. This paper provides a general overview of present police organizational discipline prescriptions, and an example of an alternative positive-based discipline program. (Violanti JM, 2011)

3.5. STUDIES ON VERBAL AGGRESSION;

Dr. Turner P aimed to assess whether global and context specific attitudes influence the ability to correctly identify the motivation for aggression and selection of appropriate intervention strategies. A sample of 105 prison officers completed a measure assessing global attitude towards prisoners, one assessing context specific attitude towards aggression, and also a case vignette. Global or context specific attitudes did not influence the ability to interpret aggression, but aggression type did. (Turner P, 2011)

Dr. Galatzer Lev conducted a study on Peritraumatic and trait dissociation to differentiate police officers with resilient versus symptomatic trajectories of posttraumatic stress symptoms. There were 178 active-duty police officers following exposure to a life-threatening event using latent growth mixture modeling (LGMM). Findings indicate that trait and peritraumatic dissociation differentiated the resilient from the distressed-improving trajectory (trait, $p < .05$; peritraumatic, $p < .001$), but only peritraumatic dissociation differentiated the resilient from the distressed-worsening trajectory ($p < .001$) symptomatic groups of individuals. Though there is abundant evidence that dissociation has a positive linear relationship with PTSD symptoms, this study demonstrates that degree of dissociation can distinguish between resilient and symptomatic groups of individuals. (Galatzer-Lev, 2011)

Chen CH conducted a multilevel study on the relationships between work characteristics, self-efficacy, collective efficacy, and organizational citizenship behavior taking the case of Taiwanese police duty-executing organizations. This study showed not only that knowledge characteristics will influence the self-efficacy of a police officer and that self-efficacy can in turn

influence individual police officers' OCB, but also the contextual effect of social characteristics, contextual characteristics, and collective efficacy on self-efficacy and individuals' OCB (Chen CH, 2011)

Compton MT wanted to assess does empathy and psychological mindedness affect police officers' decision to enter crisis intervention team training? The study revealed that the three groups did not differ on three of four exposure and experience variables. However, self-selected CIT officers were more likely to have prior exposure to mental health issues and professionals. No differences were found between the three groups on measures of empathy or psychological mindedness. One measure of empathy increased significantly after the weeklong CIT training.(Compton MT, 2011)

A study was made by Du Preez E on Personality and mental health on South African police trainees. This study also revealed that Additional training modules focusing on coping skills could possibly reduce vulnerability to stress in some trainees. (Du Preez E, 2011)

Mohandie K conducted study on Suicidal tendency by cop among female subjects in officer-involved shooting cases. An analysis of suicide by cop (SBC) among female subjects in a large sample (n = 707) of officer-involved shootings (OIS) is reported. Women represented 3% of the total sample (n = 21) and 5% (n = 12) of the 256 SBC cases. Therefore, 57% of the women (n = 12) were classified as SBC, and 81% of the women (n = 17) behaviorally evidenced some suicidal motivation.

The results underscore that when a female subject becomes involved in a situation leading to an OIS, there is every possibility that she will be motivated to be intentionally killed. She is almost

guaranteed to have a diagnosed mental disorder, has been prescribed psychiatric medications, and is abusing a substance at the time, most likely alcohol. Nevertheless, she also poses a serious risk of injury to both police officers and civilians during the encounter and will possess a firearm half the time. (Mohandie K, 2011)

3.6. Conclusion:

All the above studies and research revealed that the need for management of emotion, coping and personality is very much required among the forces like Police, Military and Home Guards. It not only helps them and their family but also the society. Hence the present trial was planned using a randomized control design to evaluate the effects of Yoga on Home Guards.

7. RESULTS

7.1. Demographic Data: The 75 participants in YG and 73 participants in CG had age ranges between 20 and 50 years. Between 20 to 30 years 36 in YG and 41 in CG, between 30 to 40 years 28 in YG and 20 in CG, above 40 years 11 in YG and 12 in CG. In gender, 36 in YG were female, and 31 in CG, 39 in YG, were male and 42 in CG. In marital status 49 were married in both YG and CG; 26 in YG were unmarried, and 24 in CG. Participants' educational qualifications were up to SSLC, SSLC to PUC and graduates. 49 in YG and 37 in CG are SSLC, 20 in YG and 24 in CG are PUC and 6 in YG and 12 in CG are Degree.

Sl. No.	Particulars		Yoga group	Controlled group
1	No. of Participants (n)		75	73
2	Age	Range		
		20 - 30	36	41
		30 - 40	28	20
		> 40	11	12
3	Gender	Females	36	31
		Males	39	42
4	Marital Status	Married	49	49
		Unmarried	26	24
5	Educational qualifications	SSLC	49	37
		PUC	20	24
		Degree	6	12

7.2. Gunas; VPI: Baseline scores for all the domains for both the groups did not differ significantly ($P > 0.05$, Shapiro-Wilk's test). *Sattva* in *Yoga* group had significantly increased from 39.87 ± 2.02 to 47.14 ± 7.22 whereas it had decreased significantly from 43.66 ± 4.39 to 37.74 ± 10.26 in control group. *Rajas* in *Yoga* group had significantly decreased from 29.15 ± 0.98 to 27.46 ± 4.38 whereas it had increased significantly from 28.60 ± 3.55 to 32.74 ± 5.37 in controlled group. *Tamas* in *Yoga* had significantly decreased from (30.98 ± 1.04 to 25.40 ± 5.11) whereas it had significantly increased from 27.74 ± 4.43 to 30.51 ± 5.50 in control group. Also significant in between group.

Sl No	Guna	Yoga Group				Controlled Group				Between Group	
		Pre	Post	t	p value	Pre	Post	t	p value	t	p value
1	<i>Sattva</i>	39.87±2.02	47.14±7.22	8.8	0.001***	43.66±4.39	37.74±10.26	-5.1	0.001***	6.4	0.001***
2	<i>Rajas</i>	29.15±0.98	27.46±4.38	-3.2	0.001***	28.60±3.55	32.74±5.37	4.4	0.001***	5.3	0.001***
3	<i>Tamas</i>	30.98±1.04	25.40±5.11	-9.8	0.001***	27.74±4.43	30.51±5.50	4.2	0.001***	5.8	0.001***

Significant level, * $p < 0.05$ and ** $p < 0.01$ *** $p < 0.001$

7.2.1. Sattva –*Sattva* in YG increased significantly ($p<0.001$) from 39.87 ± 2.02 to 47.14 ± 7.22 whereas it decreased significantly ($p<0.001$) from 43.66 ± 4.39 to 37.74 ± 10.26 in CG. (Refer to Figure 1).

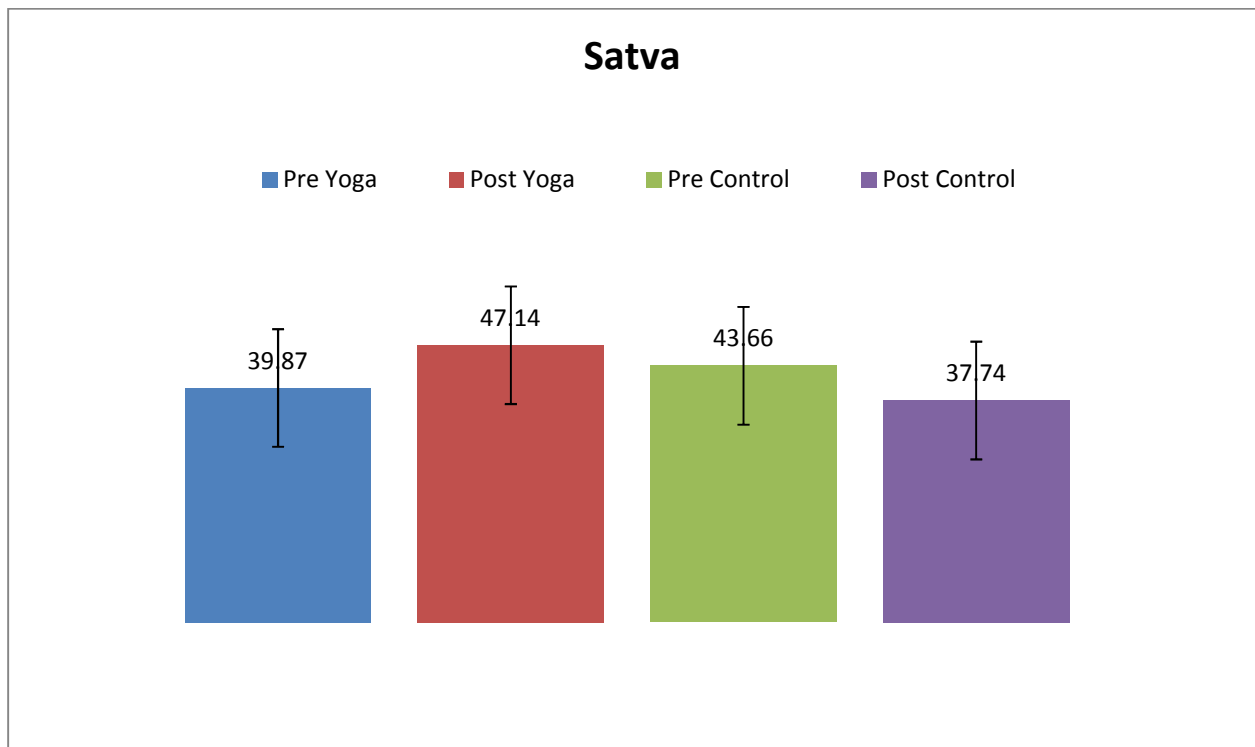


Figure 1

S1. Gender: -Males and Females:-Both males (40.04 ± 2.14 to 48.24 ± 7.99) and females (39.67 ± 1.90 to 45.94 ± 6.16) showed significant increase in *Sattva* in YG whereas in CG it decreased significantly males (42.79 ± 4.18 to 35.55 ± 11.03) and females (44.83 ± 4.46 to 40.71 ± 8.41). (See Table 2A)

S2. Marital status: Both married (39.90 ± 1.97 to 47.02 ± 6.76) and unmarried people (39.79 ± 2.16 to 47.35 ± 8.14) showed significant improvement of *Sattva* in YG whereas both significantly decreased in CG.(See Table 2B).

