

BENEFITS OF YOGA EDUCATION IN HIGH SCHOOL CURRICULUM FOR ANGER MANAGEMENT; A RANDOMIZED CONTROL STUDY

Thesis submitted by

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[PhD/Cat2/06/Aug12]

Towards the partial fulfillment of
DOCTOR OF PHILOSOPHY (YOGA)
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To

Swami Vivekananda Yoga Anusandhana Samsthana
(Declared as Deemed University Under Section 3 of the UGC Act, 1956)
#19 Eknath Bhawan, Gavipuram Circle, K G Nagar,
Bangalore- 560019, India.

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DOCTOR OF PHILOSOPHY (YOGA)**

**by
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[PhD/Cat2/06/Aug12]**

**Under the guidance of
Dr. H. R. Nagendra, Ph.D.**

**and Co-guidance of
Dr. S. N. Omkar, Ph.D.
Dr. Manoj Kumar Sharma, Ph.D.**

To



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

a	=	अ	ña	=	ङ	pa	=	प
ā	=	आ	ca	=	च	pha	=	फ
i	=	इ	cha	=	छ	ba	=	ब
ī	=	ई	ja	=	ज	bha	=	भ
u	=	उ	jha	=	झ	ma	=	म
ū	=	ऊ	ñ	=	ञ	ya	=	य
ṛ	=	ऋ	ṭa	=	ट	ra	=	र
ṝ	=	ॠ	ṭha	=	ठ	la	=	ल
e	=	ए	ḍa	=	ड	va	=	व
ai	=	ऐ	ḍha	=	ढ	śa	=	श
o	=	ओ	ṇa	=	ण	ṣa	=	ष
au	=	औ	ta	=	त	sa	=	स
ṁ	=	अं	tha	=	थ	ha	=	ह
ḥ	=	अः	da	=	द	kṣa	=	क्ष
ka	=	क	dha	=	घ	tra	=	त्र
kha	=	ख	na	=	न	jña	=	ज्ञ
ga	=	ग	gha	=	घ			

**Benefits of Yoga Education in High School Curriculum for
Anger Management: A Randomized Control Study**

ABSTRACT



ABSTRACT

Introduction:

Adolescent anger is one of the key contributors of adolescent mortality and many negative developmental outcomes. Research studies indicate, escalated anger issues in schools and colleges across the globe including India. Anger being multidimensional construct, assessment of anger and its management remains a significant challenge. Despite a number of studies done on anger, it is still an emotion that is very much misunderstood. While, the available adolescent anger theories and inventories provide considerable direction towards the way forward, they lack clarity in terms of providing a comprehensive approach in assessment and management of anger. Considering negative developmental outcomes and the far reaching consequences of adolescent anger, there is a growing consensus among researchers, educators and health professionals to develop effective school based anger management programs.

Indian Classical texts, mainly Vedic science provides immense conceptual resources to understand the concept of anger and its dynamics. There is an increasing trend of adopting spiritual concepts and practices for promoting mental health. Yogic Science having its strong roots in spirituality as well as evidence based approaches acceptable to modern science will be able to provide holistic approach to anger assessment and anger management.

Literary Review :

The concept of anger is studied from various Vedic and Vedantic scriptures. The major source of this literary survey is the *astadasha vidhya stanam* (18 abodes of knowledge). Following texts which have dealt the concept of anger explicitly are considered for thorough study. 1) Taittiriya Upanishad, 2) Manyu Sukta, 3) Shatarudriyam, 4) Brihadaranyaka Upanishat, 5) Mahanarayana Upanishat, 6) Srimad Mahabharata, 7) Srimad Ramayana, 8) Srimad Bhagavata, 9) Bhagavad

Gita, 10) Patanjali Yoga Sutra, 11) Yoga Vasista, 12) Ayurveda, 13) Viveka Chudamani, 14) Tirukurrall and 15) Subhashitas.

The key findings include anger is a powerful destructive force. It is an enemy existing within. The consequences of anger affect all aspects of life. Body (kaya), speech (vacha) and mind (manasa) are the three tools (Trikarana) through which anger is experienced and expressed. Assessment and management of anger is holistic when all three levels are considered. The literary review also resulted in deriving a number of anger management techniques such as Manaprashamana (Sublimation), Pratipaksha Bhavana (Distraction), Chittaprasadana (Tranquillity of mind) and practice of Ahimsa (Non-violence), Daya (kindness), Karuna (compassion) etc.

Literature Review:

Anger is a strong influencing factor for many negative behaviour (aggression, violence, road accidents, self-harm etc.), conduct disorders (inter-personal conflicts, substance abuse, crimes of passion etc.) and health issues (depression, stress, heart diseases, PCOS, & anxiety etc.). There are multiple theories of anger and an array of adolescent anger inventories which lack in comprehensive approach thereby does not represent the anger construct adequately. Research on adolescent anger and yoga in schools are still in primitive stage.

Aim & Objectives:

This study is therefore focused on deriving the fundamental principles of anger assessment and anger management from the Traditional Scriptures and adopting these principles to develop an adolescent anger assessment scale and an integrated yoga module for anger management. Further the study aims at examining the efficacy of the yoga module and the scale in management and assessment of anger by conducting a yoga intervention study in high schools.

Materials & Methods:

Considering the multi-dimension nature of this research work, the study was carried out in four phases. Different methods and materials are used in each phases. They include

- a) **Phase 1 : Prevalence Study** : Survey method was used to study the prevalence of anger in Indian High Schools considering 1220 children (boys and girls) from 8 schools. An existing popular western scale (STAXI-2-CA) was used.

- b) **Phase 2 : Development of Adolescent Anger Assessment Scale** : Standard scale development processes such as construction of items, item reduction, factor analysis using Varimax Rotation, validity and test-retest reliability tests were conducted to develop the anger assessment scale. All stake holders such as yoga experts, psychologists, teachers, parents and adolescent children were involved in most of the processes. Test retest reliability was carried out with 127 children and the final field study was conducted with 757 subjects to determine internal consistency (Alpha coefficient). The existing western scale (STAXI-2-CA) was also used parallely for comparison.

- c) **Phase 3 : Development of Integrated Yoga Module for Anger Management** : Based on the IAYT (Integrated Approach to Yoga Therapy) and SVYASA developed meditation MEMT (Mastering Emotion Technique), an integrated yoga module for anger management in high school children was developed. The yoga module was developed in consultation with yoga experts, psychologists and referring to various yogic texts. The module was further validated by 5 yoga experts and 5 psychology experts.

d) **Phase 4: Pre-post study of Yoga Intervention as a curriculum:** Both scale and module was further validated / standardised through a pre-post yoga intervention control study in two English medium high schools with a sample size of 187 (yoga group-114, control group-73). Yoga sessions were conducted for duration of 4 months with 2 sessions per week.

Emphasis was laid more on deriving new approach to assess and manage subtle aspects of anger in addition to ensuring use of statistical methods, authorised tools and software throughout the processes.

Results:

The first of its kind study in many ways resulted in remarkable outcomes against each of the phases which is a testimony for a harmonious blend of eastern concepts with the western processes to achieve holisticity. The literary review resulted in deriving holistic approach to assess anger using **trikarana (mano-vak-kaya) concept** and identifying many techniques to manage anger, such as **manaprashamana, pratipaksha bhavana, and chitta prasadana.**

Phase wise results are given below:

- Phase 1:** Prevalence of **higher levels of anger** (45% of state anger & 23% of trait anger) and moderate levels of anger control among high School children.
- Phase 2 :** Development of A 23 item **adolescent anger assessment scale** which assesses anger at **behavioural (kayika), verbal (vachika) and mental (manasika)** domains. The scale demonstrated high scores of reliability and validity ($\alpha = 0.816$).
- Phase 3:** Development of **Integrated Yoga Module for Anger Management** in high school children which included Asanas, Pranayamas, Meditation and Knowledge points such as yama and niyama. The module was validated by 5 yogic experts and 5 psychologists.
- Phase 4 :** Significant **reduction in anger** scores were observed in **yoga group** as compared to control group in a study conducted in two schools with n=187.

Conclusion:

This is a systematic and comprehensive study of concept of anger in adolescence. It examined various aspects of anger such as its dynamics, assessment and coping mechanisms. Following conclusions were drawn from the study.

Phase 1 : Prevalence of high levels of anger adolescents even in India is an alarming situation.

Phase 2 : Assessment of anger at behavioural (kayika) , verbal (vachika) and mental (manasika) domains provides a holistic or comprehensive approach. The newly developed adolescent anger scale is a holistic tool to assess anger among high school children.

Phase 3 : Validated yoga module found effective as a program for anger management in high school children. Yogic practices such as yama, niyama and short meditations that were included in the module were able to cause significant reduction of anger.

Phase 4 : Yoga is an effective school based anger management program. It is feasible as a curriculum in high schools. The newly developed anger scale and yoga module provide holistic approach to anger assessment and management in high school children.

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**Benefits of Yoga Education in High School Curriculum for
Anger Management: A Randomized Control Study**

SECTION - 1

INTRODUCTION



SECTION 1 : INTRODUCTION

This research work is aimed at understanding the concept of anger and its management from two different perspectives i.e. from Spiritual Science and Behavioural Science. Further, the research work also proposes to come out with a holistic approach to assess and manage anger in adolescents using Yogic principles and techniques. A comprehensive and indigenous approach is adopted throughout the study. A brief background of the terms and concepts related to adolescent anger such as adolescence, anger, physiology of anger, taxonomy of anger, anger assessment, anger management, yoga for adolescences and spiritual perspective are provided in this section.

Adolescence :

Adolescence (10 - 19 years), which is the transitional period between the childhood and adulthood, is also a period of vulnerabilities and opportunities. Adolescents are susceptible to many adverse effects of health and safety during this period of rapidly evolving biological, cognitive and psychosocial developmental processes. Hence, smooth transition to adulthood demands adaptation of effective coping mechanisms.

Adolescents of today are confronted with a variety of life stressors both at home and school. They establish patterns of behaviour and make lifestyle choices that have long-lasting effects on future health and well-being. Mental disorders that occur during adolescents have strong implication with all classes of disorders at all life-course stages (Ronald et al, 2007 & Ronald et al, 2010).

By 2020, India is set to become the world's youngest country with 64% of its population comprising of adolescents and youth. Therefore health and safety issues within this paradigm of population cannot be overlooked. One of the strong factors that negatively contribute to adolescent health and safety is Anger.

Anger:

Anger which enables a 'fight' response has been linked to hostility, aggression and violence especially in adolescents. Typically associated with hostile thoughts, physiological arousal and maladaptive behaviours, anger inspires powerful often aggressive feelings and behaviours that affects all aspects of life. Intense, uncontrolled feelings of anger are often associated with violence, road accidents, self-harm and substance abuse. Adolescent anger has been associated with devastating social events besides its negative impact on academic success. Anger is hence considered as a health disparity (CDD, 2009).

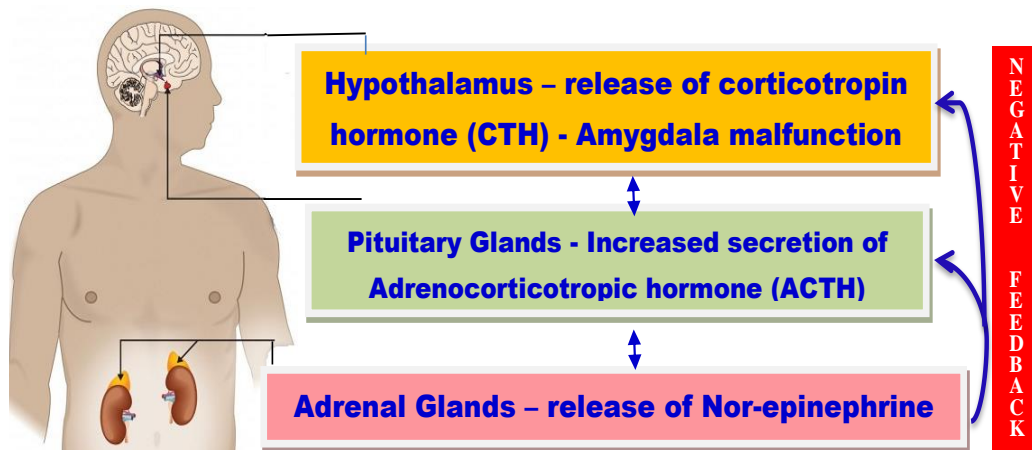
Anger which is the most powerful and vital emotion has strong influence on adolescents' mental health. It has a strong association with the quality of relationship with parents, selfish personality and school climate (Lucia, Esti, Petrus, 2015). Prevalence of persistent anti-social behaviours such as anger, aggression during adolescence causes disruption in multiple life domains (Catherine, Cindy, Hanno, Nicholas, 2010). Childhood anger and aggressive behaviour is considered as a risk factor for adulthood violence and criminal behaviour (Rowell, Leonard and Eric, 2002). Adolescent anger is linked with interpersonal conflicts, inappropriate risk taking and crimes of passion. In addition, anger compromises the immune system (Samuel, Lorenza, Giuseppa and Fulvio, 2014), increases one's vulnerability to illnesses, increases pain, and also risk of death (Suinn, 2001)

The effects of adolescent anger are substantial and adversely influence major institutions of society such as individual, family, neighbourhoods, schools, sports & recreation. It has become a significant social problem. Problems associated with inappropriate expressions of anger are the most serious concerns of parents, educators, and the mental health community. There is also a question whether anger is an emotion with stereotyped response pattern or heterogeneous category (expressions not look same in any given situation). Expression of anger or perceiving the triggers of anger is dependent on many psycho-physiological activities that occur within. The root cause of inappropriate expressions of anger lies in dysfunction at physiological level.

Physiology of Anger:

Anger is marked by powerful chemical and electric activities simultaneously occurring at hypothalamic-pituitary-adrenal (HPA) axis, as shown in figure 1. During anger arousal, a complex series of physiological events occur both in the body and in the brain. During anger, the catecholamine activation is more strongly nor-epinephrine (adreno cortex) than epinephrine (adreno medulla). Adrenocortical effects are mediated by secretion of the pituitary gland and it also influences testosterone levels. These activities have strong implication on various organs, bio-systems and pathways causing short term as well as long term impact (Hendricks, Sam, Dean, Guy, 2013). Adreno cortical effects (in case of anger) have longer duration than medullary effects (in case of fear). Anger is experienced and felt both at body and mind level causing disruption at all dimensions of existence.

Figure 1 : HPA axis activity during anger arousal



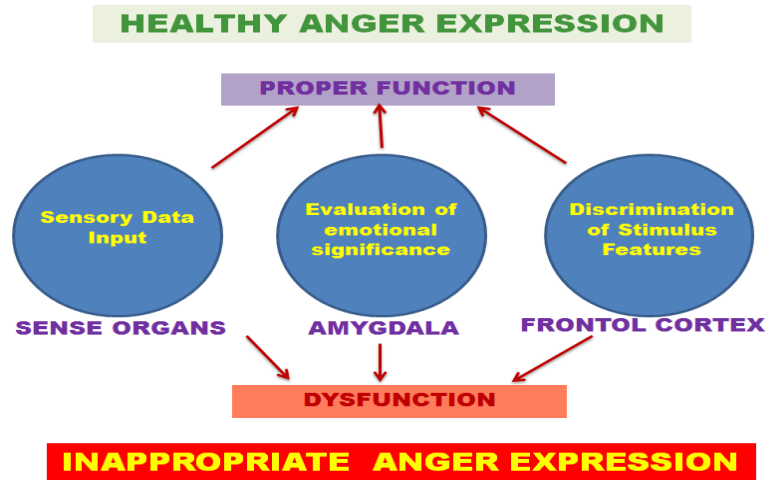
Brain Activity:

In general, anger is regarded as a response to perceived threat or frustration. It is a result of dysfunction at the following systems in brain (Blair, 2012).

- a) Amygdala-hypothalamus-periaqueductal grey circuit - ability to perceive the threat (improper sensory input or over sensitivity to stimulus)
- b) Elevated amygdala processing also called Amygdala hijacking - processing the perceived threat (malfunction or irrational response of amygdala)

- c) Orbital, medial and ventrolateral frontal cortex - regulation of response to threat (impairment of regulatory functions or loss of control)

Figure 2 : Brain Activity during anger arousal



During experience and expression of anger, limbic part (amygdala, the storehouse for emotional memories) overrides the cortex and responds irrationally and destructively. Physical and emotional upsurge is caused by releases of flood of hormones and neurotransmitter chemicals (catecholamine). The impact of this hormonal flush leads to chemical imbalance and lasts for several minutes and at times, longer until the prefrontal cortex reengages and act.

Hyperactive response in the amygdala results in lessening activity in the prefrontal cortex of the brain. Unchecked anger can eventually decrease the production of serotonin in the pre-frontal cortex. Serotonin deficiency increases the chances of angry behaviour and is associated with escalated anger and aggression (Society for Neuroscience, 2007).

Anger arousal is checked by the release of neurotransmitter called acetylcholine by the parasympathetic nervous system which acts more as a neuromodulator. It neutralizes the adrenaline and noradrenaline hormones and helps the body to relax and calm down.

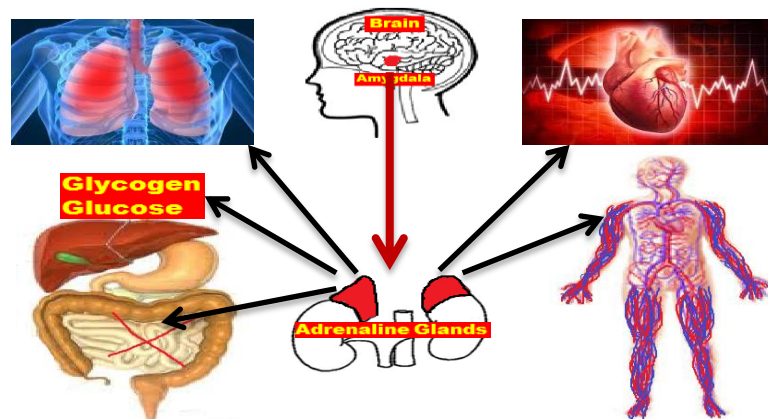
Anger also reduces conscious thought processes in the higher brain centres, leads to narrowing attention span and mind gets locked onto the target of anger (Jungmeen, Kirby, Paula, Ben, 2010).

Body activity:

During anger, the brain sends signals to the body to release stress hormones (cortisol), adrenaline (epinephrine) and noradrenaline (nor-epinephrine). Adrenaline glands acts on to it and pumps out these chemicals. The body also starts producing more testosterone, a chemical that kicks off aggression into higher gear. Excess secretion of neurotransmitters and hormones can cause a multitude of negative effects on the body in addition to release of bursts of energy. Too much nor-epinephrine and cortisol in the body can cause an imbalance in blood sugar. It can suppress thyroid function and decrease bone density (Hendricks, Sam, Dean, Guy, 2013).

A few physiological changes that occur during anger are a) Increased heart rate, b) Increased blood flow to the heart and skeletal muscles, c) Reduced blood flow to the skin, and most other internal organs, d) Shut down of digestive processes and intestinal activity, e) Shut down of kidney function, f) Open the bronchi (two main branches of the trachea, leading directly to the lungs), g) Even healing that is in process is shut down etc.

Figure 3 : Physiological (bodily) changes during anger



Although the physiology of anger is universal, its psychological interpretation and perceptions across cultures are different. Study of anger includes understanding the taxonomy of anger.

Taxonomy of Anger :

Anger being most primitive defence mechanism, determining its maladaptive nature is a complex phenomenon. While anger is discussed for its positive effects, there are no well-defined baselines or homeostatic levels of anger that is considered healthy. Anger, Hostility, Aggression are

relative terms and are part of a cluster constructs called 'AHA syndrome'. The definitions of anger and related constructs are often inconsistent and ambiguous. These words are interplayed due to lack differentiation and clarity in terms of their definition (Ramírez, Andreu 2008).

Distinguished anger researchers have evolved different theories of anger and defined it accordingly. Spielberger (1988) refers anger as an emotional state consisting of feelings that vary in intensity from mild irritation to intense fury or rage, accompanied by activation and arousal of autonomic nervous system. Deffenbacher (1996) defines anger as an experiential state consisting of emotional, cognitive and physiological components that co-occur, rapidly interacting with and influencing each other in such a way that they tend to be experienced as a single phenomenon. DiGiesepe and Tafrate (2007) calls it as a multidimensional construct consisting of physiological (general sympathetic arousal, 5-HT suppression), cognitive (irrational beliefs, automatic thoughts, negative automatic thoughts, causal attributions, inflammatory imagery), phenomenological (subjective awareness of angry feelings), and behavioural (facial expressions, verbal or behavioural anger-expression strategies) variables.

The theory of anger stated by Spielberger is considered more fundamental. His theory categorises anger as State anger and Trait anger. State anger is a momentary anger or psychobiological condition marked by subjective experience over time and across situations. State Anger is the level of intensity of anger at the moment. Trait anger is a kind of carry forwarded anger or a personality type that indicates proneness to anger situations. Trait Anger is the frequency of anger. It is considered to be a general temperament of low threshold reactivity in which angry feelings are experienced in response to a very wide variety of relatively inoffensive triggers. The theory also postulates other components such as expression, suppression and control of anger (Brunner and Spielberger 2009).

Anger is still an emotion that is very much misunderstood and also neglected. Lack of conceptual clarity on anger and its correlates continues to haunt researchers and mental health professionals.

Incidentally, despite its far reaching consequences and negative outcomes, anger is not listed in the Diagnostic and Statistical Manual of Mental Disorders (DSM) unlike anxiety and depression.

Anger is accompanied by physiological and biological changes that are very similar to that of fear, stress, anxiety and depression. Distinction of these is made at the neurochemicals level such as predominant release of cortisol during stress, epinephrine during fear and nor-epinephrine during anger. The biomarker for all these is the sympathetic arousal. Hence there are no specific biomarkers of anger which can be assessed at a non-clinical setting. This has led to dependence on psychological parameters of anger in assessment of anger. The result is emergence of several theories of anger and development of many anger measures or inventories.

Limited investigation has been done on gender effect in expression and experience of anger in adolescents. Available studies provide contradictory results giving ample scope to explore the field (Kushwaha and Akthar 2016).

Anger Assessment:

Psychological assessment of anger is mainly done considering factors that causes anger (stimulants), bio-physiological symptoms of anger (experience) and individual's responses to such stimulants (response). Self-reporting psychometric scales and observation methods are widely used to assess anger both in clinical and non-clinical setting.

Available popular adolescent anger scales include State and Trait Anger Expression Inventory (STAX I-2-CA) (Brunner and Spielberger, 2009), Multi-dimensional School Anger Inventory (MSAI) (Smith, Furlong, Bates, Laughlin, 1998), Adolescent Anger Rating Scale (AARS) (Burney and Jeffrey, 2001) and Anger Regulation and Expression Scale (ARES) (DiGiuseppe and Tafrate, 2010). These rating scales vary widely in their theoretical corroborations, psychometric quality and construct validity. Since psychological paradigm of anger varies across cultures, gender and age (Iris, Emily, Nicole, Ann, 2010), these measures lack generalizability

Anger expression and anger control are two facets that are strongly intertwined. Hence most measures confound the experience and expression of anger with situational determinants of angry behaviour. While there is considerable clarity in assessment of anger experience and expression, there exists lack of consistent theoretical basis to define anger control or anger coping mechanisms. Anger management is hence another area which needs to be explored and assessed to arrive at a holistic understanding of anger.

Anger Management:

Anger management is a key concept of coping mechanisms that are required for smooth transition of adolescent period. Schools and colleges can go beyond imparting academic education, to offer programs that promote good physical and mental health.

Adolescents' ability to modulate their emotional responses to anger is being increasingly recognized as an important skill for ensuring mental health, academic success and healthy transition into adulthood (Nancy, Tracy, and Natalie, 2010). Given the long-term consequences and the seriousness of the negative outcomes associated with anger, researchers and clinicians have described varieties of anger management programs to combat it.

Cognitive-behavioral and skills-based approaches are the most widely studied and empirically validated treatments for anger in adolescents (Denis, Howard, Bernard, 2004). Commonly used therapeutic techniques include affective education, relaxation training, cognitive restructuring, problem-solving skills, social skills training and conflict resolution. Most of these programs tend to be multicomponent in nature and customized to individual and to the family.

Psycho-educational school-based programs are less in numbers and they too are multi-component in nature. Some of the programs have not examined their efficacies and hence little information is known about their contribution to the reduction of anger. Developing an age-appropriate and

socially relevant school based holistic program for anger management in adolescence is a challenging task. Yoga education in schools which has become popular and found to be a holistic and effective program for promotion of mental health is explored in this study to examine its efficacy as an anger management tool.

Yoga and anger management in Adolescents :

Yoga is gaining mastery over mind by establishing harmony between body (physical activity), mind (moral support) and energy (food / breath). Yoga contributes to physical, psychological, social and spiritual development in children and seen as an effective tool for achieving overall development of children. Major forms of yoga are *Karma Yoga* (yoga of action), *Bhakti Yoga* (yoga of devotion), *Jnana Yoga* (yoga of knowledge) and *Raja or Astanga Yoga* (yoga of mental mastery).

In particular Astanga Yoga as enunciated by Sage Patanjali is an authoritative text to gain mastery over the mind. All the eight limbs *Yama* (social discipline), *Niyama* (individual adherences), *Asana* (postures), *Pranayama* (breathing exercises), *Pratyahara* (regulation of senses), *Dharana* (focusing), *Dhyana* (meditation) and *Samadhi* (bliss) focuses on restraining the modifications of mind and channelize the thought processes.

Adolescence is the right age to imbibe moral education. *Yama* (social disciplines) and *Niyama* (individual adherences) are the code and conduct of *Astanga Yoga* which contributes heavily on moral education. The 5 *yamas* are a) *Ahimsa* (non-violence), b) *Satya* (truthfulness), c) *Asteya* (non-stealing), d) *Brahmacharya* (self-restraint) and e) *Aparigraha* (non-covetousness). The 5 *niyamas* are a) *Shoucha* (cleanliness), b) *Santosha* (contentment), c) *Tapas* (penance), d) *Swadhyaya* (self-awareness) and e) *Iswara Pranidana* – Surrendering to Supreme. To reap the benefits of yoga, one should follow disciplined life and engage in practicing all limbs.

Āsanas (Postures), *Pranayama* (Breathing Techniques) and *Dhyana* (Meditations) are the most popular components of yoga which are widely practiced by all age groups across the globe. Meditations and relaxations have shown positive results in alleviating many mental health disorders particularly the stress, anxiety and depression. Increased awareness and popularity of yoga in schools and colleges provide strong grounds to explore efficacy of yoga education to address anger issues in adolescents.

In India, yoga has been an integral part of the curriculum under the subject head 'Health and Physical Education'. Yoga is a compulsory subject up to the secondary school stage. The National Curriculum Framework (NCF) adopted a holistic definition of health, in which yoga is an integral part (NCERT 2011). Yoga or Yogic Science is a group of physical, mental and spiritual practices or disciplines that promotes physical, psychological, social and spiritual health and wellbeing, ultimately leading to discover the human existence or the creation itself. Hence, yogic Science has its roots in the classical Indian Texts including *Vedic* and *Vedantic* scriptures.

Spiritual Perspective:

Adolescence is marked by the term '*brahmacharya*' in the traditional Indian scriptures (Manusmriti 2.173-249), roughly denoting the age group of 8 to 20 years. The prime focus during this stage is to build a disciplined and values-based culture, while seeking the knowledge. It is during this period, moral education is imparted as a foundation for a sound social conduct and overall health and wellbeing of an individual.

Indian Classical texts or Vedic science provides holistic approaches and immense conceptual resources to contribute to the psychological processes. They provide holistic understanding of concepts and paradigms relating to mental health and cover all aspects of the basic entity, the mind (Shamasundar 2008). There is an increasing trend of adopting spiritual concepts and practices for

promoting mental health. Studies on such practices support beneficial effects in favour of sense and well-being.

Anger is considered as an internal enemy and an obstacle in the path of success. Customary *kāma* (desire) and *krodha* (anger) are considered twin attributes. Unfulfilled desire becomes anger. Scriptures talk about many approaches or techniques that help to overcome anger. Yoga being an intermediary discipline between Spiritual Science and Modern Science, it has the potential to provide holistic approach to health and well-being. Yogic approach to anger assessment and management can be holistic by considering the principles of spiritual science and processes of behaviour science.

To sum up the introductory section, anger is a complex phenomenon considering its far reaching consequences and maladaptive behaviours. Despite the numerous studies done on anger and its components, it is still an emotion that is very much misunderstood. However, there appears to be a consensus considering anger as a multi-dimensional construct with its manifestations at physiological (sympathetic arousal, hyperactivity at amygdala), psychological (distorted perceptions, wrong interpretations) and behavioural (fighting, yelling, shouting) level. Holistic or integrative approaches such as combination of spiritual and behaviour science perspective may provide better clarity on Anger, its dynamics and management. Yoga is one such holistic or integrated approach which promotes positive health (Nagarathna R and Nagendra HR, 2008).

* * * * *

Anybody can become angry - that is easy, but to be angry with the right person and to the right degree and at the right time and for the right purpose, and in the right way - that is not within everybody's power and is not easy.

Aristotle, Greek Philosopher

* * * * *

**Benefits of Yoga Education in High School Curriculum for
Anger Management: A Randomized Control Study**

SECTION – 2

LITERARY REVIEW

(STUDY OF INDIAN CLASSICAL TEXTS)



SECTION 2 : LITERARY REVIEW

Background:

This literary survey is focused on understanding the concept of anger from the perspective of spiritual science or Indian classical texts and is considered as a base for developing an adolescent anger scale for anger management as well as to develop a yoga module. This survey of traditional text became critical and essential considering non availability of conceptual clarity of anger and its dynamics in behaviour science.

Scope:

Though anger is a most commonly and most frequently occurring emotion, it has not drawn the attention of Vedic research scholars as no studies or papers are available in the open internet sources. Different scriptures discuss different aspects of anger and hence there is a need to compile them.

The anger assessment scales that are available do not represent the construct adequately and comprehensively. There is a need to identify holistic assessment of anger.

Though anger is considered as a negative emotion (being part of *arishadvarga*) and every scripture condemning the acts of anger, many texts particularly Puranas depict scenarios where anger is expressed explicitly by Rishis, Gods and Incarnations of God and also by avatāras. This requires an in-depth study and understanding of their anger.

Yoga is an emerging field amalgamating spiritual science and the modern medical science through its techniques and practices to promote overall health and well-being. Identifying specific yoga techniques to overcome anger issues and providing relevance for such techniques from scriptures would greatly help to present the yoga module for the scientific community

Earlier Works on Anger:

Almost all traditional scripture talks about anger and spiritual organisation emphasis overcoming anger. Anger is condemned in all philosophies. Yet not much of research work is carried out on understanding the concept anger and its management from the scriptural perspective.

There is one paper on anger (*krodha*) and *body constitution (Shareera prakruti)*, which correlates intensity of anger with the *shareera prakruti*. According to this, anger is high in *pitta pradhan prakruti*, moderate in *kapha pradhan prakruti* and low in *vata pradhan prakruti* (Nitin Sharma, Rashi S, Gaurav, Kavita, 2015). Another scientific paper on ‘anger as in Mahabharata’ discusses various situations where anger is exhibited and comments of author on each of the situations (Ajit Bhide 2007)

There is a study on anger and triguna in adolescents. The results indicate that *guṇas* have significant correlation with anger and there is no gender wise difference in anger. However the study does not provide strong evidence due to weak methodology (Soni, 2016)

A book ‘overcoming anger’ written by Swami Budhananda, Ramakrishna Math, Chennai provides some general understanding of anger from the spiritual lore. SVYASA has published a DVD for anger management which provides a number yogic technique for management of anger. Both these provide empirical knowledge but lack research perspective.

AIM OF THE STUDY:

To understand the concept of anger and its management from various classical texts that could be adopted in Yogic Science.

OBJECTIVES OF THE STUDY:

- 1) To search and extract the concept of anger, its dynamics, its manifestations and its coping mechanisms from various texts
- 2) Interpret these findings in relation with the concepts of Yoga.
- 3) To extract a base for holistic assessment of anger
- 4) To identify the evidences to provide relevance for yogic techniques used for anger management.

METHODOLOGY

The concept of anger is studied from various Vedic and Vedantic scriptures. The major source of this literary survey is the *astadasha vidhya stanam* (18 abodes of knowledge) which comprises of *Veda Samhitas*, the *Vedangas* (limbs of the Vedas), *Upanishads*, *Mimamsa*, *Nyaya*, *Ramayana*, *Mahabharata*, the *Puranas* and *Upavedas (Yagnavalkya Smriti)*. The *Upanishads* are considered as the foundation of Yoga (Satyanarayana Sastry, 1988). In consultation with a few Vedic Scholars, it was understood that the concept of anger is explicitly dealt in the following texts. Accordingly focus was laid to study the following texts.

- | | |
|---------------------------------|---------------------------------|
| 1) Thaittiriya Upaniṣad (TU) | 9) Bhagavad-Gita (BG) |
| 2) Manyu Sukta (MS) | 10) Patanjali Yoga Sutras (PYS) |
| 3) Sri Rudram (SR) | 11) Yoga Vasista (YV) |
| 4) Brihadaranyaka Upaniṣad (BU) | 12) Ayurveda |
| 5) Mahanarayana Upaniṣad (MU) | 13) Viveka Chudamani (VC) |
| 6) Srimad Mahabharata (SM) | 14) Tirukurral |
| 7) Srimad Ramayana (SR) | 15) Subhashita |
| 8) Srimad Bhagavata (SB) | |

These Vedic scriptures follow distinct type of literary composition. Words are well derived based on the *dātu pada* (root word), *prathyaya*, *vibhakti*, *chandas* and other grammatical characteristics.

These scriptures are better understood by deriving the contextual meaning which is in harmony with the main purport of the text. An endeavour is made to pick up concepts of anger which are

explicitly stated in these scriptures. The following section provides an overall brief background on the concept of anger followed by text-wise presentation of sections relevant to anger.

TEXT WISE STUDY OF ANGER AND ITS CORRELATES

Overall concept of anger in the spiritual lore:

Concept of *krodha* (anger) exists ever since creation. In the spiritual lore, the concept of human existence is explained comprehensively by considering multi-dimensional aspects of life. Realities of life are dealt at three frames of reference – *vyavaharika* (materialistic -practical), *pratibhaasika* (assumed (dream) - apparent) and *paramarthika* (transcendental - absolute). The concept of anger exists only in *vyavaharika* and *pratibhaasika* spheres. The experiences of life, particularly the miseries (*taapatraya*) are dealt at three realms – *Adhi bhoutika* (Physical), *Adhi daivika* (Divine) & *Adhyatmika* (Mental / Consciousness). Anger is more of *Adhyatmika* tapa that leads to *adhi bhoutika* tapa.

The concept of *trikarana* (the three instruments) is used in all the scriptures to provide a comprehensive or holistic approach to any principle or concept. These instruments are *manas* (thought / mind), *vak* (word / voice) and *kaya* (deed / body). All actions are carried out using one or more of these *karanas*. Doing anything perfectly means doing it on all these levels. *Trikarana shuddhi* is a well-known concept which emphasizes on purity at all three *karanas*. Purity, unity and harmony of thought, word and deed is the ideal situation.

Krodha the Sanskrit word for anger is derived from the root word (*dhatu*) ‘*krudha krodhe*’ meaning intolerance. That which causes intolerance is *krodha*. Other synonyms or words used for anger are ‘*Manyu*’, ‘*Rudra*’, ‘*Bhama*’ and ‘*Amarsha*’. *Krodha*, customarily associated with *Kāma*, is a component of *arishadvarga* (six internal enemies), which are responsible for all kinds of unpleasant experiences of life and are the obstacles in the path of self-realization. *Kāma* and

Krodha are the two faces of the same coin or the twin attributes. Anger can destroy relationships and mutilates universal harmony. It elevates false ego and is also termed as momentary madness.

Sankalapa and *vikalpa*, the two *pravrutis* (fundamental characteristics) of mind, leads to powerful propensities such as *kāma* (desire) and *krodha* (anger) which may be *satvic* or *rajasic* or *tamasic* in nature. Characterized by *vega* (speed - racing thoughts) and *shakti* (sudden surge of energy), *krodha* has great destructive potential. Anger is a *vritti*, a wave of thought that arises in the mind ocean called *antahkarana*. It is the *swabhava* (very nature) of *antahkarana*. With its origin in *manas* (mind), anger is felt and experienced throughout the body. Hereafter a few texts referring to concept of anger are quoted and discussed. Inferences or interpretations made are presented as summary at the end of description of each text.

THAITTIRIYA UPANISHAD:

Understanding the concept of human existence is very important and crucial to study the concept of anger. The Vedanta literature considers the individual as an entity consisting of five different sheaths of matter, each covering the other. This theory is known as *Pancha Kosha* or five sheaths. Hence this topic of defining the individual as an entity is elaborately discussed here.

Brahmananda Valli and Brugu Valli section of this Upanishad explains *Pancha Kosha concept* (The path of 5 layers to know the ultimate reality), a step-by-step process of contemplation on Brahman leading ultimately to *moksha*. The five sheaths explained in detail in this text are 1) Annamaya Kosha - the physical body, 2) Pranamaya Kosha - the energy which is the governing principle (vital body), 3) Manomaya Kosha - the emotions (emotional body), 4) Vijnanamaya Kosha - the wisdom or intellect (intellect body) and 5) Anandamaya Kosha - the bliss (bliss body). Annamaya Kosha is also called 'Sthula Shareera' (gross body). The Pranamaya, Manomaya and the Vijnanamaya Kosha together form the Sukshma Shareera (Subtle Body) and Anandamaya Kosha is called *Karana Shareera* (causal body) (Sethumadhavan TN, 2011).