S3. Education: -Further the groups were divided according to their educational qualification, high school or below, Pre-University and Degree. Both groups SSLC or below (39.52 ± 1.95 to 46.99 ± 7.24), PUC (39.91 ± 1.88 to 46.23 ± 6.96) and HGs who had completed degrees (42.51 ± 1.04 to 51.40 ± 7.65) have show significant improvement in *Sattva*. In CG all categories showed significant decreases in *Sattva*. (See Table 2C)

S4. Age: - The data was analyzed based on the ages.

The age groups between 20 to 29 years (39.56 ± 1.94 to 47.45 ± 7.68), 30 to 39 years (39.87 ± 2.21 to 46.42 ± 6.90) and the HGs above 40 years (40.83 ± 1.5 to 47.94 ± 6.92) have shown significant increase in *Sattva*. The CG have shown significant decrease in *Sattva* in all other groups. (See Table 2D)

7.2.2. Rajas – In general the *Rajas* in YG had significantly ($p < 0.001$) decreased from 29.15 ± 0.98 to 27.46 ± 4.38 whereas it had increased significantly ($p < 0.001$) from 28.60 ± 3.55 to 32.74 ± 5.37 in CG.

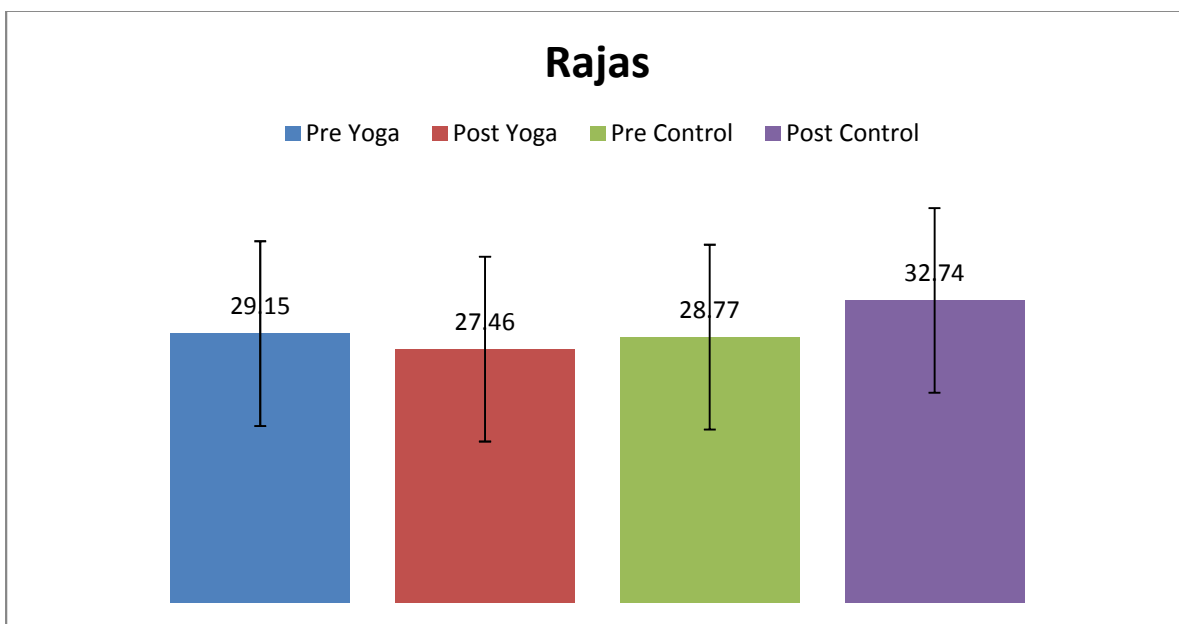


Figure - 2

R1. Gender: -Males and Females: - Both males (29.06 ± 1.04 to 27.21 ± 5.15) and females (29.24 ± 0.92 to 27.73 ± 3.43) showed significant decrease in *Rajas* whereas it increased significantly in CG. (See Table 2A)

R2. Marital status: Both married (29.13 ± 0.95 to 27.27 ± 3.71) showed significant decrease and unmarried people (29.18 ± 1.05 to 27.80 ± 5.51) showed non significant decrease in *Rajas* in YG whereas both showed significant increases in CG. (See Table 2B)

R3. Education: - when groups were divided according to educational qualifications High school or below, Pre University and Degree, the groups SSLC or below (29.31 ± 0.95 to 27.20 ± 4.20) showed significant decrease in *Rajas* whereas in PUC (29.12 ± 0.91 to 27.49 ± 4.71) showed non significant decrease in *Rajas*. HGs who had completed degrees showed non significant change (27.86 ± 0.50 to 29.43 ± 5.06). In CG SSLC category showed increases in *Rajas* level that failed to reach significance but other two categories showed significant increase in *Rajas* level. (See Table 2C)

R4. Age: - Analysis according to age.

In YG, both age groups, 20 to 29 years (29.29 ± 0.94 to 27.46 ± 5.10), 30 to 39 years (29.14 ± 1.07 to 27.35 ± 3.75) showed significant decrease in *Rajas* and the age above 40 years showed non significant decrease in *Rajas*. The CG shown non-significant increase in *Rajas* in 30 to 39 years and significant increase in *Rajas* in other groups. (See Table 2D)

7.2.3. *Tamas* – In general *Tamas* in YG significantly ($p < 0.001$) decreased from 30.98 ± 1.04 to 25.40 ± 5.11 whereas it increased significantly ($p < 0.001$) from 27.74 ± 4.43 to 30.51 ± 5.50 in CG.

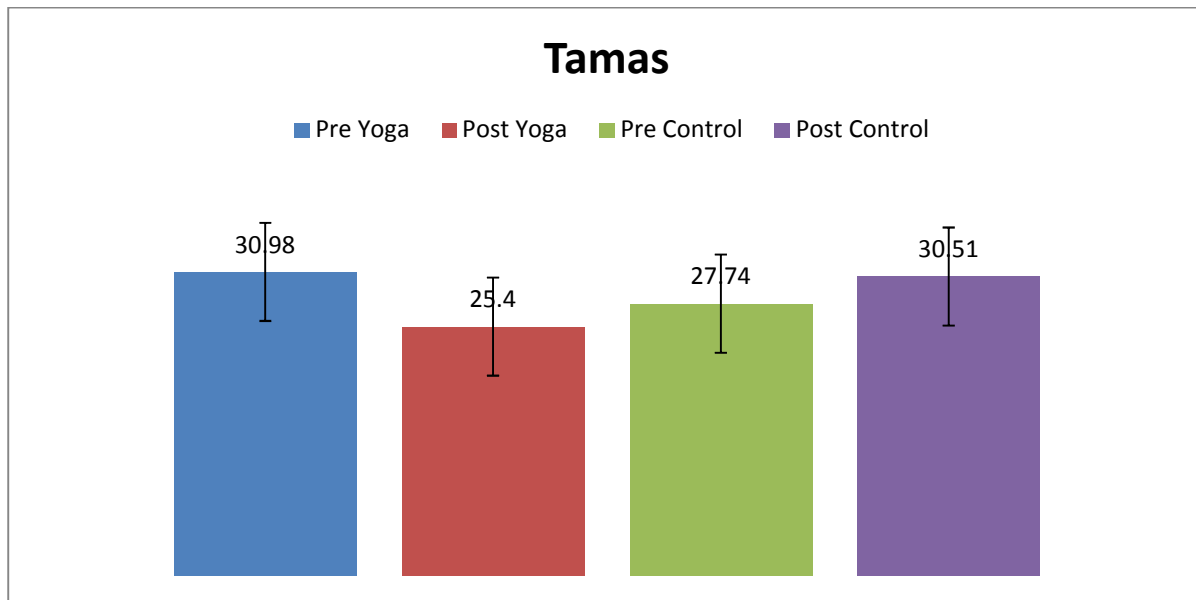


Figure - 3

T1. Gender: -Males and Females: - Both males (30.89 ± 1.10 to 24.54 ± 5.25) and females (31.08 ± 0.98 to 26.32 ± 4.86) showed significant decreases in *Tamas*, whereas in CG it significantly increased. (See Table 2A)

T2. Marital status: Both married (30.96 ± 1.01 to 25.69 ± 4.98) and unmarried people (31.02 ± 1.11 to 24.83 ± 5.40) showed significant decrease in *Tamas* in YG whereas it increased significantly in both married and unmarried category in CG. (See Table 2B)

T3. Education: - When groups were divided according to educational qualifications: high school or below, Pre University, and Degree, the groups SSLC or below (31.16 ± 1.00 to 25.80 ± 4.83), PUC (30.95 ± 0.97 to 26.27 ± 4.6) and Degree HGs (29.62 ± 0.54 to 19.15 ± 5.33) all showed significant decrease in *Tamas* in YG. In CG all the categories showed significant increase in *Tamas* level. (See Table 2C)

T4. Age: - *Tamas* data was further analyzed according to age.