अन्नाद्वा प्रजाः प्रजायन्ते। याः काश्च पृथिवीश्रिताः । अथो अन्नेनैव जीवन्ति । अथैनदपि यन्त्यन्ततः । अन्नश्चि भूतानां ज्येष्ठम्। तस्मात्सर्वोषधमुच्यते। सर्वं वैतेऽन्नमाप्नुवन्ति । येऽन्नं ब्रह्मोपासते। अन्नश्चि भूतानां ज्येष्ठम्। तस्मात्सर्वोषधमुच्यते। अन्नाद्भूतानि जायन्ते। जातान्यन्नेन वर्धन्ते। अद्यतेऽत्ति च भूतानि । तस्मादन्नं तदुच्यत इति । तस्माद्वा एतस्मादन्नरसमयात्। अन्योऽन्तर आत्मा प्राणमयः । तेनैष पूर्णः । स वा एष पुरुषविध एव । तस्य पुरुषविधताम्। अन्वयं पुरुषविधः । तस्य प्राण एव शिरः । व्यानो दक्षिणः पक्षः । अपान उत्तरः पक्षः । आकाश आत्मा । पृथिवी पुच्छं प्रतिष्ठा । तदप्येष श्लोकोभवति ॥ १ ॥

(Brhmananda Valli, Anuvaka 2; Thaittiriya Upanishad)

Meaning: From food, verily, are produced all creatures—whatsoever dwell on earth. By food alone, furthermore, do they live and to food, in the end, do they return; for food alone is the eldest of all beings and therefore, it is called the panacea for all.” “They who worship food as Brahman obtain all food. Food alone is the eldest of all beings and therefore it is called the panacea for all. From food all creatures are born: by food, when born, they grow. Because it is eaten by beings and because it eats beings, therefore it is called food.” Verily, different from this, which consists of the essence of food, but within it, is another self, which consists of the vital breath. By this the former is filled. This too has the shape of a man. Like the human shape of the former is the human shape of the latter. Prana, indeed, is its head; vyana is its right wing; apana is its left wing; akasa is its trunk; the earth is its tail, its support. On the above there is also the following mantra.

प्राणं देवा अनुप्राणन्ति । मनुष्याः पशवश्च ये। प्राणोहि भूतानामायुः । तस्मात् सर्वायुषमुच्यते। सर्वमेव त आयुर्यन्ति । ये प्राणं ब्रह्मोपासते। प्राणो हि भूतानामायुः । तस्मात्सर्वायुषमुच्यत इति । तस्यैष एव शारीर आत्मा । यः पूर्वस्य । तस्माद्वा एतस्मात्प्राणमयात्। अन्योऽन्तर आत्मा मनोमयः । तेनैष पूर्णः । स वा एष पुरुषविध एव । तस्य पुरुषविधताम्। अन्वयं पुरुषविधः । तस्य यजुरेव शिरः । ऋग्दक्षिणः पक्षः । सामोत्तरः पक्षः। आदेश आत्मा । अथर्वाङ्गिरसः पुच्छं प्रतिष्ठा । तदप्येष श्लोकोभवति ॥ १ ॥

(Brhmananda Valli, Anuvaka 3; Thaittiriya Upanishad)

Meaning: The gods breathe after the prana, so also do men and cattle; for the prana is the life of creatures. Therefore it is called the life of all. Those who worship the prana as Brahman obtain a full life; for the prana is the life of creatures. Therefore it is called the life of all. This sheath of the Prana is the embodied soul of the former. Verily, different from this sheath, which consists of the essence of the prana, but within it, is another self, which consists of the mind. By this the former is filled. This too has the shape of a man. Like the human shape of the former is the human shape of the latter. The Yajur Veda is its head, the Rig Veda is its right wing, the Sama Veda is its left wing, the teaching is its trunk, the hymns of Atharva and Angiras are its tail, its support.

यतो वाचो निवर्तन्ते। अप्राप्य मनसा सह । आनन्दं ब्रह्मणो विद्वान्। न बिभेति कदाचनेति । तस्यैष एव शारीर आत्मा । यः पूर्वस्य । तस्माद्वा एतस्मान्मनोमयात्। अन्योऽन्तर आत्मा विज्ञानमयः । तेनैष पूर्णः । स वा एष पुरुषविध एव । तस्य पुरुषविधताम्। अन्वयं पुरुषविधः । तस्य श्रद्धैव शिरः । ऋतं दक्षिणः पक्षः । सत्यमुत्तरः पक्षः । योग आत्मा । महः पुच्छं प्रतिष्ठा । तदप्येष श्लोकोभवति ॥ १ ॥

(Brhmananda Valli, Anuvaka 4; Thaittiriya Upanishad)

Meaning: He who knows the Bliss of Brahman, whence all words together with the mind turn away, unable to reach it—he never fears. This sheath of the mind is the embodied soul of the former. Verily, the different from this sheath, which consists of the essence of the mind, but within it, is another self, which consists of the intellect. By this the former is filled. This too has the shape of a man. Like the human shape of the former is the human shape of the latter. Faith is its head, what is right is its right wing, what is truth is its left wing, absorption is its trunk, Mahat is its tail, its support.

विज्ञानं यज्ञं तनुते। कर्माणि तनुतेऽपि च । विज्ञानं देवास्सर्वे । ब्रह्म ज्येष्ठमुपासते। विज्ञानं ब्रह्म चेद्वेद । तस्माच्चेन्न प्रमाद्यति । शरीरे पाप्मनो हित्वा । सर्वान्कामात्समश्नुत इति । तस्यैष एव शारीर आत्मा । यः पूर्वस्य । तस्माद्वा एतस्माद्विज्ञानमयात् । अन्योऽन्तर आत्माऽऽनन्दमयः । तेनैष पूर्णः । स वा एष पुरुषविध एव । तस्य पुरुषविधताम् । अन्वयं पुरुषविधः । तस्य प्रियमेव शिरः । मोदोदक्षिणः पक्षः । प्रमोद उत्तरः पक्षः । आनन्द आत्मा । ब्रह्म पुच्छं प्रतिष्ठा । तदप्येष श्लोकोभवति ॥ १ ॥

(Brhamananda Valli, Anuvaka 5; Thaittiriya Upanishad)

Meaning: The intellect accomplishes the sacrifice; it also accomplishes all actions. All the gods worship the intellect, who is the eldest, as Brahman.” “If a man knows the intellect as Brahman and if he does not swerve from it, he leaves behind in the body all evils and attains all his desires. This is the embodied soul of the former. Verily, different from this, which consists of the essence of the intellect, but within it, is another self, which consists of bliss. By this the former is filled. This too has the shape of a man. Like the human shape of the former is the human shape of the latter. Joy is its head, delight is its right wing, great delight is its left, bliss is its trunk. Brahman is its tail, its support.

This concept of *Pancha Kosha* provides a clear and holistic definition of human existence. The five layers or five bodies (koshas) are not separate entities. These bodies are intertwined or interwoven to form a complete existence.

Figure 4 : Pancha Kosha concept of human existence



This concept is adapted profoundly in Yogic Science to diagnose the health status and also to prescribe yogic techniques to be practiced by an individual. Integrated approach to yoga therapy of now called as IYM (Integrated Yoga Module) is derived based on this concept. (Nagarathna and Nagendra, 1988). Hence, yogic of concept of human existence comprises of all these five sheaths

and an individual is considered healthy when health is established in all the sheaths. The definition of health as defined by WHO (World Health Organisation) as 'State of complete physical, mental, social and spiritual wellbeing and not merely the absence of disease or infirmity' endorses the pancha kosha concept.

MANYU SUKTA:

Manyu sukta appears in two places in Vedic literature: Rigveda (10-83-84) and Atharvaveda (4-31-2). Apart from a few differences in the text, more or less the two are same. Manyu in Vedic Sanskrit stands for temper, anger or passion. Manyu is the presiding deity of anger. The verses praise the deity as mightiest, strongest and who always destroyed the evils and enemies (Bannanje Govindacharya, 1999). Dedicated to Manyu, this sukta contains 14 verses and is said to help in control of anger and lust as reproduced below with the word meaning in English.

यस्ते मन्योऽविधद्वज्रसायक सह ओजः पुष्यति विश्वमानुषक्। साह्यामदासमार्यं त्वया युजा सहस्कृतेन सहसा सहस्वता ॥

1-2) *He who hath revered thee, Manyu, destructive bolt, breeds for himself forthwith all conquering energy. Arya and Dasa will we conquer with thine aid, with thee the Conqueror, with conquest conquest-sped*

मन्युरिन्द्रो मन्युरेवास देवो मन्युर्होता वरुणो जातवेदाः । मन्युं विश ईळते मानुषीर्याः पाहिनो मन्यो तपसा सजोषाः ॥

3-4) *Manyu was Indra, yea, the God, was Manyu, Manyu was Hotar, Varunas Jatavedas. The tribes of human lineage worship Manyu. Accordant with thy fervour, Manyu, guard us*

अभीहि मन्यो तवसस्तवीयान्तपसा युजा विजहि शत्रून् । अमित्रहा वृत्रहा दस्युहा च विश्वा वसून्याभरात्वं नः ॥

5-6) *Come hither, Manyu, mightier than the mighty; chase, with thy fervour for ally, our foemen. Slayer of foes, of Vá'ra, and of Dasyu, bring thou to us all kinds of wealth and treasure*

तवं हि मन्यो अभिभूत्योजास्वयम्भूर्भामोऽभिमातिषाहः । विश्वचर्षणिस्सहुरिः सहावानस्मास्वोजः पृतनासु धेहि ॥

7-8) *For thou art, Manyu, of surpassing vigour, fierce, queller of the foe, and self-existent, Shared by all men, victorious, subduer: vouchsafe to us superior strength in battles*

अभागस्सन्नव परेतो अस्मि तव क्रत्वा तविषस्य प्रचेतः । तं त्वा मन्यो अक्रतुर्जिहीळाहं स्वा तनूर्बलदेयाय मेहि ॥

9-10) *I have departed, still without a portion, wise God! according to thy will, the Mighty. I, feeble man, was wroth thee, O Manyu I am myself; come thou to give me vigour*

अयं ते अस्म्युपमेह्यर्वाङ्घ्रतीचीनस्सहुरे विश्वधायः । मन्यो वज्रिन्नाभि मामावृत्स्वहनावदस्युन्नतबोध्यापेः ॥

11-12) *Come hither. I am all thine own; advancing, turn thou to me, Victorious, All-supporter! Come to me, Manyu, Wielder of the Thunder: bethink thee of thy friend, and slay the Dasyus.*

अभि प्रेहि दक्षिणतो भवा मेऽधा वृत्राणि जङ्घनावभूरि । जुहोमि ते धरुणं मध्वो अग्रमुभा उपांशु प्रथमा पिबाव ॥

13-14) Approach, and on my right hand hold thy station: so shall we slay a multitude of foemen. The best of Meath I offer to support thee: may we be first to drink thereof in quiet.

Courtesy: Ralph T.H. Griffith, [1896], at sacred-texts.com (Rigveda Book 10-83-84).

This *sukta* includes praising the special qualities of Manyu, expressing admiration, requesting Manyu to consider the devotee as His own, appealing for warding off all evils and enemies and also requesting for bestowing all bliss, happiness and wealth on the devotee. This *sukta* can be interpreted adoring the deity and pleading to destroy enemies within and outside. This *sukta* refines the anger within and paves way for subtle *dharmic* anger and prevents from ‘sinning’. It also provides an alchemical touch that aids in the transcendence of a negative trait to that of positive vibrant energy.

Summary: a) Manyu personifies wrath or anger to fight against the negative forces both within and outside for restoration of peace and harmony. b) Anger can be constructive in nature c) Channelization of anger – anger has the ability to vanquish enmity. Use anger to fight for the good cause (Dusta shikshana and Shishta rakshana).

SRI RUDRAM:

Sri Rudram occurs in the Taittiriya Samhita of the Yajurveda and also in the Sukla Yajurveda. This prayer to Rudra has two parts (*Namakam and Chamakam*). The word ‘Rudra’ has many meanings. The meanings which are close to anger are ‘*Ritam (dam) Samsaara dukham draava yat it Rudrah*’ meaning ‘one who destroys the sorrows of the world’ and ‘*Rodati Sarvamantakala*’ (The one who makes one to suffer). *Rudra* was born from the anger of Brahman. Characterised by terrifying form, Rudra is riding his anger (Manyu) and a weapon (bow and an arrow) in hand. Anger and his weapons mark Rudra. (Muthukrishna Sastri & Srinivasa Sarma n.d.; Ramachander, 2016)

In this mantra, the angry Rudra is pacified. He is praised in many ways and respect is paid to him. At the end, prayers are offered to Sri Rudra and Rudraganas. In order to pacify the terrible form of

his, respect is paid to his anger, weapons etc. Though the entire Sri Rudram is referring to Rudra, few verses with specific mention of Manyu are mentioned below:

नमस्ते रुद्र मन्यव उतोत इषवे नमः। नमस्ते अस्तु धन्वने बाहुभ्यामुत ते नमः ॥

(Anuvaka 1, verse 1; Sri Rudram)

Meaning: Oh! Rudra Deva! My salutations to your anger and also to your arrows. My Salutations to your bow and to your two hands.

मानस्तोके तनये मान अयुषि मानो गोषु मानो अश्वेषु रीरिषः । वीरान्मानो रुद्र भामितो वधीर्हविष्मन्तो नमसा विधेम ते ॥

(Anuvaka 10, verse 6, Sri Rudram)

Meaning: Lord Rudra! Getting angry at our transgressions hurts not only our children, our sons in particular, but also our cattle and horses, and our warriors. Making offerings into the sacred fire, we shall serve and calm you by our Namaskars (salutations).

To appease Rudra, salutations to his power Manyu and his weapon are made. He is praised and appeased not to show his wrath on the devotee & his surroundings. He is requested to turn away his anger from his devotees and to raise his anger against the sinners. He is prayed seeking protection for those who surrender to him and to bestow happiness and peace.

After praying and identifying Rudra with everything in the Namakam, the Chamakam is recited, in which the devotee asks him to give him everything. Chamakam roots are firmly implanted in the worldly desires ultimately leading to the divine fulfilment.

ज्यैष्ठ्यं च म आधिपत्यं च मे मन्युश्च मे भामश्च मेऽमश्च मेऽम्भश्च मे जेमा च मे महिमा च मे वरिमा च मे प्रथिमा च मे वर्ष्मा च मे द्राघुया च मे वृद्धं च मे वृद्धिश्च मे सत्यं च मे श्रद्धा च मे जगच्च मे धनं च मे वशश्च मे त्विषिश्च मे क्रीडा च मे मोदश्च मे जातं च मे जनिष्यमाणं च मे सूक्तं च मे सुकृतं च मे वित्तं च मे वेद्यं च मे भूतं च मे भविष्यच्च मे सुगं च मे सुपथं च म ऋद्धं च म ऋद्धिश्च मे क्लृप्तं च मे क्लृप्तिश्च मे मतिश्च मे सुमतिश्च मे ॥

(Anuvaka 2, Matra 1, Sri Rudra Chamakam)

Meaning : I implore for granting of these to me. Recognition as the most cherished senior and eminent person overriding among men; combat resentment and control internal anger, and the outward manifestation of anger; and the in-depth mind and general character, and obtaining sweet waters; commanding and victory over enemies.....

As anger is also required on certain occasions, it is prayed that capacity for anger on right occasions be provided. Sri Rudra is prayed to bestow *Manyu* to gain command and victory over enemies and to overcome inappropriate anger expressions. He is also prayed to bestow *Bhama* to combat resentment and internal anger.

Summary: a) Embodiment of Rudra includes Manyu & also weapon (bow & arrow), symbolizing the most powerful and destructive potential nature of anger. b) not to show anger on those who surrender c) Rudra is *laya karaka* – mass destruction for the ultimate union d) Constructive anger is needed to combat internal and external enmities in order to succeed in the path of moralistic life within the context of *samsara* (common man) and *prapancha* (materialistic world).

BRIHADARANYAKA UANISHAD:

The *Brihadaranyaka Upanishad* is a treatise on *Ātman* (Soul, Self), includes passages on metaphysics, ethics and a longing for knowledge. In chapter 3, Rishi Yagnavalkya talks about eleven Rudras.

कतमे रुद्रा इति । दशमे पुरुषे प्राणा आत्मैकादशस्ते यदाऽस्माच्छरीरान्मर्त्यादुत्क्रामन्त्यथ रोदयन्ति तद्यद्रोदयन्ति तस्माद्रुद्रा इति ॥

(Chapter 3, Brahmana 9, Verse 4; Brihadaranyaka Upanishad)

Meaning: To a question - 'katame Rudra iti?' (What is Rudra?), he explains 'the ten senses and the mind are Rudras. When these rudras live in the body, they subject the person to their demands and make the person do evil deeds.

The *indriyas* provide the wrong inputs about the situation to *manas*. *Manas* then processes the information based on the inputs and the *vasana* (emotional memory) and forms the anger thoughts. It then expresses the anger through *kaya*, *vak* or *manas*. These rudras contribute to inappropriate anger expression and regulation of these sensory organs is essential to overcome anger. *Pratyahara* is the concept of regulating these sensory organs in yogic parlance.

In the Chapter 5, brahmana 2 there is a mention of three 'da' s (*dama*, *dana* and *daya*) for three types of people (*Deva*, *Manushya*, *Asura*) – In its true spirit, the negative personality traits such as desire, greed and anger are compared to deva, manushya, asura qualities respectively. They can be sublimated by self-restraint (*dama*), charity (*dana*) and forgiveness (*daya*) respectively. Desire, greed and anger are multiple faces. In desire state anger is mild. When greed is developed, anger is moderate and when anger manifests it is intense. Prognosis of anger is done in a subtle way.

(Lakshminarasimha Murthy, 1999; Swami Aadidevaananda, 2008). The mantras and their meaning are stated below:

त्रयाः प्राजापत्याः प्रजापतौ पितरि ब्रह्मचर्यमूषुर्देवा मनुष्या असुरा उषित्वा ब्रह्मचर्यं देवा ऊचुर्ब्रवीतु नो भवानिति तेभ्यो
हैतदक्षरमुवाच द इति व्यज्ञासिष्टा इति व्यज्ञासिष्मेति होचुर्दाम्यतेति न आत्थेत्योमिति होवाच व्यज्ञासिष्टेति ॥

(Chapter 5, brahmana 2, verse 1; Brihadaranyaka Upanishad)

Meaning: Prajapati had three kinds of offspring: gods, men and demons (asuras). They lived with Prajapati, practising the vows of brahmacharins. After finishing their term, the gods said to him: "Please instruct us, Sir." To them he uttered the syllable da and asked: "Have you understood?" They replied: "We have. You said to us, 'Control yourselves (damyata).' He said: "Yes, you have understood."