All age groups, 20 to 29 years (31.14±1.00 to 25.07±4.71), 30 to 39 years (30.97±1.14 to 26.22±5.21) and over 40 years (30.48±0.80 to 24.33±6.24) showed significant decrease in *Tamas* in YG. The CG showed significant increase in *Tamas*.(See Table2D)

7.3. Emotion; PANAS: Positive Affect in Yoga group had significantly increased ($p < 0.016$) whereas it had decreased significantly ($p < 0.04$) in controlled group. Other Positive Effect in Yoga group had significantly increased ($p < 0.001$) whereas it had decreased significantly ($p < 0.001$) in controlled group. Negative Affect in Yoga had significantly decreased ($p < 0.001$) whereas it had significantly increased ($p < 0.001$) in control group. Other Negative Affect in Yoga had significantly decreased ($p < 0.001$) whereas it had significantly increased ($p < 0.01$) in control group. Also significant in between group.

S l · N	panas	Yoga Group				Control Group				Between Group	
		Pre(M±SD)	Post(M±SD)	t	p value	Pre(M±SD)	Post(M±SD)	t	p value	t	p value
1	Positive Affect	19.92±3.89	21.02±3.76	2.45	0.016**	19.79±3.88	18.24±6.38	-2.04	0.043*	-3.21	0.001***
2	Other Positive Affect	8.44±2.42	10.37±2.86	-5.11	0.001***	9.97±2.48	8.17±3.27	4.33	0.001***	-4.33	0.001***
3	Negative Affect	16.76±7.71	13.03±6.63	-5.11	0.001***	17.86±5.29	22.01±7.53	4.49	0.001***	7.70	0.001***
4	Other Negative Affect	10.07±3.85	7.56±3.95	-5.45	0.001***	10.84±2.82	12.11±3.76	2.49	0.010**	7.17	0.001***

Significant level, * $p < 0.05$ and ** $p < 0.01$ *** $p < 0.001$

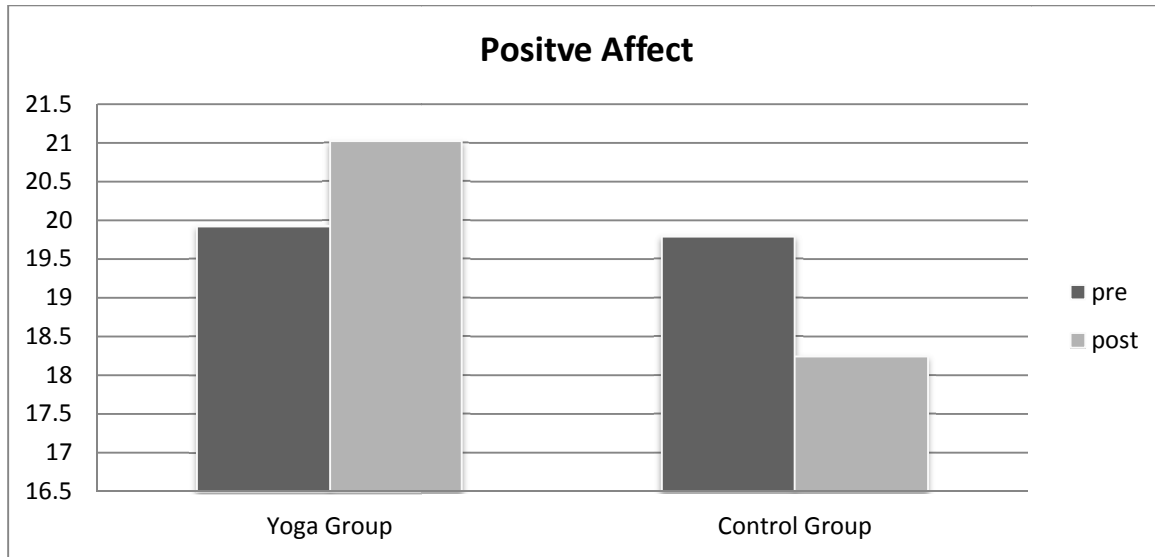
Results of integrated yoga practices in Yoga and Control Group

Variables	Yoga Group				Control Group			
	Mean±SD		Pre-Post p value	% changes in YG	Mean±SD		Pre-Post p value	% changes in CG
	Pre-yoga	Post Yoga			Pre	Post		
PANAS Positive	19.92±3.89	21.02±3.76	0.016**	+5.53%	19.79±3.88	18.24±6.38	0.0443*	-7.83%
Other Positive	8.44±2.42	10.37±2.86	0.0001***	+22.86%	9.97±2.48	8.17±3.27	0.0001***	-18.50%
PANAS Negative	16.76±7.71	13.03±6.63	0.0001***	-22.23%	17.86±5.29	22.01±7.53	0.0001***	+23.23%
Other Negative	10.07±3.85	7.56±3.95	0.0001***	-24.92%	10.84±2.82	12.11±3.76	0.0150**	+11.71%

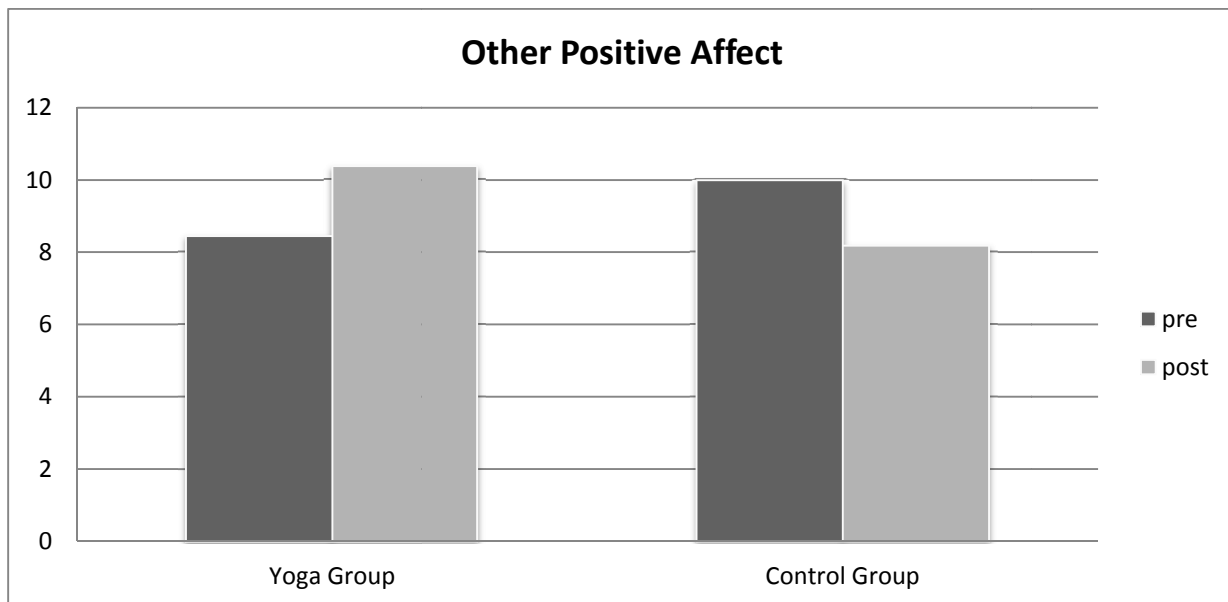
Changes in PANAS after yoga in Yoga Group: There was a significant improvement in positive affect after yoga at a $P<0.01$, and $p<0.001$ showing 5.53% and 22.86% changes in PA and OPA respectively. The NA decreased after yoga at a $P<0.001$, with 22.23% and 24.92% reduction in NA and ONA respectively.

Changes in PANAS in control group: There was a significant reduction in positive affect after yoga at a $P<0.05$, and $p<0.001$ showing 7.83% and 18.50% changes in PA and OPA respectively. There was a significant increase in NA and ONA $P<0.001$, $p<0.01$ with 23.23% and 11.71% improvement in NA and ONA respectively.

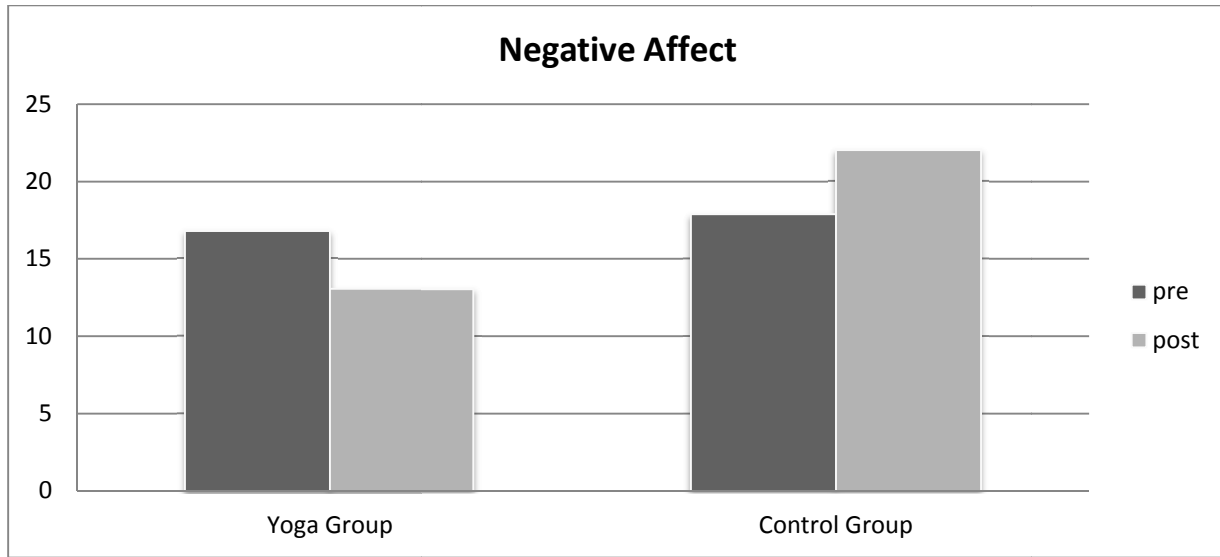
7.3.1. POSTIVE AFFECT: In general the positive affect in *Yoga* group has significantly increased from 19.92±3.89 to 21.02±3.76 ($p<0.01$) whereas it has decreased significantly from 19.79±3.88 to 18.24±6.38 ($p<0.05$) in control group. (Appended in Table No.2A)



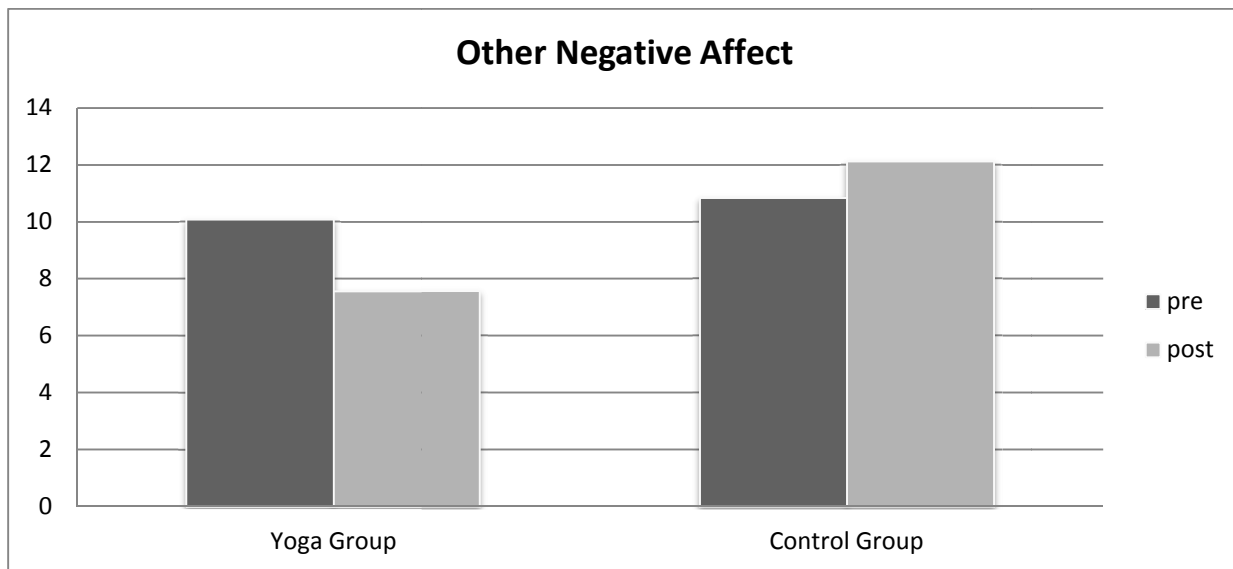
7.3.2. OTHER POSTIVE AFFECT:-The other positive affect in *Yoga* group has significantly increased from 8.44 ± 2.42 to 10.37 ± 2.86 ($p < 0.001$) whereas it has decreased significantly from 9.97 ± 2.48 to 8.17 ± 3.27 ($p < 0.001$) in control group.(Appended in Table No.2A)



7.3.3. NEGATIVE AFFECT – In general the negative affect in *Yoga* group had significantly decreased from 16.76 ± 7.71 to 13.03 ± 6.63 ($p < 0.001$) whereas it had increased significantly from 17.86 ± 5.29 to 22.01 ± 7.53 ($p < 0.01$) in controlled group.(Appended in Table No.2A)



7.3.4. OTHER NEGATIVE AFFECT – In general the other negative affect in *Yoga* has significantly decreased from 10.07 ± 3.85 to 7.56 ± 3.95 ($p < 0.001$) whereas it has increased significantly from 10.84 ± 2.82 to 12.11 ± 3.76 ($p < 0.01$) in control group. (Appended in Table No.2A)



Further Individual question in the PANAS was analyzed.

Percentage Changes in individual items of positive Affect .

Questi on no.	Panas Positive Affects		
	Descriptor	% change (increase)in Yoga Group	% change (decrease)in Control Group
Positive Affects			
2	Attentive	13.11%	-17.13%
3	Interested	0.0%	-24.30%
7	Excited	20.73%	0.65%
10	Strong	0.43%	14.45%
11	Enthusiastic	4.63%	-15.69%
17	Determined	5.33%	-14.22%
18	Proud	-3.35%	-3.96%
22	Inspired	11.17%	-23.26%
25	Active	9.85%	-6.86%
29	Alert	11.82%	1.55%
Other Positive Affects			
1	Happy	5.32%	-39.07%
8	Pleased	25.35%	5.52%
15	Content	39.29%	-14.38%
26	Glad	26.99%	-15.54%

This table shows the changes in individual items of positive affect domains (PA and OPA). There was an increase ranging from 0-20.73% in the individual items of PA with a negative change -3.35% in the question 'Proud'. There was 5.32-39.29% increase in the OPA scores. Question number 15 ('content') indicating the degree of contentment showed the highest degree

of improvement (39.29%.) in Yoga group. But in control group There was an decrease ranging from 0-24.30% in the individual items of PA with a positive change 14.45% in the question 'Strong'. There was 14.38-39.07% decrease in the OPA scores. Question number 8 “pleased” with a positive improvement.

Percentage Changes in individual items of Negative Affect .

Question no.	Panas Negative Affects		
	Descriptor	% change (decrease) in Yoga Group	% change (increase) in Control Group
Negative Affects			
4	Afraid	-26.90%	10.07%
6	Distressed	-37.40%	4.19%
9	Upset	-30.06%	8.77%
12	Jittery	0.93%	42.15%
14	Guilty	5.33%	40.63%
16	Nervous	-26.23%	15.32%
20	Scared	-17.46%	32.06%
21	Hostile	6.67%	108.06%
24	Ashamed	-24.75%	7.30%
28	Irritable	-29.87%	26.03%
Other Negative Affects			
5	Disappointed	-38.01%	3.14%
13	Sad	-28.57%	0.52%
19	Unhappy	-25.16%	26.14%
23	Troubled	-11.14%	0.61%
27	Miserable	-16.26%	38.40%

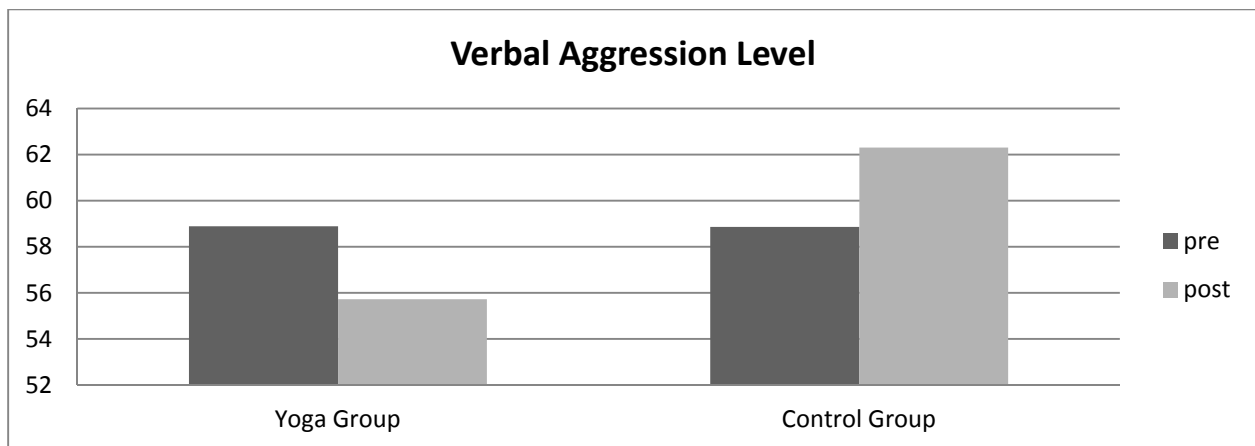
In Yoga Group, it is noteworthy that the degree of changes in the negative affect is better, in the range of 11.14-38.01%, than the increase in the items on positive affect. The ONA descriptor 'Disappointed' showed the maximum reduction of 38.01%. There is positive change in questions Jittery, Guilty and Hostile in yoga group.