अथ हैनं मनुष्या ऊचुर्ब्रवीतु नो भवानिति तेभ्यो हैतदेवाक्षरमुवाच द इति व्यज्ञासिष्टा इति व्यज्ञासिष्मेति होचुर्दत्तेति न
आत्थेत्योमिति होवाच व्यज्ञासिष्टेति ॥

(Chapter 5, brahmana 2, verse 2; Brihadaranyaka Upanishad)

Meaning : Then the men said to him: "Please instruct us, Sir" To them he uttered the same syllable da and asked: "Have you understood?" They replied: "We have. You said to us, 'Give (datta).' He said: 'Yes, you have understood.'

अथ हैनमसुरा ऊचुर्ब्रवीतु नो भवानिति तेभ्यो हैतदेवाक्षरमुवाच द इति व्यज्ञासिष्टा इति व्यज्ञासिष्मेति होचुर्दयध्वमिति न
आत्थेत्योमिति होवाच व्यज्ञासिष्टेति तदेतदेवैषा दैवी वागनुवदति स्तनयित्नुर्द द द इति दाम्यत दत्त दयध्वमिति तदेतत्त्रय
शिक्षेद्दमं दानं दयामिति।

(Chapter 5, brahmana 2, verse 3; Brihadaranyaka Upanishad)

Meaning: Then the demons said to him: "Please instruct us, Sir." To them he uttered the same syllable da and asked: "Have you understood?" They replied: "We have. You said to us: 'Be compassionate (dayadhvam).' He said: "Yes, you have understood." That very thing is repeated even today by the heavenly voice, in the form of thunder, as "Da," "Da," "Da," which means: "Control yourselves," "Give," and "Have compassion." Therefore one should learn these three: self-control, giving and mercy.

Summary: a) Regulation of sensory stimulations is essential to overcome anger. Sensory pleasures leads to misery. b) Develop *dama*, *dana* and *daya* to overcome different forms of anger.

MAHANARAYANA UPANISHAD :

Mahanarayanopanishad is considered to have its root in Krishna Yajurveda. Both Vishnu and Shiva are glorified as the first equivalent embodiment of Brahman, the concept of ultimate. It solemnises Lord Vishnu and Lord Shiva as being the entire universe, the manifest One, the right,

the just and the truth. It also describes the highest principles of human endeavours. ((Swami Vimalananda, 1968; Lakshminarasimha Murthy, 2012)

आपान्तमन्युस्तृपलप्रभर्मा धुनिशिशमीवाञ्छरुमाञ्छरुजीषी । सोमोविश्वान्यतसा वनानि नार्वागिन्द्रं प्रतिमानानि देभुः ॥

(Anuvaka 1, Verse 44, Mahanarayana Upanishad)

Meaning : Soma who is of mild anger, who strikes with stones, who shakes enemies, who has many deeds, who wields weapons and who delights in soma juice kept over, causes the jungles of dried up trees and bushes (to grow by the downpour of rains). Counter-weights do not weigh down making Indra light

Soma is another term used to describe mild anger (assumed to be anger) in this Upanishad. It describes Soma as one who is of mild anger, who strikes with stones, who shakes enemies, who has many deeds, who wields weapons and who delights in soma juice causes. *Apanta Manyu* (soma) is like the mother's anger towards child.

यन्मे मनसा वाचा कर्मणा वा दुष्कृतं कृतम्। तन्न इन्द्रो वरुणो बृहस्पतिस्सविता च पुनन्तु पुनः पुनः ॥

(Anuvaka 1, Verse 56, Mahanarayana Upanishad)

Meaning : May Indra, Varuna, Brihaspati and Savitur completely destroy that sin committed by me and my people in thought, word and act.

The concept of Trikarana is employed here. Seeking the divine to completely destroy the sins committed in thought, word and act. Anger is a sin. Anger can be committed or expressed in thought (manas), word (vak) and act (kaya).

अग्निश्च मा मन्युश्च मन्युपतयश्च मन्युकृतेभ्यः । पापेभ्यो रक्षन्ताम्। यद्वा पापमकार्षम्। मनसा वाचा हस्ताभ्याम्। पद्भ्यामुदरेण शिश्ना । अहस्तदवलुम्पतु। यत्किञ्च दुरितं मयि । इदमहं माममृतयो नौ । सत्ये ज्योतिषि जुहोमि स्वाहा ॥

(Anuvaka 31-1, Mahanarayanopanishad)

Meaning: May fire, Anger and Guardians of anger guard me from the sins resulting from anger. May the Day efface completely whatever sin I have committed on this day by thought, word, hands, feet, stomach and the procreative organ. Further whatever sinful deed has been committed by me, all that and myself I offer as an oblation into the Self-luminous Truth, the source of Immortality. Hail

सूर्यश्च मा मन्युश्च मन्युपतयश्च मन्युकृतेभ्यः । पापेभ्यो रक्षन्ताम्। यद्वात्रिया पापमकार्षम्। मनसा वाचा हस्ताभ्याम्। पद्भ्यामुदरेण शिश्ना । रात्रिस्तदवलुम्पतु। यत्किञ्च दुरितं मयि । इदमहं माममृतयो नौ । सूर्ये ज्योतिषि जुहोमि स्वाहा ॥

(Anuvaka 32-1, Mahanarayanopanishad)

Meaning: May the Sun, Anger and the Guardians of anger guard me from the sins resulting from anger. May the Night efface completely whatever sin I have committed during the last night by thought, word, hands, feet, stomach and the procreative organ. Further, whatever sinful deed has

been committed by me all that and myself I offer as an oblation into the Supreme Light represented by the sun, the source of Immortality. Hail !

These are the Mantra also used in *Sandhya Vandana*. This is a prayer to Sun and Fire. Anger and Guardians of anger are prayed to guard from the sins resulting from anger. Further praying God to destroy completely whatever sins committed by thought, word, hands, feet, stomach and the procreative organ. Anger leads only to sin.

Sandhya Vandana is generally done at three times a day which means we are reminded not to engage in any acts of anger, three times a day. Secondly considering anger among all evil emotions indicates that it is the root of all sins. Thirdly it also denotes that anger is the most commonly and most frequently encountered evil and hence included in this practice.

आदित्यो वै तेज ओजो बलं यशश्चक्षुः श्रोत्रमात्मा मनो मन्युर्मनुर्मृत्युः सत्योमित्रो वायुराकाशः प्राणो लोकपालः कः किं कं
तथसत्यमन्नमृतो जीवो विश्वः कतमः स्वयम्भु ब्रह्मैतदमृत एष पुरुष एष भूतानामधिपतिर्ब्रह्मणः सायुज्यं
सलोकतामाप्नोत्येतासामेव देवतानां सायुज्यं सार्ष्टितां समानलोकतामाप्नोति य एवं वेदेत्युपनिषत् ॥

(Anuvaka 15, verse 1; Mahanarayana Upanishad)

Meaning : The sun alone is verily all these: -- energy, splendour, strength, renown, sight, hearing, body, mind, anger, Seer, the Deities Death, Satya, Mitra, Wind, Ether and Breath, the Rulers of the world, Prajapati, the Indeterminable One, happiness, that which transcends the senses, truth, food, (span of life), liberation or Immortality, individual Soul, the Universe, the acme of bliss and the self-born Brahman. This Person in the sun is eternal. He is the Lord of all creatures. He who meditates thus upon Him attains union with Brahman and lives in the same region of enjoyment with Him; he attains union, co-residence and like-enjoyment with these gods in their worlds. The secret knowledge is thus imparted.

While praising Sun, as the all-pervading entity, anger (Manyu) also included. This indicates sun is the super power and anger is under his control. Hence, surrendering to him or praying him helps in managing anger. Surya Namaskara may find relevance here.

मन्युरकार्षीन्नमोनमः । मन्युरकार्षीन्मन्युः करोति नाहं करोमि मन्युः कर्ता नाहं कर्ता मन्युः कारयिता नाहं कारयिता एष ते
मन्यो मन्यवे स्वाहा ॥

(Anuvaka 62, Verse 1, Mahanarayana Upanishad)

Meaning: Salutations to the gods. Anger performed the act. Anger did the act. Anger is doing the act, not I. Anger is the agent, not I. Anger causes the doer to act, not I. O Anger, let this oblation be offered to thee. Hail!

In this verse, we can see total surrendering to divinity. It says acts of anger are not done by me. I am not responsible for it. In the previous verse the same is said for desire. Repeated salutations and offerings are made to Manyu (seeking not to engage the person to do bad deeds). This is in a way surrendering to God. Detaching the acts from the 'I' ness. In the previous verse, it says desire is ignited by me. It is the Kama. In this verse, anger is not caused by me but by Manyu. So be it a good or bad deed, detach from 'I'.

मनोवाक्कायकर्माणि मे शुध्यन्तां ज्योतिरहं विरजा विपाप्मा भूयासश्स्वाहा ॥

(Anuvaka 66, verse 3, Mahanarayana Upanishad)

Meaning: By this oblation may the deeds accomplished by my mind, speech and body become purified.

Concept of trikarana shuddhi is mentioned here. Purification at physical, verbal and mental level is considered here.

Summary: a) Soma - mild anger is defined and described b) concept of trikarana shuddhi (kaya-vak-manas), the three dimensional cleaning of anger is emphasized c) One should contemplate on overcoming anger three times a day d) Yogic practice Sun Salutation promotes overcoming anger. e) Total surrendering to divine is an approach to overcome anger.

SRIMAD MAHABHARATA

There are a number of situations where anger was exhibited by almost all prominent characters. The focus is to consider the concepts of anger stated by the characters of Mahabharata and not on the situations. Here below are a few extracts:

The Mahabharata; VanaParva, YakshaPrashna 311–12

For a question by Yaksha, Yudhishtira said, anger is the invisible enemy. Yaksha put forth another set of questions - “Who is the enemy of men difficult to conquer and what is the endless disease? What is the nature of a good man and what is the nature of a bad man?. Yudhishtira’s answer was क्रोधः सुदुर्जयः शत्रुः लोभो व्याधिरनन्तकः । सर्वभूतहितः साधुः असाधुर्निन्दयः स्मृतः॥ Anger is the enemy of men difficult to conquer and covetousness (greed) is the endless desire. A good man is one who seeks welfare of all beings and a bad man is one who has no compassion or mercy.

In Mahabharata, udyoga parva (5-15-18) it says

अक्रोधेन जयेत् क्रोधम् असाधुं साधुना जयेत्। जयेत् कदर्यं दानेन जयेत् सत्येन चानृतम्।।

Meaning : ‘Win anger with mercy, win wickedness with good behaviour, win miser with charity, and win liar with truth’.

Vidhura Niti 7-72 also says Win Anger by serenity, wickedness by Virtue.

The Mahabharata; VanaParva, Section XXVII:

Draupadi recalled an ancient story of the conversation between Prahlada and Vali, Vali asks Prahlada which is meritorious forgiveness or might? Prahlada reply was neither forgiveness nor might is always meritorious. One should put forth his might and show his forgiveness on proper occasions, with reference to place and time. Draupadi narrating this story tells that Kauravas are disregarding Yudhishtira because of his virtue of forgiveness. She says that time has come to put forth his might and anger. Yudhishtira replies giving detailed elaboration on anger and its consequence.

युधिष्ठिर उवाच ॥ क्रोधो हन्ता मनुष्याणां क्रोधो भावयिता पुनः । इति विद्धि महाप्राज्ञे क्रोधमूलौ भवाभवौ ॥ १ ॥ यो हि संहरते क्रोधं भावस्तस्य सुशोभने । यः पुनः पुरुषः क्रोधं नित्यं न सहते शुभे ॥ तस्याभावाय भवति क्रोधः परमदारुणः ॥ २ ॥ क्रोधमूलो विनाशो हि प्रजानामिह दृश्यते । तत्कथं मादृशः क्रोधमुत्सृजेल्लोकनाशनम् ॥ ३ ॥ क्रुद्धः पापं नरः कुर्यात्क्रुद्धो हन्याद्गुरूनपि । क्रुद्धः परुषया वाचा श्रेयसोऽप्यवमन्यते ॥ ४ ॥ वाच्यावाच्ये हि कुपितो न प्रजानाति

कर्हिचित् । नाकार्यमस्ति क्रुद्धस्य नावाच्यं विद्यते तथा ॥ ५ ॥ हिंस्यात्क्रोधादवध्यांश्च वध्यान्सम्पूजयेदपि । आत्मानमपि
 च क्रुद्धः प्रेषयेद्यमसादनम् ॥ ६ ॥ एतान्दोषान्प्रपश्यद्भिर्जितः क्रोधो मनीषिभिः । इच्छद्भिः परमं श्रेय इह चामुत्र
 चोत्तमम् ॥ ७ ॥ तं क्रोधं वर्जितं धीरैः कथमस्मद्विधश्चरेत् । एतद्वैपदि सन्धाय न मे मन्युः प्रवर्धते ॥ ८ ॥ आत्मानं च परं
 चैव त्रायते महतो भयात् । क्रुध्यन्तमप्रतिक्रुध्यन्द्द्वयोरेष चिकित्सकः ॥ ९ ॥ मूढो यदि क्लिश्यमानः क्रुध्यतेऽशक्तिमान्नरः ।
 बलीयसां मनुष्याणां त्यजत्यात्मानमन्ततः ॥ १० ॥ तस्यात्मानं सन्त्यजतो लोका नश्यन्त्यनात्मनः । तस्माद्वैपद्यशक्तस्य
 मन्योर्नियमनं स्मृतम् ॥ ११ ॥ विद्वांस्तथैव यः शक्तः क्लिश्यमानो न कुप्यति । स नाशयित्वा क्लेशरं परलोके च नन्दति ॥
 १२ ॥ तस्माद्वलवता चैव दुर्बलेन च नित्यदा । क्षन्तव्यं पुरुषेणाहुरापत्स्वपि विजानता ॥ १३ ॥ मन्योर्हि विजयं कृष्णे
 प्रशंसन्तीह साधवः । क्षमावतो जयो नित्यं साधोरिह सतां मतम् ॥ १४ ॥ सत्यं चानृततः श्रेयो नृशंसाच्चानृशंसता । तमेवं
 बहुदोषं तु क्रोधं साधुविवर्जितम् ॥ १५ ॥ मादृशः प्रसृजेत्कस्मात्सुयोधनवधादपि ॥ १५ ॥ तेजस्वीति यमाहुर्वै पण्डिता
 दीर्घदर्शिनः । न क्रोधोऽभ्यन्तरस्तस्य भवतीति विनिश्चितम् ॥ १६ ॥ यस्तु क्रोधं समुत्पन्नं प्रज्ञया प्रतिबाधते । तेजस्विनं तं
 विद्वांसो मन्यन्ते तत्त्वदर्शिनः ॥ १७ ॥ क्रुद्धो हि कार्यं सुश्रोणि न यथावत्प्रपश्यति । न कार्यं न च मर्यादां नरः
 क्रुद्धोऽनुपश्यति ॥ १८ ॥ हन्त्यवध्यानपि क्रुद्धो गुरून्त्रैस्तुदत्यपि । तस्मात्तेजसि कर्तव्ये क्रोधो दूरात्प्रतिष्ठितः ॥ १९ ॥
 दाक्ष्यं ह्यमर्षः शौर्यं च शीघ्रत्वमिति तेजसः । गुणाः क्रोधाभिभूतेन न शक्याः प्राप्तुमञ्जसा ॥ २० ॥ क्रोधं त्यक्त्वा तु पुरुषः
 सम्यक्तेजोऽभिपद्यते । कालयुक्तं महाप्राज्ञे क्रुद्धैस्तेजः सुदुःसहम् ॥ २१ ॥ क्रोधस्त्वपण्डितैः शश्वत्तेज इत्यभिधीयते ।
 रजस्तल्लोकनाशाय विहितं मानुषान्प्रति ॥ २२ ॥ तस्माच्छश्वत्त्यजेत्क्रोधं पुरुषः सम्यगाचरन् । श्रेयान्स्वधर्मानपगो न क्रुद्ध
 इति निश्चितम् ॥ २३ ॥ यदि सर्वमबुद्धीनामतिक्रान्तममेधसाम् । अतिक्रमो मद्विधस्य कथं स्वित्स्यादनिन्दिते ॥ २४ ॥ यदि
 न स्युर्मनुष्येषु क्षमिणः पृथिवीसमाः । न स्यात्सन्धिर्मनुष्याणां क्रोधमूलो हि विग्रहः ॥ २५ ॥ अभिषक्तो
 ह्यभिषजेदाहन्याद्गुरुणा हतः । एवं विनाशो भूतानामधर्मः प्रथितो भवेत् ॥ २६ ॥ आक्रुष्टः पुरुषः सर्वः प्रत्याक्रोशेदनन्तरम् ।
 प्रतिहन्याद्धतश्चैव तथा हिंस्याच्च हिंसितः ॥ २७ ॥ हन्युर्हि पितरः पुत्रान्पुत्राश्चापि तथा पितृन् । हन्युश्च पतयो भार्याः
 पतीन्भार्यास्तथैव च ॥ २८ ॥ एवं सङ्कुपिते लोके जन्म कृष्णे न विद्यते । प्रजानां सन्धिमूलं हि जन्म विद्धि शुभानने ॥
 २९ ॥ ताः क्षीयेरन्प्रजाः सर्वाः क्षिप्रं द्रौपदि तादृशे । तस्मान्मन्युर्विनाशाय प्रजानामभवाय च ॥ ३० ॥ यस्मात्तु लोके
 दृश्यन्ते क्षमिणः पृथिवीसमाः । तस्माज्जन्म च भूतानां भवश्च प्रतिपद्यते ॥ ३१ ॥ क्षन्तव्यं पुरुषेणेह सर्वास्वापत्सु शोभने ।
 क्षमा भवो हि भूतानां जन्म चैव प्रकीर्तितम् ॥ ३२ ॥ आक्रुष्टस्ताडितः क्रुद्धः क्षमते यो बलीयसा । यश्च नित्यं जितक्रोधो
 विद्वानुत्तमपुरुषः ॥ ३३ ॥ प्रभाववानपि नरस्तस्य लोकाः सनातनाः ।
 क्रोधनस्त्वल्पविज्ञानः प्रेत्य चेह च नश्यति ॥ ३४ ॥

Courtesy : sanskritdocuments.org

King Yudhishtira said: Anger is the slayer of men and is again their protector. Know this, O thou possessed of great wisdom, that anger is the root of all prosperity and all adversity. O thou beautiful one, he that suppresses his anger earns prosperity. That man, again, who always gives way to anger, reaps adversity from his fierce anger. It is seen in this world that anger is the cause of destruction of every creature. How then can one like me indulge his anger, which is so destructive of the world? The angry man commits sin. The angry man kills even his preceptors. The angry man insults even his superiors in harsh words. The man that is angry fails to distinguish between what should be said and what should not. There is no act that an angry man may not do,

no word that an angry man may not utter. From anger a man may slay one that deserves not to be slain, and may worship one that deserves to be slain. The angry man may even send his own soul to the regions of Yama. Beholding all these faults, the wise control their anger, desirous of obtaining high prosperity both in this and the other world. It is for this that they of tranquil souls have banished wrath. How can one like us indulge in it then? O daughter of Draupada, reflecting upon all this, my anger is not excited. One that acts not against a man, whose wrath has been up, rescues himself as also others from great fear. In fact, he may be regarded to be the physician of the two (viz., himself and angry man). If a weak man persecuted by others, foolishly becomes angry towards men that are mightier than he, he then becomes himself the cause of his own destruction. And in respect of one who thus deliberately throws away his life, there are no regions hereafter to gain. Therefore, O daughter of Draupada, it has been said that a weak man should always suppress his wrath. And the wise man also who though persecuted, suffers not his wrath to be roused, joyeth in the other world, having passed his persecutor over in indifference. It is for this reason has it been said that a wise man, whether strong or weak, should ever forgive his persecutor even when the latter is in the straits. It is for this that the virtuous applaud them that have conquered their wrath. Indeed, it is the opinion of the virtuous that the honest and forgiving man is ever victorious.

Courtesy : Hinduism.com

Summary : a) Anger is an invisible enemy b) one should win over anger by not becoming angry c) forgiveness is the highest virtue d) anger is the gift given to man for destruction activities, e) Anger should be exhibited in a right way, at the right place and at right time.

SRIMAD RAMAYANAM

During Sita Svayamvara – the episode of Parashurama visit and the conversation of Lakshmana and Rama with him is a classic example for anger expression and anger control. It took place after Ram broke Shiva's bow and Parashurama rushed towards Mithila filled with rage after coming to know this. In this story, we see the highest level of anger expression by Parashurama. For this, response from Lakshmana was very aggressive which only added fuel to the fire. For the same situation Sri Rama's response was more assertive. There is a big difference between the exchange of words between Parashurama and Lakshmana and that of Parashurama and Rama. Lakshmana's anger can be termed as Rajasic while Rama's was Satvic. Anger of Ravana is of Tamasic nature.

Parashurama denotes the powerful anger trigger (stimulus) which we come across every day. The moral of the incident is that even when there is a strong stimulus (trigger), one should maintain calmness and respond appropriately.

Valmiki in the first chapter, 18th verse, describes the qualities of Rama and says Rama's anger was like that of Kalagni (*kaala agni sadrushah krodhe*). There are instances where Rama got angry.

In sundara khanda (chapter 55), after setting Lanka on fire, Hanuman begins to reproach himself for his unrestrained exhibition of anger, unmindful of Sita's location and her safety. Later he reflects that those who control anger are the real great people. He who gives in to anger is capable of any crime including killing his preceptors. There is no obscene word he cannot utter and there is no foul deed he cannot do. He alone is called a Purusha who overcomes anger through forbearance. Following are the verses

धन्यास्ते पुरुषश्रेष्ठा ये बुद्ध्या कोपमुत्थितम्। निरुन्धन्ति महात्मानो दीप्तमग्निमिवाम्भसा।। क्रुद्धः पापं न कुर्यात्कः क्रुद्धो हन्याद्गुरून्पि। क्रुद्धः परुषया वाचा नरस्साधूनधिक्षिपेत्।। वाच्यावाच्यं प्रकुपितो न विजानाति कर्हिचित्। नाकार्यमस्ति क्रुद्धस्य नावाच्यं विद्यते क्वचित्।। यस्समुत्पतितं क्रोधं क्षमयैव निरस्यति। यथोरगस्त्वचं जीर्णां स वै पुरुष उच्यते।।

(Sundara khanda, chapter 55, verse 3-6)

As a burning fire is extinguished with water, blessed indeed are those great-souled men of excellence, who in their wisdom, restrain their elevated fury. Which enraged man would not incur a sinful act? An enraged person may even kill his elders/gurus. An enraged person may insult virtuous men with harsh words. An agitated person ever does not know which appropriate words are and which are forbidden words to be uttered. For enraged persons, there is neither an improper act nor ever an improper word to be spoken. As a serpent casts off its slough, whoever casts aside an intense anger sprung up in him suddenly by virtue of his endurance, he verily is said to be an excellent man (Sundara khanda, chapter 55, verse 3-6)

ईषत्कार्यमिदं कार्यं कृतमासीन्न संशयः। तस्य क्रोधाभिभूतेन मया मूलं क्षयः कृतः।।

(Sundara khanda, chapter 55, verse 10)

This task (of burning Lanka) has been fulfilled by me and it has been completed only with a small effort. Overpowered as I was with anger, the very root of that fulfilment has been destroyed by me. There is no doubt. (Sundara khanda, chapter 55, verse 10)

मया खलु तदेवेदं रोषदोषात्प्रदर्शितम्। प्रथितं त्रिषु लोकेषु कपित्वमनवस्थितम्।।

धिगस्तु राजसं भावमनीशमनवस्थितम्। ईश्वरेणापि यद्रागान्मया सीता न रक्षिता।।

(Sundara khanda, chapter 55, verse 15 and 16)

Due to culpability of my anger, I have indeed shown this apishness that is famous for instability in the three worlds. Let there be shame upon the passionate way of my thinking, which breeds helplessness and instability. even though capable as I am, Sita could not be saved by me due to my exciting passion of anger. (Sundara khanda, chapter 55, verse 15 and 16)

Valmiki, in the form of broodings of Hanuman, explains the disastrous consequences of anger while recommending to avoid anger of any kind and at all costs.

Summary: a) There can be many stimuli to anger around and some of them may be very powerful, b) response to these stimuli determines one's proneness to anger c) Anger is not the counter for anger stimulus d) consequences of anger are disastrous.

SRIMAD BHAGAVATAM

Trikarana concept is dealt in Srimad Bhagavatam (SB) in the following verse.

कायेन वाचा मनसेन्द्रियैर्वा बुध्यात्मना वा वनुष्टुतस्वभावात्। करोति यद्यत् सकलं परस्मै नारायणायेति समर्पयत् तत्
Meaning: Whatever one does with body, words, mind, senses, intelligence or purified consciousness, one should offer to the Supreme thinking 'this is for the pleasure of Lord Narayana'.
(SB 11.2.36)

Based on this verse, the popular samarpana mantra, with a slight change is used to surrender.

कायेन वाचा मनसेन्द्रियैर्वा बुध्यात्मना वा प्रकृतेस्वभावात्। करोमि यद्यत् सकलं परस्मै नारायणायेति समर्पयामि ॥
Meaning : I dedicate to the Supreme Narayana all that I do by means of the body, words, mind, the organs of action, the organs of a knowledge and by the impulsion of nature

The Bhagavatam narrates several accounts of how anger bewildered the intelligence of even great personalities. In the story of Ambarisha, Lord Krishna protected his devotee Ambarisha and released his razor-sharp disc weapon towards Durvasa. After fleeing for his life, Durvasa came to his senses and realized how his pride and lust for adoration and distinction had provoked his needless wrath. Understanding the ramifications of his anger, Durvasa Muni fell at the feet of Maharaja Ambarisha and received forgiveness.

Anger is considered as younger brother of desire (SB 3.15.31). Anger will continue even in the liberated stage. The difference between the anger of an ordinary person and that of a liberated person is that an ordinary person becomes angry because his sense desires are not being fulfilled, whereas a liberated person becomes angry when restricted in the discharge of duties for serving the Supreme Personality of Godhood.

"Control your anger, for anger is the foremost enemy on the path of spiritual realization (Bhagavatam, 4.11.31). A person who desires liberation from this material world should not fall under the control of anger because when bewildered by anger one becomes a source of dread for all others." (Bhagavatam, 4.11.32)

The Srimad-Bhagavatam describes many persons who conquered lust and were unaffected by anger. Foremost among them is Prahlada Maharaja. Hiranyakashipu began to look upon his saintly son as an enemy and plotted to kill him. Prahlada did not get angry with his father instead had full faith that the Lord is orchestrating everything and that He will protect them. After, calming down of Narasimha Avatara, the first thing Prahlada asks God is to forgive his father and grant him sadgati. Prahlada was an adolescent at this point of time. Again here we can see strong triggers of anger but the young Prahlada never lost his calmness. Rather he pleaded for Moksha of his father.

Similarly, Nachiketa also exhibited very high level of patience and perseverance. He did not get angry about his father's acts. The first boon he asks with Yama is the forgiveness for his father.

Summary: a) Anger will not spare the learned too, one should be very careful and cautious b) Anger can very well be kept under control during adolescence, c) Right time to impart moral education is during adolescence (*brahmacharya, gurukulavasa*)

Puranas:

Kali Purana: *Kali* is the son of *Krodha* (anger) and his sister-turned wife *Himsa* (Violence). *Dhamba* (vanity), *Maya* (illusion), *Adharma* (impropriety) and *Mithya* (falsehood) are all relatives (Wikipedia).

Bhagavata Purana: This purana provides a different lineage of *Krodha*. It talks about series of twin descendants who intermarry to produce the next twin. *Krodha* (anger) and *Himsa* (violence)

are produced by Lobha (covetousness) and Nikriti (fraud). Their further series of progeny are Kali (wickedness) and Durukti (evil speech), then Mrityu (death) and Bhí (fear) then Niraya (hell) and Yatana (torment) (Wikipedia)

Vishnu Purana : In this Purana, *Krodha* (anger) along with its siblings *soka* (sorrow), *Thrishna* (greediness), *Jara* (decay), *Vyadhi* (disease) are the progeny of *Mrityu*. They are closely related to *Himsa* (violence), *Anrita* (falsehood), *Nikriti* (fraud), *Bhaya* (fear), *Naraka* (hell), *Maya* (deceit), *Vedana* (grief), *Dukha* (pain) and *Mrityu* (death) are all relatives of *Krodha*. These are called inflictors of misery and are characterised as progeny of Vice (Adharma).

This indicates that anger is a core negative emotion and has many facets. The definition of anger by Psychologists also falls in this direction only. They say, anger is an emotion that can range from mild annoyance to intense rage.

There is also story of eleven Rudras in Vishnu Purana. According to this purana, ‘Rudra’ is the form of Parabrahman when he is personified with anger. The furious Rudra was born from the anger of Brahma with a form having body of half man and half woman (Ardhanareeshwara). The male form then split itself into eleven, forming the eleven Rudras called Manyu, Manu, Mahmasa, Mahan, Siva, Rtudhvaja, Ugraretas, Bhava, Käma, Vamadeva and Dhrtavrata. From the woman were born the eleven Rudranis who became wives of the Rudras. They are Dhi, Vrtti, Usana, Urna, Niyuta, Sarpis, Ila, Ambika, Iravatl, Sudha and Diksa. Brahma allotted to the Rudras the eleven positions – five sensory organs, five organs of action and the mind. The Rudranis are the feminine form the strong powerful forces of energy (Sri Shaktis) for destruction of evil.

Summary: a) Anger is a negative emotion so its correlates, b) concept of 11 Rudras and Rudranis – associated to 11 indriyas

SRIMAD BHAGAVAD GITA

Considering the concepts of yoga intervened in Bhagavad Gita (BG) and the words of wisdom and practical teachings explained in a simplest way, a thorough analysis of anger as said in Bhagavad Gita is carried out. The words used about anger in this text are Krodha, Dwesha, Amarsha.

Lord Krishna explains step by step process of origin of anger and its consequences. He says anger is an innate emotion that masks the discrimination ability. He states that Anger is born out of Rajas. He also explains the 12 types of Rajasic Natures such as 1) *Rajasic Shradha* (faith), 2) *Rajasic Ahara* (food), 3) *Rajasic Yajna* (sacrifice), 4) *Rajasic Tapas* (austerity), 5) *Rajasic Dana* (gift), 6) *Rajasic Tyaga* (renunciation), 7) *Rajasic Jnana* (knowledge), 8) *Rajasic Karma* (action / deed), 9) *Rajasic Person* (personality), 10) *Rajasic Buddhi* (intellect), 11) *Rajasic Dhruti* (fortitude / strength), 12) *Rajasic Sukha* (pleasure). All these phenomenon can lead to anger.

He considers anger as an enemy, gate to hell. He further warns to be aware anger as an enemy and calls for abandoning it. By abandoning anger, one gets *chitta prasadana* (peace of mind). By controlling the senses from the beginning one can abandon or eliminate anger. Lord Krishna categorises anger as the *Asuri Guna* (Vice Nature - demonic quality). He also says enslaved by anger, *Alpa buddhi* (ignorant) people strive to accumulate wealth in improper ways and perform sinful acts. Malicious People take shelter of anger and hate everyone. While explaining the concept of *Kshetra* (the field and the knower), he says anger and its manifestations are part of *Kshetra*.

Ahimsa is another virtue which Lord Krishna has emphasized in many occasions. He says Ahimsa is the quality of divine and is the symbolic quality of Jnana. Ahimsa is the fundamental concept to be adopted by everyone. Any seeker should practice Ahimsa. He ensures including ahimsa as the basic requirement, while defining the qualities of various personalities or types of seekers, such as *Muni, Sanyasi, Yuktha* or *Sukhi Narah, Yati, Mukta, Bhakta, Dhyanyoga Para, Shantah*, seeker of

eternal liberation (*sada muktha*). (Swami Tapasyananda 2011; Sri Sri Sachidaanandendra Saraswati Swami, 2012) Below tabular columns (Table 1) provide the details of the verses and interpretations

Table 1: Bhagavad Gita Verses on Anger and its related concepts

Sl No	Verse No	Verse in Sankrit & English Meaning	Comments
1	2-56	दुःखेष्वनुद्विग्नमनाः सुखेषु विगतस्पृहः। वीतरागभयक्रोधः स्थितधीर्मुनिरुच्यते। He whose mind is not shaken by adversity, who does not hanker after pleasures, and who is free from attachment, fear and anger, is called a sage of steady wisdom.	Quality of a Muni
2	2-62	ध्यायतो विषयान्मुंसः सङ्गस्तेषूपजायते। सङ्गात् संजायते कामः कामात्क्रोधोऽभिजायते। When one thinks of an object, attachment to it arises; from attachment desire is born; from desire anger arises.	Origin of Anger
3	2-63	क्रोधाद्भवति संमोहः संमोहात्स्मृतिविभ्रमः। स्मृतिभ्रंशाद् बुद्धिनाशो बुद्धिनाशात्प्रणश्यति।। From anger comes delusion; from delusion the loss of memory; from loss of memory the destruction of discrimination; from destruction of discrimination one perishes.	Anger Consequences
4	2-64	रागद्वेषवियुक्तैस्तु विषयानिन्द्रियैश्चरन्। आत्मवश्यैर्विधेयात्मा प्रसादमधिगच्छति But the self-controlled man, moving amongst objects with the senses under restraint, and free from attraction and repulsion, attains to peace	Abandoning anger one gets Chitta prasada (peace)
5	3-34	इन्द्रियस्येन्द्रियस्यार्थे रागद्वेषौ व्यवस्थितौ। तयोर्न वशमागच्छेत्तौ ह्यस्य परिपन्थिनौ Attachment and aversion for the objects of the senses abide in the senses; let none come under their sway, for they are his foes.	Anger is an enemy (paripantha)
6	3-37	काम एष क्रोध एष रजोगुणसमुद्भवः। महाशनो महापाप्मा विद्ध्येनमिह वैरिणम्। It is desire, it is anger born of the quality of Rajas, all-sinful and all-devouring; know this as the foe here (in this world).	Anger is born out rajas. Know anger is an enemy (vairi)
7	3-38	धूमेनाव्रियते वह्निर्यथाऽऽदर्शो मलेन च। यथोल्बेनावृतो गर्भस्तथा तेनेदमावृतम्। As fire is enveloped by smoke, as a mirror by dust, and as an embryo by the amnion, so is this (viveka) enveloped by that (anger).	Anger masks discrimination ability

8	3-41	तस्मात्त्वमिन्द्रियाण्यादौ नियम्य भरतर्षभ। पाप्मानं प्रजहि ह्येनं ज्ञानविज्ञाननाशनम्। Therefore, O best of the Bharatas (Arjuna), controlling the senses first, do thou kill this sinful thing (anger), the destroyer of knowledge and realisation!	By controlling the senses from the beginning, kill or eliminate anger
9	4-10	वीतरागभयक्रोधा मन्मया मामुपाश्रिताः। बहवो ज्ञानतपसा पूता मद्भावमागताः। Freed from attachment, fear and anger, absorbed in Me, taking refuge in Me, purified by the fire of knowledge, many have attained to My Being.	One who is free from anger attains Him
10	5-3	ज्ञेयः स नित्यसंन्यासी यो न द्वेष्टि न काङ्क्षति। निर्द्वन्द्वो हि महाबाहो सुखं बन्धात्प्रमुच्यते।। He should be known as a perpetual Sanyasi who neither hates nor desires; for, free from the pairs of opposites, O mighty-armed Arjuna, he is easily set free from bondage!	Qualities of a Sanyasi
11	5-23	शक्नोतीहैव यः सोढुं प्राक्शरीरविमोक्षणात्। कामक्रोधोद्भवं वेगं स युक्तः स सुखी नरः He who is able, while still here in this world to withstand, before the liberation from the body, the impulse born of desire and anger—he is a Yogi, he is a happy man	Qualities of a Yuktha or Sukhi Narah
12	5-26	कामक्रोधवियुक्तानां यतीनां यतचेतसाम्। अभितो ब्रह्मनिर्वाणं वर्तते विदितात्मनाम्। Absolute freedom exists on all sides for self-controlled ascetics who are free from desire and anger, who have controlled their thoughts and who have realized the Self.	Qualities of a Yati
13	5-28	यतेन्द्रियमनोबुद्धिर्मुनिर्मोक्षपरायणः। विगतेच्छाभयक्रोधो यः सदा मुक्त एव सः With the senses, the mind and the intellect always controlled, having liberation as his supreme goal, free from desire, fear and anger—the sage is verily liberated forever.	Eternal Liberation (Sada Muktha) requirements
14	7-27	इच्छाद्वेषसमुत्थेन द्वन्द्वमोहेन भारत। सर्वभूतानि संमोहं सर्गे यान्ति परन्तप।। By the delusion of the pairs of opposites arising from desire and aversion, O Bharata, all beings are subject to delusion at birth, O Parantapa!	Anger is an innate character
15	10-5	अहिंसा समता तुष्टिस्तपो दानं यशोऽयशः। भवन्ति भावा भूतानां मत्त एव पृथग्विधाः Non-injury, equanimity, contentment, austerity, fame, beneficence, ill-fame -(these) different kinds of qualities of beings arise from Me alone.	Ahimsa is the quality of divine
16	12-15	यस्मान्नोद्विजते लोको लोकान्नोद्विजते च यः। हर्षामर्षभयोद्वेगैर्मुक्तो यः स च मे प्रियः He by whom the world is not agitated and who cannot be agitated by the world, and who is freed from joy, envy, fear and anxiety—he is dear to Me.	Qualities of a Mukha bhakta (Amarsha word is used here)