In Control Group, there is increase in Negative affect range of 4.19-42.15%, descriptor “Jittery” showed the maximum increase of 42.15%. The ONA also increase with a range of 0.52-38.40% , with a “Miserable” showed maximum increase 38.40%.

7.4. Verbal Aggression:

	Yoga Group			Controlled Group			Between Group	
	Pre	Post	p value	Pre	Post	p value	t	P value
VAS	58.89±8.05	55.73±7.87	0.01	58.87±6.83	62.31±6.93	0.004	5.39	0.001

In general the Verbal Aggression in *Yoga* group has significantly($p \leq 0.05$) decreased from 58.89±8.05 to 55.73±7.87 whereas it has increased significantly($p \leq 0.05$) from 58.87±6.83 to 62.31±6.93 in control group. Between the group is also significant($p \leq 0.05$). (Appended in Table No. 2B,).



Gender:- Males and Females:-Both males (58.17 ± 8.70 to 56.35 ± 8.77) and females (59.66 ± 7.33 to 55.05 ± 6.83) have shown decrease in verbal aggression in yoga group whereas it has increased in Males (59.16 ± 6.639 to 64.50 ± 7.02) and considerably increase in Females (58.22 ± 7.14 to 60.03 ± 9.01) in control group. (appended in Table No. 2B)

Marital status: Both married (60.06 ± 8.19 to 55.60 ± 7.63) and unmarried people (56.56 ± 7.38 to 56.0 ± 8.49) shown decrease in verbal aggression in *Yoga* group whereas it had increased in married (58.26 ± 7.27 to 61.73 ± 7.15) and unmarried people (60.12 ± 5.77 to 63.50 ± 6.44) in control group .(appended in Table No. 2B).

Education: - Further the groups were divided according to their educational qualification high school or below, Pre-University and Degree. The two groups SSLC or below (58.89 ± 7.51 to 56.44 ± 7.77), PUC (58.25 ± 9.22 to 55.70 ± 7.79) and degree (61.0 ± 9.40 to 50.00 ± 7.97) have shown decrease in verbal aggression in yoga group. In controlled group Degree category shown increase in verbal aggression but other two categories slight decrease in verbal aggression level. (appended in Table No. 2B)

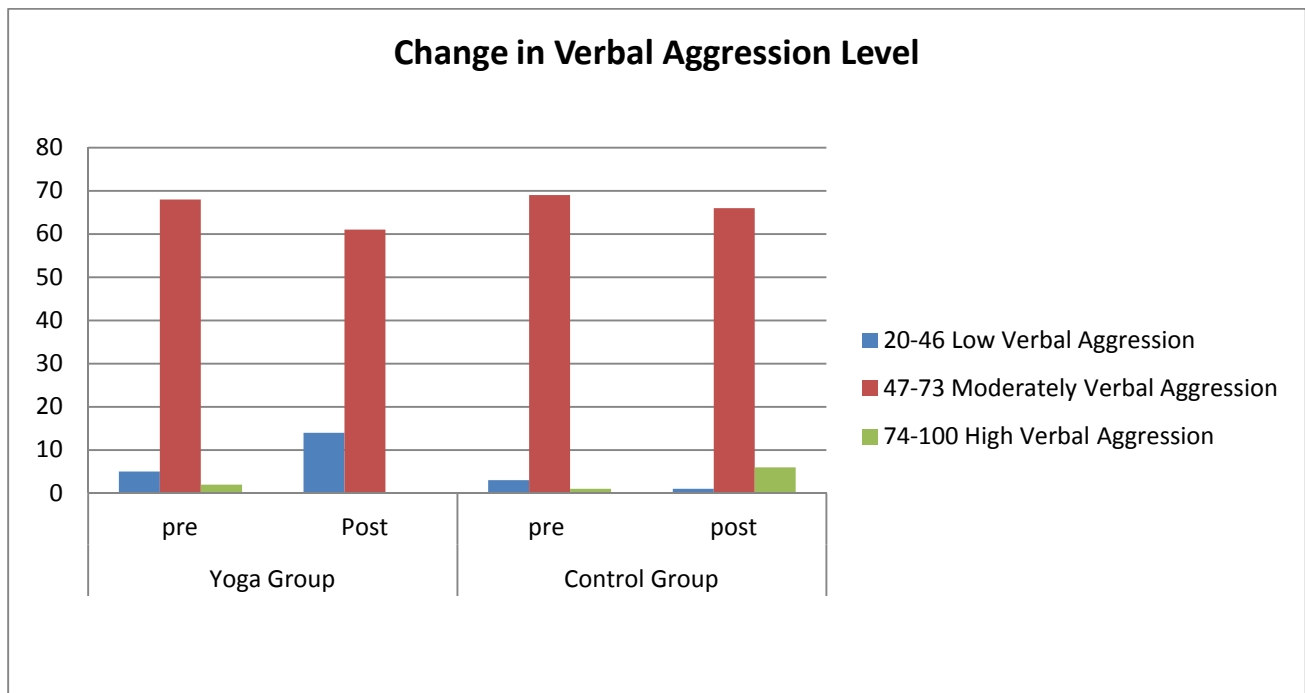
Age: - The data was analyzed based on the ages.

The age groups between 20 to 29 years (59.50 ± 7.26 to 56.02 ± 9.00), 30 to 39 years (58.53 ± 9.17 to 55.92 ± 6.35) and above 40 years (57.81 ± 8.06 to 54.27 ± 7.97) have shown decrease in verbal aggression level whereas the HGs 30 to 39 have shown increase in verbal aggression (58.40 ± 6.2 to 62.25 ± 8.01) but slight decrease in other categories in the control group. (appended in Table No. 2B)

7.4.1. Change in Verbal Aggression Level:

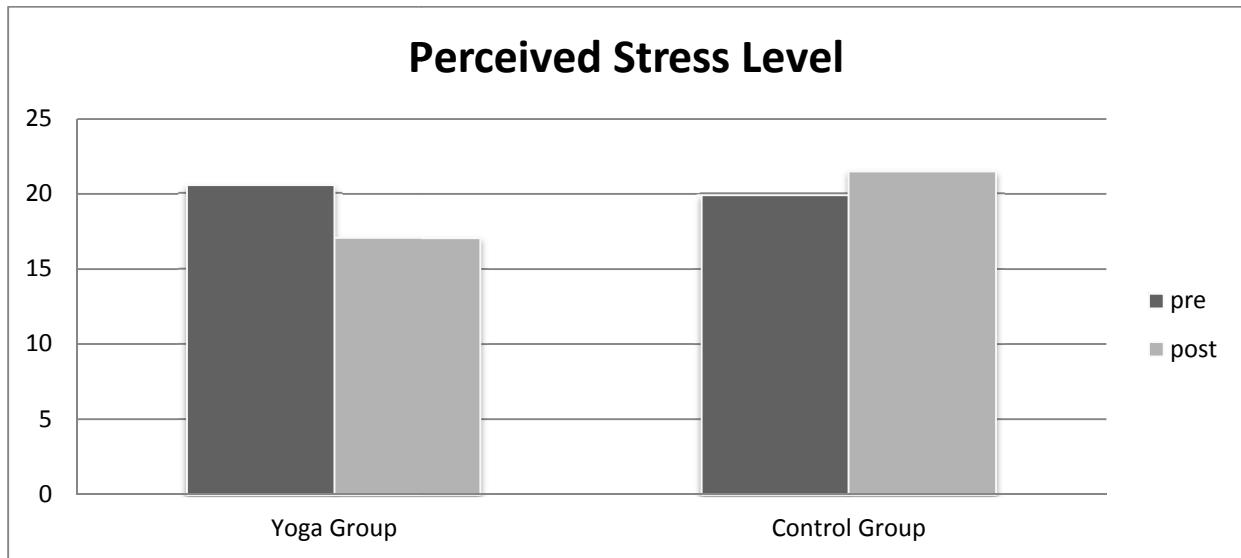
Scores		Yoga Group		Control Group	
		Before	After	Before	After
20-46	Low Verbal Aggression	5	14	3	1
47-73	Moderately Verbal Aggression	68	61	69	66
74-100	High Verbal Aggression	2	0	1	6

There were 5 people who were Low Verbal Aggression and increased to 14 in *Yoga* group where as it has decreased from 3 to 1 in control group. 68 people who were in the category of moderate verbal aggression have decreased to 61 people in *Yoga* where as in control group also it has increased from 69 to 66 people. 2 people who were in the category of high verbal aggression have become nil in *Yoga* group whereas it has increased in control group from 1 to 6 persons.



7.5 . Perceived Stress:

	Yoga Group			Controlled Group			Between Group	
	Pre	Post	p value	Pre	Post	p value	t	P value
PSS	20.52±4.57	17.04±5.04	0.001	19.87±4.73	21.45±5.37	0.044	5.14	0.001

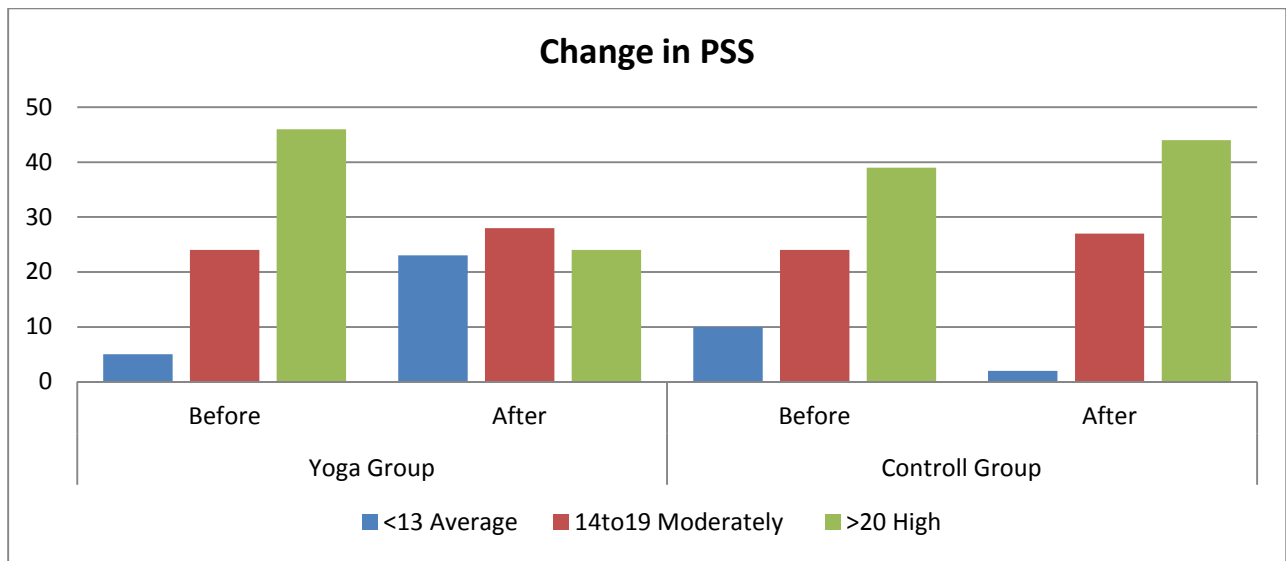


In general the stress level in *Yoga* group has significantly($p \leq 0.05$) decreased from 20.52±4.57 to 19.87±4.73 whereas it has increased significantly($p \leq 0.05$) from 19.87±4.73 to 21.45±5.37 in control group. Between the group is also significant($p \leq 0.05$). (Appended in Table No. 2A,).

Perceived Stress Level Scores around 13 are considered average, scores 14 to 19 are considered as moderate stress and Scores of 20 or higher are considered high stress.

Scores		Yoga Group		Control Group	
		Before	After	Before	After
<13	Average	5	23	10	2
14to19	Moderately	24	28	24	27
>20	High	46	24	39	44

There were 5 people who were in average stress and increased to 23 in *Yoga* group where as it has decreased from 10 to 2 in control group. 24 people who were in the category of moderate stress have increased to 28 people in *Yoga* where as in control group it has increased from 24 to 27 people (same trend). 46 people who were in the category of high stress have decreased to 24 in *Yoga* group whereas it has increased in control group from 39 to 44 persons.



Change in Perceived Stress Level:

Scores		Yoga Group			Control Group		
		Before yoga	Shifting of people to different stress group .	After yoga	Before	Shifting of people to different stress group .	After
<13	Average	5	3 to <13 2 to 14-19	23	10	1 to <13 5 to 14-19 4 to >20	2
14to19	Moderately	24	7 to <13 12 to 14-19 5 to >20	28	24	9 to 14-19 15 to >20	27
>20	High	46	13 to <13 14 to 14-19 19 to >20	24	39	1 to <13 13 to 14-19 25 to >20	44

Average Stress: $PSS \leq 13$ is considered as average stress. There were 5 people who were in average stress, 3 people remain in average and 2 move to moderate stress level in *Yoga* group where as 10 people who were in average stress, 1 remain in average and 5 move to moderate stress level and 4 people move to high stress level in control group.

Moderate stress: PSS score 14 to 19 are considered as moderate stress level. There were 24 people who were in moderate stress, 7 people move to average and 12 move to moderate stress level and 5 move to high stress level in *Yoga* group where as 24 people who were in moderate stress, 9 move to moderate stress level and 15 people move to high stress level in control group.

High stress: $PSS \geq 20$ is considered as high stress level. There were 46 people who were in high stress, 13 people move to average, 14 move to moderate stress level and 19 remain in high stress level in *Yoga* group where as out of 39 people who were in high stress, 1 person move to average stress level , 13 people to moderate stress and 25 people move to high stress level in control group.

7.6. Satisfaction with Life Scale

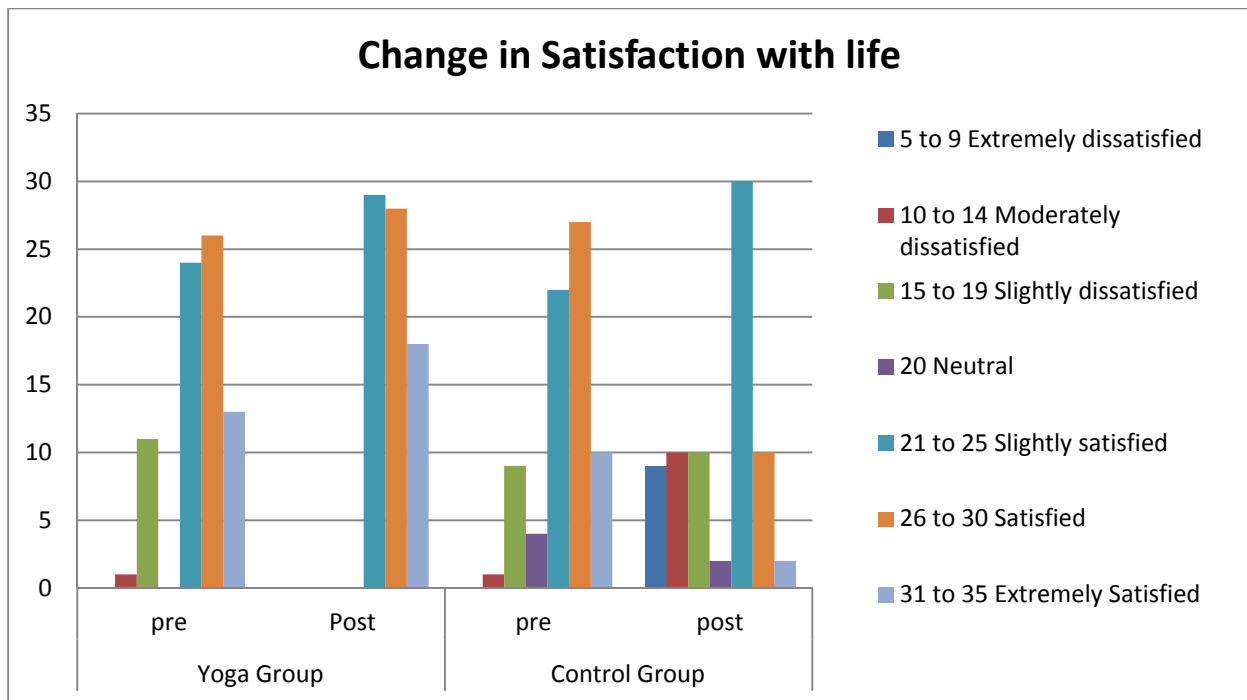
	Yoga Group			Controlled Group			Between Group	
	Pre	Post	p value	Pre	Post	p value	t	P value
SWL	25.34±4.79	27.57±3.49	0.0001	25.01±5.03	19.80±6.88	0.0001	-8.61	0.0001



In general the Satisfaction in life in *Yoga* group has significantly($p \leq 0.05$) increased from 25.34±4.79 to 27.57±3.49 whereas it has decreased significantly($p \leq 0.05$) from 25.01±5.03 to 19.80±6.88 in control group .Between the group is also significant($p \leq 0.05$). (Appended in Table No. 2C,).

Improvement in Satisfaction with Life Scale Table-

Satisfaction with life scale scores 5to9 are considered extremely dissatisfied, scores 10 to 14 are considered as moderately dissatisfied, score 20 are considered as neutral, scores 21 to 25 are considered as slightly satisfied, scores 26 to 30 are considered as satisfied and scores 31 to 35 are considered as extremely satisfied.



Improvement in Satisfaction with Life Scale shows Moderately and Slightly dissatisfied level in participants have reduced to completely nil in *Yoga* group where as it has increased in Control group. Slightly satisfied, satisfied and extremely satisfied has increased in yoga group where as in control group except slightly satisfied both satisfied and extremely satisfied has decreased substantially.