17	12-17	यो न हृष्यति न द्वेष्टि न शोचति न काङ्क्षति। शुभाशुभपरित्यागी भक्ितमान्यः स मे प्रियः He who neither rejoices, nor hates, nor grieves, nor desires, renouncing good and evil, and who is full of devotion, is dear to Me.	Qualities of an ardent devotee
18	13-7	इच्छा द्वेषः सुखं दुःखं सङ्घातश्चेतनाधृतिः। एतत्क्षेत्रं समासेन सविकारमुदाहृतम्। Desire, hatred, pleasure, pain, the aggregate (the body), fortitude and intelligence—the Field has thus been described briefly with its modifications.	Anger is a constituents of Kshetra
19	13-8	अमानित्वमदम्भित्वमहिंसा क्षान्तिरार्जवम्। आचार्योपासनं शौचं स्थैर्यमात्मविनिग्रहः। Humility, unpretentiousness, non-injury, forgiveness, uprightness, service of the teacher, purity, steadfastness, self-control, is Jnana	Ahimsa is the quality of Jnana
21	16-2	अहिंसा सत्यमक्रोधस्त्यागः शान्तिरपैशुनम्। दया भूतेष्वलोलुप्त्वं मार्दवं ह्रीरचापलम् Harmlessness, truth, absence of anger, renunciation, peacefulness, absence of crookedness, compassion towards beings, uncovetousness, gentleness, modesty, absence of fickleness,	Ahimsa is the Daivi Guna (Virtue / Divine nature)
22	16-4	दम्भो दर्पोऽभिमानश्च क्रोधः पारुष्यमेव च। अज्ञानं चाभिजातस्य पार्थ सम्पदमासुरीम् Hypocrisy, arrogance, self-conceit, harshness and also anger and ignorance, belong to one who is born in a demoniacal state, O Arjuna!	Anger is the Asuri Guna (Vice Nature)
23	16-12	आशापाशशतैर्बद्धाः कामक्रोधपरायणाः। ईहन्ते कामभोगार्थमन्यायेनार्थसञ्चयान् Bound by a hundred ties of hope, given over to lust and anger, they strive to obtain by unlawful means hoards of wealth for sensual enjoyment.	Enslaved by anger, Alpa buddhi people perform sinful acts
24	16-18	अहङ्कारं बलं दर्पं कामं क्रोधं च संश्रिताः। मामात्मपरदेहेषु प्रद्विषन्तोऽभ्यसूयकाः Given over to egoism, power, haughtiness, lust and anger, these malicious people hate Me in their own bodies and those of others.	Malicious People take shelter of anger and hate everyone
25	16-21	त्रिविधं नरकस्येदं द्वारं नाशनमात्मनः। कामः क्रोधस्तथा लोभस्तस्मादेतत्त्रयं त्यजेत्। Triple is the gate of this hell, destructive of the self—lust, anger, and greed,—therefore, one should abandon these three.	Anger is gate to hell, One should abandon it
26	17-4	यजन्ते सात्त्विका देवान्यक्षरक्षांसि राजसाः। प्रेतान्भूतगणांश्चान्ये यजन्ते तामसा जनाः Rajasic-faith: The Satvic or pure men worship the gods; the Rajasic or the passionate worship the Yakshas and the Rakshasas; the others (the Tamasic or the deluded) worship the ghosts and the hosts of nature-spirits.	Rajasic Shradha (faith)

27	17-9	कद्वसुलवणात्युष्णतीक्ष्णरूक्षविदाहिनः। आहारा राजसस्येष्टा दुःखशोकामयप्रदाः। Rajasic-food : The foods that are bitter, sour, saline, excessively hot, dry, pungent and burning, are liked by the Rajasic and are productive of pain, grief and disease.	Rajasic Ahara (food)
28	17-11	अफलाकाङ्क्षिभिर्यज्ञो विधिदृष्टो य इज्यते। यष्टव्यमेवेति मनः समाधाय स सात्त्विकः Rajasic Yajna: The sacrifice which is offered, O Arjuna, seeking a reward and for ostentation, know thou that to be a Rajasic Yajna!	Rajasic Yajna (sacrifice)
29	17-18	सत्कारमानपूजार्थं तपो दम्भेन चैव यत्। क्रियते तदिह प्रोक्तं राजसं चलमध्रुवम् Rajasic Tapas: The austerity which is practiced with the object of gaining good reception, honour and worship and with hypocrisy, is here said to be Rajasic, unstable and transitory.	Rajasic Tapas (austerity)
30	17-20	दातव्यमिति यद्दानं दीयतेऽनुपकारिणे। देशे काले च पात्रे च तद्दानं सात्त्विकं स्मृतम्। Rajasic Dana: And, that gift which is made with a view to receive something in return, or looking for a reward, or given reluctantly, is said to be Rajasic.	Rajasic Dana (gift)
31	18-8	दुःखमित्येव यत्कर्म कायक्लेशभयात्त्यजेत्। स कुत्वा राजसं त्यागं नैव त्यागफलं लभेत् ॥ Rajasic Tyaga: He who abandons action on account of the fear of bodily trouble (because it is painful), he does not obtain the merit of renunciation by doing such Rajasic renunciation.	Rajasic Tyaga (renunciation)
32	18-21	यत्तु प्रत्युपकारार्थं फलमुद्दिश्य वा पुनः। दीयते च परिक्लिष्टं तद्दानं राजसं स्मृतम्। Rajasic Jnana: But that knowledge which sees in all beings various entities of distinct kinds as different from one another—know thou that knowledge to be Rajasic (passionate).	Rajasic Jnana (knowledge)
33	18-24	तस्मादोमित्युदाहृत्य यज्ञदानतपःक्रियाः। प्रवर्तन्ते विधानोक्ताः सततं ब्रह्मवादिनाम्। Rajasic Karma: But that action which is done by one longing for the fulfilment of desires or gain, with egoism or with much effort—that is declared to be Rajasic.	Rajasic Karma (action / deed)
34	18-27	रागी कर्मफलप्रेप्सुर्लुब्धो हिंसात्मकोऽशुचिः। हर्षशोकान्वितः कर्ता राजसः परिकीर्तितः Rajasic Person/Personality: Passionate, desiring to obtain the rewards of actions, cruel, greedy, impure, moved by joy and sorrow, such an agent is said to be Rajasic.	Rajasic Person (personality)
35	18-31	यया धर्ममधर्मं च कार्यं चाकार्यमेव च। अयथावत्प्रजानाति बुद्धिः सा पार्थ राजसी Rajasic Buddhi: That by which one incorrectly understands Dharma and Adharma, and also what ought to be done and what ought not to be done—that intellect, O Arjuna, is Rajasic!	Rajasic Buddhi (intellect)

36	18-34	यया तु धर्मकामार्थान् धृत्या धारयतेऽर्जुन। प्रसङ्गेन फलाकाङ्क्षी धृतिः सा पार्थ राजसी Rajasic Dhruiti: But that firmness, O Arjuna, by which, on account of attachment and desire for reward, one holds fast to Dharma, enjoyment of pleasures and earning of wealth—that firmness, O Arjuna, is Rajasic!	Rajasic Dhruiti (fortitude / strength)
37	18-38	विषयेन्द्रियसंयोगाद्यत्तदग्रेऽमृतोपमम्। परिणामे विषमिव तत्सुखं राजसं स्मृतम्। Rajasic Sukha: That pleasure which arises from the contact of the sense-organs with the objects, which is at first like nectar and in the end like poison— is declared to be Rajasic.	Rajasic Sukha (pleasure)
38	18-51	बुद्ध्या विशुद्धया युक्तो धृत्याऽऽत्मानं नियम्य च। शब्दादीन् विषयांस्त्यक्त्वा रागद्वेषौ व्युदस्य च Endowed with a pure intellect, controlling the self by firmness, relinquishing sound and other objects and abandoning both hatred and attraction,	Qualities of a Dhyanyoga Para
39	18-53	अहङ्कारं बलं दर्पं कामं क्रोधं परिग्रहम्। विमुच्य निर्ममः शान्तो ब्रह्मभूयाय कल्पते। Having abandoned egoism, strength, arrogance, anger, desire, and covetousness, free from the notion of “mine” and peaceful,—he is fit for becoming Brahman.	Qualities of a Shantah (peace seeker)

Sri Krishna also states that it is difficult to conquer desire and anger. The mind is so fickle and restless. Abhyasa, Vairagya and moderation in eating, recreation and work helps to control anger. The concept of Trikarana (Kaya-Vak-Manas) is touched by Sri Krishna while explaining the Tapas. Control over speech, body and mind is a requisite to aspire for Brahma Consciousness.

Summary: a) definition, description and consequences of anger is explicitly stated, b) condemns any act of anger, c) ahimsa is the pre-requisite to be a seeker, d) provides an elaborate understanding of Rajasic Nature (12 types) from which the anger is born.

YOGA

The entire Gita may be condensed into four types of yoga – The Karma Yoga (the yoga of action), The Bhakti Yoga (the yoga of devotion), The Raja Yoga (the yoga of meditation) and the Jnana Yoga (the yoga of knowledge). Karma yoga unfolds one’s hidden potential. Bhakti Yoga cultures

the feelings and brings emotional intelligence. Raja Yoga helps to develop strong will and control the mind. Jnana Yoga renders the intellect to the subtle and beyond.

Harmony could be achieved by integrating these four major yogas. Anger can be eradicated by understanding the truth (Jnana yoga), by surrendering to supreme (Bhakti yoga), by self-less action (Karma Yoga) and through gaining mastery over mind (Raja Yoga).

Apart from Bhagavad-Gita, the other major texts that expounds on yogic concepts are a) Yoga Vasista and b) Patanjali Yoga Sutras

Anger has its origin in Manomaya Kosha. It is a disturbance or a powerful fluctuation of mind. It is a thought wave that disturbs the flow of prana, clouds viveka (power of discrimination), evades peace and cause diseases. Anger affects all koshas. Just like the fire, it burns (harm or destroy) self before it extends its tongue towards others. It is an enemy of man. It is a self-destruction tool. Repeated anger makes it as a second nature of man.

Anger dwells in Sukshma Shareera (subtle body). It infiltrates to Sthula Shareera (gross body). Uncontrolled repeated anger leads to violence (amarsha) revenge (dwesha) etc and finally condensed form of it reaches the Karana Shareera (causal body), influencing the trans migratory life (cycle of birth and death). Anger of Sthula Shareera can be addressed easily whereas anger of Sukshma Shareera requires constant practice to overcome. Anger of Karana Shareera (that arises out of previous karma or latent impression) is very difficult to address. The concept of State and Trait anger as in behaviour science could be corroborated here. State anger is momentary anger whereas Trait anger is carried over anger which is related to personality of a person.

Anger is said to be associated with Swadhistana Chakra, the predominant consciousness of creativity, instinctive realms of emotions. Its location encompasses the genital and excretory regions where adrenaline glands and reproductive glands exists. Swadhistana chakra is very

important in self-development, with it being the storehouse to all our personal impressions and habits from past actions/lives. Anger issues could be worked on focusing on establishing balance at this chakra.

PATANJALI YOGA SUTRAS

Patanjali Yoga Sutras of Sage Patanjali is the primordial text providing foundation of classical Yoga philosophy. The 196 verses are the compilation of yoga philosophy from major traditional texts. Commentaries on Yoga Sutras by Swami Vivekananda (2012), IK Thaimini (2002) are considered to derive the concept of anger in this section.

Modifications of mind are called Vrittis. Accordingly anger being one of the strong modifications of the mind, is considered as a vritti. Hence attributes that Sage Patanjali assigns for vrittis implies for anger also. Vrittis by its nature are random, persistent, volatile, unpredictable, innumerable and changeable. Vrittis exists in both gross form and subtle form. They are like the seeds which germinate when condition becomes favourable. Anger is a vritti that exists in dormant state and manifests when there is a stimulus.

वृत्तयः पञ्चतस्यः क्लिष्टाऽक्लिष्टाः (PYS 1-5)

There are five classes of modifications, (some) painful and (others) not painful

Vrittis are of five types and are categorised as Klishta and Aklishta depending on their potential to cause suffering / afflictions or not. Accordingly, anger can also be classified as klishta (adharmic) or aklishta (dharmic).

मैत्रीकरुणामुदितोपेक्षाणां सुखदुःखपुण्यापुण्यविषयाणां भावनातश्चित्तप्रसादनम् ॥ (PYS 1-33)

Friendship, mercy, gladness and indifference being thought of in regard to subjects happy, unhappy, good and evil respectively, pacify the chitta.

A major part of life is concerned with the attitudes toward oneself and others. Fulfilment of attitudes contributes to satisfying life (peace of mind) and unfulfilment leads disturbance of mind (generally anger). In this verse, Sage Patanjali talks about developing positive attitude in order to have peace of mind by describing four types of people and the attitude one needs to develop towards each type of persons. They are cultivating feelings of friendliness towards those who are happy, compassion for those who are suffering, goodwill towards those who are virtuous, and indifference or neutrality towards those we perceive as wicked or evil.

Feeling of anger does not arise with a friend or loved one. Cultivating compassion towards people who are suffering make one not to get irritated, frustrated or impositioned because of them. Irritation, frustration are the milder version of anger. Cultivating complacency or joy towards virtuous or people who are doing good, makes us not to find fault in them and not to feel inadequate. Feeling of displeasure is the root of anger. Cultivating neutrality or disinterestedness towards wicked people makes us not to get angry or develop aversion towards them. Acceptance, tolerance and equality cannot be cultured when one is angry. Chittaprasadanam could be an effective anger management technique.

अविद्यास्मितारागद्वेषाभिनिवेशाः क्लेशाः ॥ (PYS 2-3) दुःखानुशयी द्वेषः ॥ (PYS 2-8)

The pain bearing obstructions are ignorance, egoism, attachment, aversion and clinging to life. (PYS 2-3) Aversion is that which dwells on pain (PYS 2-8).

Aversion (dvesha) a co-variate of anger, is one of the five obstructions stated in this verse. These obstructions are the cause of all misery and bear pain. Anger can only reap pain and suffering. Anger causes misery and hence is an obstacle in the path of yoga. Aversion is a modification that results from misery (anger) associated with some memory.

ते प्रतिप्रसवहेयाः सूक्ष्माः ॥ ध्यानहेयास्तद्बुद्धयः ॥ क्लेशमूलः कर्माशयो द्रुष्टाद्रुष्टजन्मवेदनियः ॥ सति मूले तद्विपको जात्यायुर्भोगाः ॥ (PYS 2-10,11,12,13)

The fine samskaras are to be conquered by resolving them into their causal state (2-10) By meditation, their (gross) modifications are to be rejected (2-11) The 'receptacle of works' has its root in these pain-bearing obstructions, and their experience is in this visible life, or in the unseen life. (2-12) So long as this root source exists, its contents will ripen into a birth, a life, and experience (2-13)

It is difficult to come out of these kleshas completely. They exist in their subtle form as latent impression (samskara) and pop up along the spiritual path at any point of time either in this birth or in the future births. The gross form of kleshas could be subdued / suppressed / controlled through Meditation. As long as kleshas exist in subtle form, one continues in the cycle of births and deaths.

Anger (aversion) being one of the kleshas, lies in both subtle and gross form. The gross form of anger could be managed through meditation. The subtle form is a determinant of trans-migratory life. The disturbing thoughts of anger arise out of our past actions and our karma (latent impression). When we really understand that anger is due to our own karma, our own perception, and our own way of looking at the situation and not due to the external factors, it is easy to find solution. It means overcoming anger is actually in one's hand and one's control.

योगाङ्गानुष्ठानादशुद्धिक्षये ज्ञानदीप्तिराविवेकख्यातेः ॥ (PYS 2-28)

By the practice of the different parts of Yoga, the impurities being destroyed, knowledge becomes effulgent up to discrimination.

Practice of yoga removes the impurities of mind, sharpens the viveka, light the awareness of truth.

Practice of Yaga will help to cultivate the attitudes as mention earlier or to replace disturbing thoughts with the opposite. Yoga is gaining mastery over one's own mind.

अहिंसासत्यास्तेयब्रह्मचर्यापरिग्रहा यमाः ॥ (PYS 2-30)

Non-killing, truthfulness, non-stealing, continence and non-receiving are called Yama

Among the various limbs of yoga, Yama (social discipline) is the first limb. In that Ahimsa is the first component. Ahimsa is absence of causing injury or damage to any being, in any manner. Ahimsa should be practiced at action level, speech level and also at thought level. Any act of

Himsa has its root in Anger. Anger is the himsa that one does it for oneself as well as also to others.

वितर्कबाधने प्रतिपक्षभावनम् ॥ (PYS 2-33)

To obstruct thoughts which are inimical to yoga, contrary thoughts should be brought.

When agitated by negative (evil) emotions, think of the opposite (divine) thoughts. Think of love when angry. When the thought of forgiveness is raised, anger gets subdued automatically. Similarly, Premabhava overpower the Dwesha Bhava when invoked. This could be one of the anger management technique. Similarly when in anger, think of some good thing that is loved most. For example, children may think of their mother, friend or a sweet that they love most.

वितर्का हिंसादयः कृतकारितानुमोदिता लोभक्रोधमोहपूर्वका मूढमध्याधिमात्रा दुःखाज्ञानानन्तफला इति प्रतिपक्षभावनम् ॥

(PYS 2-34)

The obstructions to Yoga are killing falsehood etc whether committed, caused or approved; either through avarice, or anger or ignorance; whether slight, middling or great; and they result in infinite ignorance and misery. This is (the method of) thinking the contrary.

Himsa and other vices (anger implied), be it mild, moderate or severe, should not only be carried out by oneself, but also not through others or by simply giving approval for a violent action or just by witnessing and not opposing it also. Every vicious thought will rebound, every thought of hatred is stored and bounce back later with misery.

Other vices imply anger is one among them. Hence one should not get angry in any way (direct or indirect) at any point of time. Anger of any degree (mild, moderate or severe), any mode (kayena, vacha, manasa) is condemned. Further it says that not only one should abstain becoming angry, but also should not encourage others to become angry or use others to express their anger. In short, anger is an impediment / obstruction whether committed, caused or approved. One should restrain from any act anger.

अहिंसाप्रतिष्ठायां तत्सन्निधौ वैरत्यागः ॥ (PYS 2-35)

Non-killing being established, in his presence all enmities cease (in others)

By practicing ahimsa, all enmities cease. For one who increasingly experiences the natural inner peace of a non-harming attitude, others give up their hostilities or aggression in return. When a person is firmly grounded in non-injury (ahimsa), other people who come near will naturally lose any feelings of hostility. Classical example for this is arch rival animals living harmoniously in the hermitage of great sages.