Change in Satisfaction with life level:

Scores		Yoga Group			Control Group		
		Before	Shifting of people to different satisfaction scale	After	Before	Shifting of people to different satisfaction scale	After
5-9	Extremely dissatisfied	-		-	-		9
10-14	Moderately dissatisfied	1	1 to 26-30	0	1	1 to 21-25	10
15-19	Slightly dissatisfied	11	5 to 21-25 3 to 26-30 3 to 31-35	0	9	1 to 5-9 6 to 21-25 2 to 31-35	10
20	Neutral	-			4	1 to 5-9 1 to 10-14 2 to 21-25	2
21-25	Slightly Satisfied	24	8 to 21-25 11 to 26-30 5 to 31-35	29	22	3 to 5-9 2 to 10-14 3 to 15-19 1 to 20 8 to 21-25 5 to 26-30	30
26-30	Satisfied	26	10 to 21-25 9 to 26-30 7 to 31-35	28	27	3 to 5-9 3 to 10-14 7 to 15-19 1 to 20 9 to 21-25 4 to 26-30	10
31-35	Extremely satisfied	13	6 to 21-25 4 to 26-30 3 to 31-35	18	10	1 to 5-9 4 to 10-14 4 to 21-25 1 to 26-30	2

There were 12 people who were in different dissatisfied and Neutral level, 5 people move to slightly satisfied level, 4 people move to satisfied and other 3 moved to extremely satisfied level in *Yoga* group where as 12 people who were in different dissatisfied and neutral levels, 3 remain in dissatisfied level and other 9 move to satisfied level in control group.

Similarly 63 people who were in different satisfied level, 24 people move to dissatisfied level and other 57 people move to satisfied and highly satisfied level in *Yoga* group where as out of 62 people who were in different satisfied levels, 28 people move to different dissatisfied level and only 34 people remain in satisfied level in control group.

REFERENCES:

1. Aditi Kejriwal, Venkat R Krishnana. Impact of Vedic Worldview and Gunas on Transformational Leadership. *Vikalpa*,2004;1.
2. Alyson Ros, M.S.N, Sue Thomas. A Review of comparison studies. *J Altern Complement Med* . 2010;16:3-12.
3. Amit Kauts, Neelam Sharma. Effect of yoga on academic performance in relation to stress. *Int J Yoga*. 2009;2(1):39-43.
4. Basso MR, Schefft BK, Ris MD, Dember WN. Mood and global visual local processing. *J Neuropsychol Soc* 1996;2:249-55.
5. Berger BG, Owen Dr. Mood Alteration with *Yoga* and Swimming-Aerobic Exercise May not be necessary. *Percept Mot Skills* 1992;75:1331–43.
6. Bekiari A, Pantazis S, Apostolou M, Nonnati A SK. The relationship between verbal aggressiveness and state anxiety in sport settings. 2005;12:165–8.
7. Bijlani RL, Vempati RP, Yadav RK, Ray RB, Gupta V, Sharma R, et al. A brief but comprehensive lifestyle education program based on Yoga reduces risk factors for

- cardiovascular disease and diabetes mellitus. *J Altern Complement Med.* 2005;11(2):267–74.
8. Brown RP, Gerbarg PL. Sudarshan Kriya yogic breathing in the treatment of stress, anxiety, and depression: part I-neurophysiologic model. *J Altern Complement Med.* 2005;11(1):189–201.
9. Bower JE, Woolery A, Sternlieb B GD. *Yoga for cancer patients and survivors.* Cancer Control. *Cancer Control* 2005;12:165–71.
10. Carr A. *Positive psychology.* Spl Indian Reprint. New York: Routledge; 2008.
11. Chen KM, Tseng WS. Pilot-testing the effects of a newly-developed silver yoga exercise program for female seniors. *J Nurs Res* 2008;16:37-46.
12. Cohen, S., Kamarck, T., Mermelstein, R. A global measure of perceived stress. *Journal of Health and Social Behavior.* 1983;24:385-396.
13. Collins PA, Gibbs ACC. Stress in police officers: A study of the origins, prevalence & severity of stress-related symptoms within a county police force. *Occupation Med.* 2003;53:256–64.

14. Costa M, Junior HA, Oliviera J. Stress: Diagnosis of Military Police Personnel in a Brazilian City. *Rev Panam Salud Publication*. 2007;21:217–22.
15. Das RC. Standardization of the Gita inventory of personality. *J Indian Psychology*; 1991. 9(1-2):47-54.
16. Das DG. Effects of the Hare Krsna Maha mantra on stress, Depression and The Three Gunas. *VNN Vaishnava News Org Network*; 1999.
17. Danner DD, Snowdon DA, Friesen WV. Positive emotions in early life and longevity: Findings from the nun study. *J Person Soc Psychol*2001;80:804-13.
18. Davis CG, Nolen-Hoeksema S, Larson J. Making sense of loss and benefiting from the experience: Two construal of meaning. *J Person Soc Psychol* 1998;75:561-74.
19. Deshpande S, Nagendra HR, Raghuram N. A randomized control trial of the effect of yoga on verbal aggressiveness in normal healthy volunteers. *Int J Yoga* 2008;1:76-82.
20. Dillon K, Minchoff B, Baker KH. Positive emotional states and enhancement of the immune system. *Int J Psychiatry Med* 1985;15:13-8.
21. Drossmana DA, Creedb FH, Oldenc KW, Svedlundd J, Tonere BB, Whiteheadf WE. Psychosocial aspects of the functional gastrointestinal disorders. *Gut* 1999;45:1125-30.

22. Evan RG. Patient centred medicine: reason, emotion and human spirit ? some philosophical reflections on being with patients. *Med Humanities*; 2003.
23. Folkman S, Moskowitz JT. Positive affect and the other side of coping. *Am Psychol* 2000;55:647-54.
24. Faul F. G*Power Version 3.0.10 [Internet]. Germany; 2008. Available from: <http://www.ats.ucla.edu/stat/gpower/pairedsample.htm>.
25. Gangadhar BN, Siddharth Sarkar, Sandeep Grover . A Systematic review and meta-analysis of trials of treatment of depression from India. *India J of Psychiatry*;2014.56:29-38.
26. Geetha PR, Subbakrishna DK, Channabasavanna SM. Subjective well being among police personnel. *Indian J Psychiatry*. 1998;40:172–9.
27. Goyanka J. *Srimadbhagavad gita Tattvavivecani*. 15th ed. Gorakhpur: Gita Press; 1999.
28. Greene AM, Walsh EG, Sirois FM, McCaffrey A. Perceived benefits of complementary and alternative medicine: A whole systems research perspective. *Open Comp Med J* 2009. 1:35 45.
29. Harinath K, Malhotra AS, Pal K, Prasad R, Kumar R, Kain TC, *et al*. Effects of Hatha

- yoga and Omkar meditation on cardiorespiratory performance, psychologic profile and melatonin secretion. *J Altern Complement Med* 2004;10:261-8.
30. Hasmukh Adhia, Nagendra HR, Mahadevan B. Impact of yoga way of life on organizational performance. *Int J Yoga*. 2010;3(2): 55-56.
31. Infante DA, Wigley CJ. Verbal aggressiveness: An interpersonal model and measure. *Commun Monogr*. 1986;53:61-9.
32. Janakiramaiah N, Gangadhar BN, Naga Venkatesha Murthy PJ, Harish MG, Subbakrishna DK, Vedamurthachar A. Antidepressant efficacy of Sudarshan Kriya *Yoga* (SKY) in melancholia: a randomized comparison with electroconvulsive therapy (ECT) and imipramine. *J Affect Disord* 2000;57:255-9.
33. Jorm AF, Christensen H, Griffiths KM RB. Effectiveness of complementary and self-help treatments for depression. *Med J Aust*. 2002;176:S84-96.
34. Karnataka State HGs Manual. karnataka: Karnataka State Government; 1962.
35. Khalsa SB, Cope S. Effects of a yoga lifestyle intervention on performance-related characteristics of musicians: A preliminary study. *Med Sci Monit* 2006;12:CR325-31.
36. Khurana A, Dhar PL. Effect of Vipassana Meditation on Quality of life, Subjective well-

- being, and Criminal Propensity among inmates of Tihar jail, Delhi. Final report submitted to Vipassana Research Institute June 2000.
37. Kubzansky LD, Sparrow D, Vokonas P, Kawachi I. Is the glass half empty or half full? A prospective study of optimism and coronary heart disease in the normative ageing study. *Psychosom Med* 2001;63:910-6.
38. Kubzansky LD, Wright RJ, Cohen S, Weiss S, Rosner B, Sparrow D. Breathing easy: A prospective study of optimism and pulmonary function in the normative aging study. *Ann Behav Med* 2002;24:345-53.
39. Lavey R, Sherman T, Mueser KT, Osborne DD, Currier M, Wolfe R. The effects of yoga on mood in psychiatric inpatients. *Psychiatr Rehabil J* 2005;28:399-402.
40. Lazarus RS . Coping theory and research: Past, present, and future. *Psychosom Med*.1993;55:234–47.
41. Lazarus RS. Toward better research on stress and coping. *Am Psychol* 2000;55:665-73.
42. Lipp ME. Stress and quality of life of senior Brazilian police officers. *Span J Psychol*.2009;12:593–603.

43. S Lokeswarananda. Taittiriya U. Calcutta: The Ramakrishna Mission Institute of Culture; 1996. 136-80.
44. Lo CB, Desmond RA, Meleth S. Inclusion of complementary and alternative medicine in US state comprehensive cancer control plans: Baseline data. *J Cancer Educ* 24(4):249–53. 2009.
45. Madanmohan, Thombre DP, Balakumar B, Nambinarayanan TK, Thakur S, Krishnamurthy N, *et al.* Effect of yoga training on reaction time, respiratory endurance and muscle strength. *Indian J Physiol Pharmacol* 1993;37:350-2.
46. Malathi A, Damodaran A. Stress due to exams in medical students role of yoga. *Indian J Physiol Pharmacol* 1999;43:218-24.
47. Manjunath NK, Telles S. Spatial and verbal memory test scores following yoga and fine arts camps for school children. *Indian J Physiol Pharmacol* 2004;48:353-6.
48. McCaffrey AM, Pugh GF, O'Connor BB. Understanding patient preference for integrative medical care: Results from patient focus groups. *J Gen Intern Med* 2007. 22(11):1500–5.
49. McCaffrey, Ruth ND, ARNP-BC; Ruknui, Pratum MS, RN; Hatthakit, *et al.* The Effects of Yoga on Hypertensive Persons in Thailand. *Holist Nurs Pract.* 2005;19(5):173–80.

50. Michalsen A, Grossman P, Acil A, Langhorst J, Ludtke R, Esch T, *et al.* Rapid stress reduction and anxiolysis among distressed women as a consequence of a three-month intensive yoga program. *Med Sci Monit* 2005;11:CR555-61.
51. Motulsky H. Random number calculators [Internet]. GraphPad Software;2015.
Available from: <http://www.graphpad.com/quickcalcs/randMenu/>.
52. Nagarathna R, Nagendra HR. *Integrated Approach of Yoga Therapy for Positive Health*. 5th ed. Bangalore. SVYP;2003.
53. Narasimhan L, Nagarathna R, Nagendra H R. Effect of integrated yogic practices on positive and negative emotions in healthy adults. *Int J Yoga* 2011;4:13-9.
54. Nagendra HR. *The science of emotion's culture (Bhakti yoga)*. 1st ed. Bangalore: Swami Vivekananda Yoga Prakashana; 2000.
55. Nagarathna R, Nagendra HR. *Integrated Approach of Yoga Therapy for Positive Health*. 5th ed. SVYP: Bangalore;2003.
56. Nahin RL, Byrd-Clark D, Stussman BJ, Kalyanaraman N. Disease severity is associated with the use of complementary medicine to treat or manage type-2 diabetes: Data from

- the 2002 and 2007 National Health Interview Survey. *BMC Complement Altern Med* 12:193. 2012.
57. Ostir GV, Berges IM, Markides KM, Ottenbacher KJ. Hypertension in older adults and the role of positive emotions. *Psychosomat Med* 2006;68:727-33.
58. Pavot, W., & Diener, E. (2008). The Satisfaction With Life Scale and the emerging construct of life satisfaction. *Journal of Positive Psychology*, 3, 137–152.
59. Powers DV, Cramer RJ, Grubka JM. Spirituality, life stress, and affective well-being. *J Psychol Theol* 2007;35:235-43.
60. Raghuram N, Deshpande S, Nagendra H. A randomized control trial of the effect of Yoga on Gunas (personality) and Health in normal healthy volunteers. *Int J Yoga*. 2008;1(1):2-10.
61. Raghuraj P, Telles S. Muscle power, dexterity, skill and visual perception in community Home girls trained in yoga or sports and in regular school girls. *Indian J Physiol Pharmacol* 1997;41:409-15.
62. Ramesh Bhat M, Sameer MK, Ganaraja B. *Journal of Clinical and Diagnostic Research*. 2011 November (Suppl-2), Vol-5(7): 1331-1335.

63. Rangan R, Nagendra H R, Ramachandra Bhat. Effect of yogic education system and modern education system on memory. *Int J Yoga*. 2009;2(2):55-61.
64. . Rao GP, Moinuddin K, Sai PG, Sarma E, Sarma A, Rao AS. A study of stress and psychiatri morbidity in central industrial security force. *Indian J Psychol Med*. 2008;30:39–47.
65. Rao RM, Nagendra HR, Raghuram N, Vinay C, Chandrashekara S, Gopinath KS, *et al*. Influence of yoga on mood states, distress, quality of life and immune outcomes in early stage breast cancer patients undergoing surgery. *Int J Yoga* 2008;1:11-20.
66. Ray US, Mukhopadhyaya S, Purkayastha SS, Asnani V, Tomer OS, Prashad R, *et al*. Effect Of yogic exercises on physical and mental health of young fellowship coursetrainees. *Indian J Physiol Pharmacol* 2001;45:37-53.
67. Ray US, Sinha B, Tomer OS, Pathak A, Dasgupta T, Selvamurthy W. Aerobic capacity & perceived exertion after practices of hatha yogic exercises. *Indian J Med Res* 2001;114:215- 21.
68. Sabina AB, Williams A, Wall HK, Bansal S, Chupp G, Katz DL. Yoga intervention for adults with mild-to-moderate asthma: a pilot study. *Ann Allergy, Asthma Immunol*. 2005;94(5):543–8.

69. Sahasi G, Mohan D, Kacker C. Effectiveness of yogic techniques in the management of anxiety. *J Personality Clinical Studies* 1989;5:51-5.
70. Santrock JW. *Psychology essentials*. 2nd ed. New York: Tata McGraw-Hill; 2005. p. 337-47.
71. Selvamurthy W, Ray US, Hegde KS SR. Physiological responses to cold (10° C) in men after six months' practice of *Yoga* exercises. *Int J Biometeorol* . 2005;32:188–93.
72. Sham Ganpat, Nagendra HR. Integrated yoga therapy for improving mental health in managers. *Ind Psychiatry J*.2011;20(1): 45-48.
73. Sham Ganpat Tikhe, Nagendra HR, Neeraj Tripathi. Ancient Science of yogic life for academic excellence in university students. *Anc Sci Life*.2012;31(3): 80-83.
74. Shannahoff-khalsa DS, Beckett LR. Clinical Case Report: Efficacy of Yogic Techniques in the Treatment of Obsessive Compulsive Disorders. *IntJNeurosci*.1996;85:1–17.
75. Solberg EE, Halvorsen R, Sundgot-Borgen J, Ingjer F, Holen A. Meditation: A modulator of immune response to physical stress? A brief report. *Br J Sports Med* 1995;29:255-7

76. Survey National centre for complementary and alternative medicine. Available from: <http://www.nccam.nih.gov>. [cited in 2015].
77. Taimini IK. The science of *Yoga*: The *Yoga*-Sutras of Patanjali in Sanskrit Quest Books; 1999.
78. Telles S, Nagrathna R, Nagendra HR. Improvement in visual perception following yoga training. *J Indian Psychol* 1995;13:30-2.
79. Telles S, Nagarathna R, Nagendra HR, Desiraju T. Physiological changes in sports teacher following 3 months of training in Yoga. *Indian J Med Sci* 1993;10:235-8.
80. Telles S, Hanumanthaiah BH, Nagarathna R NH. Plasticity of motor control systems demonstrated by *Yoga* training. *Indian J PhysiolPharmacol* 1994;38:143-7.
81. Telles S, Ramprabhu V, Reddy SK. Effect of yoga on maze learning. *Indian J Physiol Pharmacol* 2000;44:197-201.
82. Tsenkova VK, Dienberg L, Singer B, Ryff CD. Coping and positive affect predict longitudinal change in glycosylated hemoglobin. *Health Psychol* 2008;27:S163-71.
83. Vempati RP TS. Baseline occupational stress levels and physiological responses to a two day stress management program. *J Indian Psychol*.2000;18:33-7.

84. Vempati RP, Telles S. Yoga-based guided relaxation reduces sympathetic activity judged from baseline levels. *Psychol Rep* 2002;90:487-94.
85. Vivek Kumar Sharma, Madanmohan Trakroo, Velkumary Subramaniam, M.Rajajeyakumar, Anan B Bhavanani, Ajit Sahai. *Int J Yoga* .2013;6:104-110.
86. Watson D, Clark L, Tellegen A. Development and Validation of brief measure of positive and negative affect: The PANAS scale. *J Person SocPsychol*1988;54:1063-70.
87. West J, Otte C, Geher K, Johnson J, Mohr DC. Effects of Hatha Yoga and African dance on affect, perceived stress, and salivary cortisol. *Ann Behav Med* 2004;28:114-8.
88. Wolf DB. The vedic personality inventory: A study of the Gunas. *J Indian Psychol*; 1998. 16:26-43.
89. Woolery A, Myers H, Sternlieb B, Zeltzer L. A yoga intervention for young adults with elevated symptoms of depression. *Altern Ther Health Med* 2004;10:60-3.