Summary: a) Anger is a modification of mind that can be righteous or non-righteous. We can infer that righteous anger is *aklishta* and non-righteous anger is *klishta*. b) anger is an obstacle c) State and Trait nature of anger could be derived e) any act of anger is condemned, be it mild, moderate or severe f) doing acts of anger or getting it done or approval of it also called sin g) anger management approaches dealt are 1) Dharana (concentration), 2) Dhyana (meditation), 3) Pratipaksha Bhavana (distraction towards opposite emotion), 5) Chitta Prasadana (developing positive attitudes), 6) practicing Ahimsa 7) Pratyahara and 8) Practicing Yoga

YOGA VASISTA

Yoga Vasista is the teachings of Sage Vasista to his student Rama when he was in Gurukul. Through various parables, the book goes into great detail surrounding the subtle intricacies of the mind, unravelling the multitude of layers to our very existence.

The concept of mental and bodily diseases is described in the Nirvana Prakarana. Diseases are of two types. *Adhija Vyadhi* (the psychosomatic, mental disorders primarily caused by the mind) and *Anadhija Vyadhi* (infections, accidents and diseases that afflict the body directly). *Adhija Vyadhis* are further classified as *Samanya* and *Sara Vyadhis*.

Repeated anger arousal in *Manomaya Kosha* turns into *Adhi* and then percolate to *Vijnanamaya kosha* causing dilution, memory loss and destruction of *Viveka* (discrimination ability). It percolates to *Pranamaya Kosha* causing disturbance in flow of *Prana*, imbalances in *Chakras*, blockage of *Nadis*. Further *Annamaya Kosha* is also affected affecting the digestion of food which leads to *ajeernatvam*, *atijeernatvam* and *kujeernatvam*. Anger paves way to many *Samanya* and *Sara vyadhis*. Angry behaviours may also lead to *anadhija vyadhis* (accidents self-harm).

A few quotes of Sage *Vasista* about anger are stated below

- a) A yogi should completely disassociate himself of all types of anger and hatred
- b) *Yama* will not approach those who have eradicated root of anger in the ocean of body
- c) Anger is one of the impure *vasanas* we have and a slight association with it is enough to afflict all our life.
- d) Great people are those who have minimized greatly the bootless delusion of anger
- e) *Jivanmuktas* are those whose minds have not experienced (or are not affected in this life by) anger which arise in them through their previous destiny.
- f) The mind will ever be tossed in the ocean of desires, being burnt by the fire of pains and gulped by the *boa-constrictor* (powerful snake) of anger.
- g) The pack of owls called passion and anger play in the *Akasha* of *Atman* during the night of restless desires enveloped with the intense gloom of dire delusion

Pratyahara and *Satsang* are the concepts emphasized in *Yoga Vasista* to ensure emotional stability and self-discipline. It says, enmities will cease in *Satsang*. Anger which is an internal enemy and also leads to external enmities can be overcome by just being with *Wise people* or *Jnanis*.

Summary: a) Anger having its origin in *Manomaya Kosha* affects other *koshas*, b) anger can cause *anadhija vyadhis* (accidents & infections), c) *Samanya* and *Sara adhis* indicate *State* and *Trait* nature, d) anger management approaches emphasized are 1) *Manaprashamana* (sublimation), 2) *Satsanga* (company of wise) and 3) *Pratyahara* (control over *Indriyas* – senses) e) adolescence is the right age to imbibe anger management skills f) Parables are effective tool for adolescent teaching g) mind-body relationship with respect to disease is well established

AYURVEDA:

Prakruti (Tridosha – kapha, vata, pitta) is the fundamental principle of ayurveda. All natural tendencies are dependent on *Shareerik Prakruti* of a person. According to Ayurveda, Anger is the result of imbalance in the tridosha. Excessive presence of pitta dosha leads to anger. Pitta is necessary for right understanding and judgment, but when it gets disturbed or out of balance, it creates misunderstanding and wrong judgment, leading to anger and hostility.

In charaka samhitha, it is mentioned that indulgence in *Kāma* (lust), *krodha* (anger), *lobha* (avarice), *irsya* (jealousy), *mana* (pride), *mada* (vanity), *shoka* (grief), *chinta* (anxiety), *udvega* (agitation), *harsha* (exhilaration) causes the vitiation of *manasik doshas* (*satva*, *rajas*, *tamas*). These further spoil *sharirik koshas* and cause diseases like *jvara* (fever), *atisara* (diarrhoea), *shosha* (emaciation), *meha* (diabetes) and *kustha* (skin disorder) etc.

तत्र प्रथमत एव तावदाद्याँल्लोभाभिद्रोह कोप प्रभवानष्टौ व्याधीन्निदानपूर्वेण क्रमेण व्याख्यास्यामः, तथा सूत्र सङ्ग्रहमात्रं चिकित्सायाः। चिकित्सितेषु चोत्तरकालं यथोपचित विकाराननुव्याख्यास्यामः ॥१५॥ (Ch.Ni. 1-15).

We shall describe the diagnosis as well as the time of treatment of 8 diseases (of ancient times) which are manifested as a result of greed, enmity and anger in the order of the Nidana (causative factors etc.) Later, other disease (along with those of this section) will be described.

According to this verse 8 types of diseases are caused by anger, enmity and greed and also how anger aggravates Pitta prakruti.

उष्णाम्णु लवण क्षार कटुकाजीर्णभोजनेभ्योऽतिसेवितेभ्यस्तथा तीक्ष्णातपान्नि सन्ताप श्रम क्रोध विषमाहारेभ्यश्च पित्तं प्रकोपमापद्यते ॥२२॥ (C.Ni. 1-22).

Intake of meals while suffering from indigestion and exposure to scorching sun, heat of fire, exhaustion, anger and irregular dieting. This aggravated Pitta approaches the site of Agni in the Amashaya (stomach including small intestine), follows the path of Rasa which is the first product of food after transformation, obstructs the channel of circulation of Rasa and sweet, impairs Agni due to its liquidity, extradites Agni from the site of digestion, inflicts pressure and spreads all over the body, thus causing Jvara (fever).

Pitta dosha aggravates when the food is consumed while angry. This aggravated Pitta approaches the site of Agni in the Amashaya (stomach including small intestine), follows the path of Rasa which is the first product of food after transformation. This obstructs the channel of circulation of Rasa and sweet, impairs Agni due to its liquidity, extradites Agni from the site of digestion, inflicts pressure and spreads all over the body, thus causing Jvara. This implies that anger brings disequilibrium of pitta dosha and leads to health issues like indigestion, fever. Psychological stress, like *udvega* (excitement), *soka* (anxiety) also leads to disequilibrium of vata dosha, whereas, pitta is the main dosha vitiated by *krodha* (anger)". Stressors (Stress inducing factors) recognized in Ayurveda can be classified as those causing physical stress, like excessive physical exercise, vigils, fasting, injury, exhaustion, uneven body postures, or psychological, like, anger, fear, grief, anxiety and environmental, like, high altitudes and prolonged exposures to intense heat of sun and fire.

Ayurveda has recognised anger as one of the psychological stress inducing factor. Unhealthy food, irregular and improper routine and mental perturbations like *bhaya* (fear), *krodha* (anger), *soka* (grief), *lobha* (greed), *moha* (attachment), *ayasa* (confusion) etc. cause all types of morbidities.(C.Ci.1/2/3)

Summary: a) Predominance of Pitta prakruti in body constitution leads to anger b) anger, unhealthy food and improper lifestyle are the cause of all types of morbidities c) anger management is possible by bringing balance among the three prakruties.

VIVEKA CHUDAMANI

The Viveka Chudamani of Adi Shankaracharya describes developing Viveka, the human faculty of discrimination. Discrimination between real (unchanging, eternal) and unreal (changing, temporal) is the key aspect in spiritual life. Anger is a terrible and destructive product of rajas which operates as a continuous outward thrust throwing the mind to vikshepa state. Rajas is the cause of bondage.

Anger is one of the Shadripu. (Swami Ranganathananda, 2008) A few verses referring anger are given below:

कामः क्रोधो लोभदम्भाद्यसूया लोभदम्भाभ्यसूया अहङ्कारेष्यामत्सराद्यास्तुघोराः । धर्माएतेराजसाः पुम्प्रवृत्तिर्यस्मादेषा तद्रजो बन्धहेतुः ॥ (VC 112)

Desire, anger, greed, hypocrisy, arrogance, jealousy, egoism, envy, etc.—these are the dreadful attributes of rajas, from which the worldly tendencies of man are produced. Rajas is therefore the cause of bondage in life.

Lust, anger, avarice, arrogance, spite, egoism, envy, jealousy etc – these are the dire attributes of rajas, from which the worldly tendency of man is produced. These expressions of Rajas take the mind to vikshepa state.

तिरोभूतेस्वात्मन्यमलतरतेजोवति पुमान् अनात्मानं मोहादहमिति शरीरं कलयति । ततः कामक्रोधप्रभृतिभिरमुंबन्धनगुणैः बन्धकगुणैः परं विक्षेपाख्या रजस उरुशक्तिर्व्यथयति ॥ (VC 140)

When a person's own Self of purest splendour is hidden from direct experience, that person, due to ignorance, comes to falsely identify with the body which is the non-Self. Then the merciless persecution of rajas (projecting power), binds the person down with fetters of lust, anger etc.

Man becomes rajasic out of ignorance by falsely identifying himself with his body. The great power of rajas called projecting power then sorely afflicts us through the binding shackles of lust anger etc. The fetters of anger are strong and they drift us up and down making the life miserable.

तमो द्वाभ्यां रजः सत्त्वात्सत्त्वं शुद्धेन नश्यति । तस्मात्सत्त्वमवष्टभ्य स्वाध्यासापनयं कुरु ॥ (VC 278)

Tamas is overcome both by rajas and satva; rajas by satva and satva by — purification. Therefore, taking recourse to satva, diligently put an end to your superimposition.

Superimposition of higher nature over the lower nature helps in negation the lower nature. Therefore, taking recourse to satva, diligently put an end to superimposition. Anger can be overpowered by practicing satva or culturing satvic qualities. Channelizing anger is an effective way. Tamasic anger should be converted into Rajasic anger and then Rajasic anger to Satvic anger and finally get rid of even Satvic anger.

Of the four Sadhana Chatustaya, Shadsampat talks about six virtues, areas of mental training, and attitudes that are cultivated to stabilize the mind and emotions. They are Shama (tranquillity), dama (training of senses), uparati (withdrawal), titiksha (forbiddance), shradha (faith) and samadhana (harmony). By acquiring Shadsampat, one can overcome anger.

Summary: a) Ignorance is the root of rajas, b) It is an internal enemy and is born out of rajas c) Anger management approach is to acquire shad sampat (the six virtues) and d) developing satva uproots Rajas.

TIRUKURRAL

A master piece of Tamil Literature, written by saint poet Thiruvalluvar has a chapter on Anger. It interprets the outgrowths of anger and advocate keeping patience at all backgrounds. It says anger is the wickedest enemy a man could have. Anger crushes one's perceptions and lessens strength of thinking and strait judgment. Anger also produces feeling of worried and clouds the brain, which influences one's development and comforts. The Tirukurral warns that anger gives rise to teeming troubles. It kills the face's smile and the heart's joy. Left uncontrolled, it will annihilate one. It burns even friends and family who try to intervene, and easily leads to injuring others.

Tirukurral, chapter 31- (301 to 310) : controlling anger (English meaning verse-wise)

- Restrain anger where anger will be effective; where it won't be, does it matter whether one restrains it or not?
- Where it can't have an impact, anger is harmful; where it can, there is still nothing more harmful.
- Erase your anger against anyone; only harm springs forth from it.
- Is there a foe other than anger, which annihilates smile and joy.
- If one seeks to protect oneself, control anger, lest anger destroys oneself.
- If you seek to protect yourself, curb your anger, lest anger destroys you.

- Anger, the fire known to destroy those who harbour it, will also burn down the lifeboat, namely, one's clan.
- One, who possesses anger as a trait, will perish with the unfailing precision of a hand that slams the ground.
- Even if taunted with a harmful deed, tantamount to toasting in a multi-tongued fire, better try not to be angered.
- If the heart doesn't harbour anger, one would attain instantly all that it aspires to.
- Those who yield to anger are as good as dead; those who've shed anger are in effect saints.

Summary: a) Anger is a wickedest enemy, b) It destroys self and the surrounding c) One should control anger before it controls the man.

SUBHASHITA

क्रोधो हि शत्रुः प्रथमो नराणाम् देहस्थितो देहविनाशनाय । यथा स्थितः काष्ठगतो हि वह्निः स एव वह्निः दहते शरीरम् ॥

Anger is foremost enemy of humankind, which inherently resides within oneself only to destroy him, just like fire which is enkindled by a piece of wood ends up burning the piece

क्रोधमूलो मनस्तापः क्रोधः संसारबन्धनम् । धर्मक्षयकरः क्रोधः तस्मात्क्रोधं परित्यज ॥

Anger is the root of anxiety and mental distress. It is anger that keeps people bound to a worldly life. It even destroys righteous qualities. Therefore, put away your anger.

अत्यन्तकोपः कटुका च वाणी दरिद्रता च स्वजनेषु वैरं । नीचप्रसङ्गः कुलहीनसेवा चिह्नानि देहे नरकस्थितानाम् ॥

Extreme of anger, harsh speech, poverty, enmity with relatives, association with evil men, service of people from not so good a family – these are the marks of people living in Hell

नित्यं क्रोधात्तपो रक्षेत् धर्मं रक्षेच्च मत्सरात् विद्यां मानापमानाभ्यामात्मानं तु प्रमादतः

Always protect penance from anger, save righteousness from jealousy, defend knowledge from (the clutches of) pride and contempt, protect oneself (soul) from misdeeds.

क्रोधो वैवस्वतो राजा तृष्णा वैतराणी नदी । विद्या कामदुघा धेनुः सन्तोषो नन्दनं वनम् ॥

Anger is the king of the kingdom of death. Desire reigns in hell. Knowledge is like the divine cow that gives you everything. To be happy is to be in paradise

ऊत्तमेच क्षणम् खोपो मध्यमम् गटिकद्वयम् आधमेस्यत् आहो रात्रम् पापिष्टे मरणान्ततः ॥

Anger lasts for few seconds in wise, for few minutes in average man, for a day in inferior man and for lifetime in bad people.

MAHA SANKALPA :

मम जन्मभ्यस जन्म प्रबुधी एतत् क्षण पर्यन्थम् बाल्ये वयसि कौमरे यौवने वार्धके च जाग्रत् स्वप्न सुशुष्या अवस्थाम्सु मनो वक् कय कर्मेन्द्रिय जनेन्द्रिय व्यापारै काम-क्रोध-लोभ-मोह-मध-मथ्सर्याधि सम्भविथानम् इह जन्मनि जन्मान्थरे च ज्ञान आज्ञान क्रुथानम् मह पथकनाम् महा पतथकनुमन्थ्रत्वदेनम् . . .

... forgive desire, anger, greed... done at physical, mental and verbal level. During maha sankalpa, prayer is made to forgive the acts of anger of all types. Concept of trikarana is employed here to express holisticity or completeness.

MANU SMRITI :

धृतिः क्षमा दमोऽस्तेयं शौचमिन्द्रियनिग्रहः । धीर्विद्या सत्यमक्रोधो दशकं धर्मलक्षणम् ॥ (6.92)

Meaning: Contentment, forgiveness, self-control, abstention from unrighteously appropriating anything, (obedience to the rules of) purification, coercion of the organs, wisdom, knowledge (of the supreme Soul), truthfulness, and abstention from anger, (form) the tenfold law.

क्रुद्धयन्तं न प्रतिक्रुध्येदाक्रुष्टः कुशलं वदेत् । सप्तद्वारावकीर्णां च न वाचमनृतां वदेत् (6.48)

Against an angry man let him not in return show anger, let him bless when he is cursed, and let him not utter speech, devoid of truth, scattered at the seven gates.

कामजेषु प्रसक्तो हि व्यसनेषु महीपतिः । वियुज्यतेऽर्थधर्माभ्यां क्रोधजेष्वात्मनैव तु ॥ (7.46)

Meaning : For a king who is attached to the vices springing from love of pleasure, loses his wealth and his virtue, but (he who is given) to those arising from anger, (loses) even his life.

Manu mentions ten *Dharma Lakshanas*. *akrodha* is one of these *lakshana* (attribute, sign of a dharmic person). The other nine are: Dhriti (patience), Kshama (forgiveness), Damah (temperance), Asteya (non-stealing), Shaucham (purity), Indriyaigraha (freedom from sensual craving), Dhi (reason), Vidya (knowledge), and Satyam (truth). Hence *akrodha* is an essential quality of a Dharmatma or one who is treading the path of Dharma.

Brahmacharya ashrama is also defined in Manusmriti

Summary : Manu mentions ten *Dharma Lakshanas*. *Akrodha* is one of these *lakshana* (attribute or sign of a dharmic person). Accordingly *Krodha* is adharmic. It also says anger should not be the response for anger. Anger ruins the life itself.

SUMMARY & CONCLUSION OF LITERARY REVIEW :

Anger is characterized by racing thoughts (*vega*). The mind becomes highly disturbed, agitated and hyper active. Speeding thoughts denotes weakness of mind. Anger symbolizes the weakest state of mind. Anger is associated with sudden surge of energy with great destructive potential. It is strengthened by repetition. Just like the fire, the more it is fed the more it becomes hungry. Anger is never satisfied. Anger destroys peace. It engulfs self and others. Following are the major outcomes of this literary review

- 1) Anger is condemned in all scriptures. Declared as an internal enemy. It is a negative emotion born out of rajasic nature. It destroys one life not only the present but also future births (determinant of trans migratory life) (BG, PYS, VC)
- 2) Rudra and Manyu are personified with wrath or anger. They represent powerful destruction forces to fight against evil forces & to uphold dharma (MS, SR, MNU)
- 3) Identified *trikarana* (three tools) concept for holistic assessment of any manifestation or phenomenon. In particular anger assessment is holistic considering its manifestations at *Kaya* (body / behaviour), *Vak* (speech / word) and at *Manas* (thought / mind) level (All scriptures). *Kaya*, *Vak* and *Manas* are inter-related and cannot be separated. However, predominance in each domain may be considered.

Figure 5: Pictorial representation of Kaya-Vak-Manas concept



- 4) Anger can be categorised as *Dharmic* (righteous) & *Adharmic* (non-righteous) – based on *pramanatraya* (three proofs) – kala (time), desha (situation /place) & patra (person) (Mahabharata)
- 5) Consequences of anger are painful, destructive and far reaching. It affects all aspects of life (all koshas) and leads to many psycho-somatic and other ailments (YV, PYS).
- 6) Interconnectedness of body, breath & mind is well established in scriptures. Healthy and clear body (environment), free flow of prana and peace of mind are the pre-requisite for any Sadhana (pursuit) (All Upanishads, YV)
- 7) Yama Niyama concepts of Patanjali Yoga sutras are emphasised in almost all scriptures to establish health and wellbeing indicating the importance of these concepts in management of anger issues (BG, VC).
- 8) Yogic techniques for anger management will be effective when they are grounded in yama niyama (PYS)
- 9) Adolescence (brahmacharya) is the right age to impart moral education or developing positive virtues to overcome anger through the life span. Parables are time tested technique to impart knowledge to adolescents (YV)
- 10) The crux of this literature review is the compilation of various anger management approaches / techniques. Controlling anger should be considered as the very first and foremost exercise by a

sadhaka (seeker), because it halts the growth, deceives the mind and flares up the ego. Controlling anger leads to emotional stability and wisdom. Considering the diversity and uniqueness of the human mind, scriptures have suggested many techniques or principles to gain mastery over mind. Following are the specific approaches that can be adopted or followed to overcome anger. They include

- a) **Manaprashamana** (Sublimation) – Sublimation of Anger. Anger when raised is generally dealt with either by suppression or by inappropriate expression. Both are harmful. Sublimation is a positive way of handling it. Sublimation is reducing the speed of thoughts. This process calms down the mind. Calming down the mind is considered as yoga (YV).
- b) **Pratipaksha Bhavana** (Distraction) – Shifting the mind from angry feeling to positive thought such as love, happiness etc. (PYS 2-33). Mind can be trained to shift the attention to the opposite feeling or emotion or concept. Popular pairs of opposites are good-bad, heat-cold, fame-insult, stretch-relax, expand-constrict and happiness-sorrow. (PYS)
- c) **Chittaprasadana** (tranquillity of mind) – **Patanjali Yoga Sutra**: By keeping the mind unagitated from external triggers, one can conquer anger. Patanjali Yoga Sutras explains how one can establish Chittaprasadana by developing attitude of friendship, compassion, delightfulness and indifference towards privileged, unprivileged, virtuous and non-virtuous people respectively (PYS).
- d) **Abhyasa & Vairagya** (practice & dispassion): Practice of life enriching activities and disassociate from life tarnishing activities helps in controlling the anger. Disciplined life, living in moderation helps to control anger. Best and most effective remedy for controlling anger is to make ceaseless and earnest effort to acquire jnana through ABHYASA and VAIRAGYA at kayena (action), vacha (speech) and manasa (mental) level. Abhyasa and

Vairagya are the companion practices that are prescribed in every scripture to culture the mind.(PYS, BG)

- e) **Sadguna** (positive traits) - developing daivi sampat (positive virtues) such as *ahimsa*, *kshama* (BG chapter 16, 13), Acquiring Shadsampat of Viveka Chudamani, attitude of *daya* (brihadaranyaka Upanishad Chapter 5, brahmana 1-3), adherence of *yama* and *niyama* (PYS), Getting rid of Arishadvarga – These traits restrict one from reacting to triggers of anger. (VC, BU, BG)
- f) **Parijnana (Prajna)** (Awareness) – Thinking and feeling of one's anger. Knowledge such as knowing what makes one angry; becoming aware that one is angry when angry; learning to respond instead of reacting to situations will help addressing anger issues. One should only work on oneself and not trying to make changes outside. Realising the truth is only the solution and not the environment around (PYS)
- g) **Iswara Pranidana** (surrendering) - Totally surrendering to the supreme, good or bad not taking the pride of ownership of doing. He is the creator, he is the administrator and he is the destroyer. The whole creation is his. Similarly feel that I did not get angry. It is the Manyu in me. Anger is exhibited in me by Manyu, not me (MU, PYS)
- h) **Ananta samapatti** (expansion): concepts of feeling of one-ness, Advaita philosophy, and Vasuidaiva kutumbakam helps in diffusing the anger. Sage Patanjali says practice of *āsana* helps in experiencing this ananta samapattibhyam (PYS).
- i) **Disha Nirdeshana** (channelize) – Turn the anger within you into Manyu or Rudra. Engage the energy or potential to fight against the bad or evil. Knowing one's personality, predominance of Prakruti or guna, one can choose to engage in suitable job or activities. This reduces the frustration and also helps in excelling in the field. Rajasic personality or Pitta predominance

people may opt to work in defence, police, patriotic and advocacy field. Ayurvedic science helps one to know their Shareera Prakruti (MS, SR).

- j) **Satsanga** (Company of wise) – Life in the company of sages, saints, yogis, scholars, gurus and mahatmas is a gatekeeper to liberation. Satsanga enlarges one's intelligence, destroys one's ignorance and one's psychological distress. Anger can be easily controlled in Satsanga. (YV)

To Conclude

ANGER is a negative emotion with high destructive potential

ANGER ASSESSMENT is HOLISTIC when assed at Kaya, Vak & Manas level

ANGER MANAGEMENT is possible through 10 techniques

PRACTICE of YOGA helps to remove impurities of MIND and BODY

* * * * *

**Benefits of Yoga Education in High School Curriculum for
Anger Management: A Randomized Control Study**

SECTION – 3

LITERATURE REVIEW

**(STUDY OF SCIENTIFIC LITERATURE /
PUBLISHED PAPERS)**



SECTION 3 : REVIEW OF SCIENTIFIC LITERATURE

This study of scientific literature is aimed to understand the concept of anger from the behavioural science perspective through published scientific literature. And also to study literature of yoga in schools and yoga for adolescents for promotion of mental health with particular reference to anger.

JUSTIFICATION FOR THE STUDY:

Research in the field of yoga in schools and anger assessment and management is in a primitive state. Initial literature review indicates that anger is a complex construct study and more so to evolve an effective holistic anger management program. The consequences of anger are multi-dimensional and have far reaching effects. This demands inter-disciplinary literature review. In depth review of scientific literature hence became critical for this study.

Inclusion Criteria :

Studies cited in PubMed Central, Science Direct and Google Scholars are included. Authors who shared the Paid Literatures upon request are included

Exclusion Criteria :

Studies before 2005 are not included unless they report key findings. A few papers on theory of anger or development of anger scales have an exception. Studies on chronic anger or its correlated categorised in DSM (Diagnostic and Statistical Manual of Mental Disorders) are excluded

Methods :

This review of scientific literature is carried out by reviewing different aspects of anger, adolescents and yoga separately. At the end a consolidation of all the sub sections is will be made to provide the rationale for the proposed research work. This section directly focuses on the

research studies on the concepts explained in the Introductory section (Section 1), where a brief understanding of the concept of anger and its management in adolescents were provided.

Concept of Anger :

Anger which enables a 'fight' response has been linked to hostility, aggression and violence especially in adolescents. As the distinction and connection between these three construct (AHA syndrome) has long been misunderstood, consideration of interplay of these constructs is essential in order to take forward the research work on these constructs (Julie, Meghan, Ronnie, Michael, 2006). There is a positive correlation among anger, hostility and aggression (Ramírez and Andreu, 2008) and the relation between these terms is mediated by moral disengagement (Rubio, Carrasco, Amor, 2016).

Prevalence of Anger & related issues in Adolescents:

Global scenario: According to indicators of school safety and crime 2015, USA, about 58% of public schools recorded incidents of physical attack or fight without weapon. Higher percentages of females (15%) than of males (13%) reported bullied. Higher percentage of males (7%) than of females (5%) reported being pushed, shoved, tripped, or spit on (NCES 2015). Amongst 94777 Japanese adolescents, 8.7% have experienced intense anger. Study further reports higher levels of intense anger among students who had history of smoking, alcohol use, skipping breakfast and using mobile phones for longer duration (Itani et al, 2016). Out of 1662 Malaysian adolescents, when angry, 7.1% have hit others, 25.1% have hit objects, 27.8% have become aggressive verbally (Rohany and Norisham, 2014). High attitude towards anger and aggressive behaviour was also found in 81% of 426 Malaysian adolescents (Chidiebere, Ma'rof, Hanina, Mohd, 2015). Turkish adolescents, 24% of the 2409, recorded very high rates of aggression scores (Dilek, Mahmut, Kevser, Tugba, 2016). Positive correlation between anger and suicide ideation is reported in 18.5% of 14537 Chinese adolescents suggesting suicide prevention programs should target at attenuating the severity of hostility, anger and physical aggression (Ping et al, 2012).

Indian Scenario: Angry behaviours, bullying, aggression are also on rise among the Indian adolescents. Study of 1500 Indian adolescents reported 23% of victims and 13% of perpetrators of violence. Study also reported high prevalence of bullying and adolescents exposed to violence had poorer school performance and adjustment scores (Munni and Mathi , 2006). About 18% of 5476 youths from different cities of India reported high aggression scores. Higher anger-aggression scores were observed in males than females and also in the age group of 16-19 years (Sharma, Palaniappan, Marimuthu, 2015). Parental anger styles tend to have strong impact on anger expression in Indian adolescent females (Kavitha and Manoj, 2014). Aggression has shown negative correlation with interpersonal and romantic relationships among Indian youth (Sharma and Mohan, 2013). Indian alcohol-dependent youths reported low levels of anger control, high level of trait anger and poor quality of life (Sharma, Suman, Pratima, Marimuthu, 2012).

Adolescent Anger & its outcomes:

Children having high scores of anger and aggression were reported less intelligent, rejected more by their parents, less identified with their parents' self-image and were less likely to express guilt (Rowell, Leonard, Eric, 2002). A meta-analytic study reports that anger has a strong predictive role in eliciting violence offences and has a strong correlation with cognitive distortion (Simona, Sebastian, Daniel, 2012). Intense, uncontrolled feelings of anger are often associated with an array of factors, including emotional arousability, social information processing, externalizing behaviour problems and contextual influences (John, Nicole, Nancy, Heather, 2005)

Adolescents with high trait anger have reported greater frequency and duration of anger episodes and have shown negative health, social and academic consequences (Colleen, David, Scott, 2014). Increased anger in adolescents was related to elevated levels of risk-taking behaviours. Further dispositional anger leads to higher risk-taking behaviour in adolescents (Jungmeen, Christopher, Kirby, 2015). Self-esteem in adolescents reported positive relationship with anger control and negative relationship with trait anger and anger expression. Further anger has negative relationship

with social support (Coskun, 2009). Positive relationship is observed between trait anger and proneness to shame in youth (Jennie and Bernice 2011).

Studies on adolescent population have documented significant association between anger and depression (Pullen et al 2015; Dale et al 2009) stress, suicidal attempts (Stephanie et al, 2009; Ahmad, 2007), conduct disorders, hyper tension, heart diseases, psychosomatic ailments (JoAnne, Sally, Carla 1997). In a study of prevalence of self-injury among 5685 adolescents, 14% of them reported having performed self-injury including suicidal ideation. One of the motivational factors for self-injury was anger and boys were most strongly motivated by sense of anger (Beata, Emilia, Maciej, Marcin, Ewa, 2016)

Anger has shown significant positive correlation with negative life events, drug use, anxiety and depressive symptoms and significant negative correlations with the adolescents' perceived family support, self-esteem, and optimism (Kathryn, Dianxu, Lisa, Tammy, Kirsti, 2008). Studies on premenstrual syndrome in adolescent girls reported high prevalence (59%) of anger/ irritability as a most common symptom (Raval et al, 2015; Doerte et al, 2014).

Anger Taxonomy:

Despite the universality of physiology, anger as an emotion demonstrates variations in terms of conceptualization, perception and expression of anger. Also anger is often blended with other strong emotions such as fear or sadness (Michael Potegal, Gerhard Stemmler, Charles Spielberger, 2010). A Meta analytic review on gender difference in emotion expression in children reports significant but very small difference of negative emotion expression in boys than girls. It also reported change in emotion expression as the age advances and found the shift in emotion expression in adolescent girls from less during childhood to high expression in adolescents (Tara and Amelia, 2013). Variations in anger experience is observed cross-culturally and intra culturally (Iris et al, 2010; Zoltan Kovecses, 2010)

Gender difference was significantly observed in anger expression in adults in a study conducted in India using STAXI-2 Hindi version with males having higher anger expression than females, which implies the need for developing gender specific anger management program (Mamta and Nov Rattan, 2013). Females were found to be predominantly victims in the study on prevalence of violence among Indian adolescents. Males were an important predictive factor for witnessing and perpetrating violence (Munni and Mathi, 2006). African American adolescence reported no gender difference in anger expression scores measured using two scales STAXI and FAS (Cheryl and Rodney, 2002).

Another intervention based pilot study indicated girls having higher levels of anger expression and lower levels of anger control than boys. However, their response to anger management program was better than boys as they showed greater improvement in both anger expression and anger control scores (Isaac Burt, 2015)

Anger Assessment :

While the emotion of anger has become an increasingly important part of clinical assessment, the theoretical and psychometric adequacy of the instruments used to assess anger have long been questioned.

Researchers across globe have developed various theories of anger and an array of psychometric scales to measure adolescent anger (Michael Potegal, Gerhard Stemmler, Charles Spielberger, 2010). The available anger scales use different frameworks and component of anger to assess such as state anger, trait anger, anger control, anger expression, anger suppression, anger hostility, anger rumination etc. Further these scales differ widely in conceptualization, assessment criterion and construct validity. (DiGiuseppe and Tafrate 2007) Below table shows available anger scales and the components they measure

Table 2 : Adolescent Anger Scales and Domains they measure

Sl No.	Authors	Measure	No of items	Dimensions
1	Gerard, Melissa, Bruce (1989)	Padiatric Anger Expression Scale (PAES)	15 items	Anger Out, Anger Control, Anger reflection, Anger suppression
2	Tangney et al (1996)	Anger Response Inventories - Children or Adolescents (ARI-A)	18 items	Anger arousal, Intentions, Maladaptive responses, behaviours, escapist-diffusing responses, cognitive reappraisals, long-term consequences
3	Smith, Furlong, Bates, Laughlin (1998) Furlong et al (2002) Ahmad (2007) Furlong et al (2012) Lucia et al (2015)	Multidimensional School Anger Inventory (MSAI) MSAI Revised MSAI Parsi Version MSAI - Abbreviated Version MSAI - Indonesian version	31 items 36 items 28 items 12 items 25 items	Anger Experience, Cynical attitude, Positive Coping, Destructive expression, Hostility, School anger experience, hostile outlook, Anger expression,
4	Burney and Jeffire (2001) Ezra and Sehvan (2009) Russel et al (2010)	Adolescent Anger Rating Scale (AARS) AARS Turkish Version AARS at Philippines	41 items	Instrumental Anger, Reactive Anger, Anger Control, Total Anger
5	Reyes et all (2003) Victoria, Anton, Spielberg (2003) Brunner, Spielberg (2009) Nualnong et al (2013)	State Trait Anger Expression Inventory (STAXI) - adolescents STAXI children and adolescents (STAXI CA) Spanish adaptation STAXI - 2 Child and Adolescent (STAXI 2 CA) STAXI - 2 (STAXI 2)	44 items 32 items 35 items 32 items	State Anger, Trait Anger, Anger Expression In, Anger Expression Out, Anger Control
6	Lindon et al (2003) Anne et al (2007)	Behaviour Anger Response Questionnaire (BARQ) BARQ for children (BARQ-C)	37 items 34 items	Direct Anger Out, Assertion, Social Support Seeing, Diffusion, Rumination, Avoidance
7	Maria, Jens V (2005)	Strategies of Anger Regulation in Adolescents (SAR-A)	18 items	Confrontations and harming, Distancing, Redirection of attention, Ignoring, Explanation and reappraisal, explanation and reconciliation, self-blaming reappraisal, humor
8	Steele et al (2009)	Anger Expression Scale for Children (AESC)	30 items	Trait Anger, Anger Expression, Anger In, Anger Control
9	Raul et al (2012)	Anger Inventory for Mexican Children (AIMC)	30 items	State Anger, Trait Anger Temperament, Anger Out, Anger Control,
10	DiGiuseppe, and Taftrate(2010)	Anger Regulated & Expression Scale (ARES)	75 items	Internalising Anger, Externalising Anger, Extent of Anger

In addition to these, there are number of scales for aggression, violence and hostility. While some of the scales have theoretically clear concepts, possess excellent psychometric properties and have multitude of uses in clinical and non-clinical settings, they appear to have the limitation of culture specificity and sensitivity. The words used to describe anger (e.g. word ‘mad’) have variety of meaning in different cultures. A study on language to express emotions in rating scales states that

the language which has evidence having understood cross culturally should only be used in rating scales (Barchard, Grob, Roe, 2016). A review study on adolescent anger expression reports that the available scales differ from one another as they measure different aspects of anger (Mathew, Berry 2008). Further a review study on adolescent school anger states that the available psychometric adolescent anger scales do not represent the construct adequately or comprehensively (Smith, Furlong, Peter 2006).

A study on cross-cultural assessment of emotions reports that the self-reporting questionnaires for anger must be adapted for cross-cultural usage and should not be back-translated. Consideration of cultural equivalence of the concept of anger is essential as these differences influence the meaning of words that are used to describe the concept (Manolete, Spielberger, 2011) Some scales have very few subscales and some have many. Number of components and the number of questions also vary from scale to scale. A few adolescent anger scales are standardized from the adult versions retaining the same items and subscale structure. This may be a deterrent for ensuring same factor structure across the age group. While these inventories are more focused on the experience, expression and control mechanisms, less attention is paid to cognitive changes and subjective experiences. There need to be more refined measures of anger to provide a integrative approach to anger assessment.

Anger Management Programs:

Considering the seriousness of the negative outcomes and long-term consequences associated with anger, researchers and clinicians have described a variety of intervention programs for anger management. Among these, cognitive-behavioural therapy (CBT) and skill based approaches are most widely studied and empirically validated. The techniques used in these approaches include affective education, relaxation training, cognitive restructuring, problem-solving skills, social skills training, counselling and conflict resolution. Most of these programs are multi-component in nature and custom made for the individual child or family. Meta-analysis of CBT studies in a variety of

treatment settings such as clinics, schools, residential treatment programs, and community centres shows effects in the moderate range (Denis et al, 2004).

Anger management in adolescence using cognitive-behavioural therapy social-skill training (Selahattin, Coskun, Engin, 2012; Herrmann, McWhirter, 2003) and psycho educational programs are studied in various clinical and non-clinical settings (Kristin, 2005). Meta-analysis and review studies on school based anger management programs report low sample size, multiple measures and lack of clarity in methodology as limitations (Graham, Michael, 2005) and also state that there remains no clear consensus on the efficacy of these treatments. Considering this, an editorial on the school based approaches for anger management states that there is a growing consensus among researchers to develop effective anger management programs for school children (Furlong, 2015).

Emotional regulation, an ability to modulate emotional response to anger is recognized as an important skill in adolescents for ensuring mental health and healthy transition into adulthood. (Nancy Eisenberg, Tracy, Natalie, 2010). However, providing age-appropriate and socially relevant program to develop these skills is a challenge. School-based yoga programs may be appropriate for promoting healthy behaviours at a societal level by focusing on the prevention of negative patterns during the adolescent transition (Lisa, Jessica, Jessica, Ravi, Khalsa, 2013).

Yoga Education in Schools:

Among the school based approaches for anger management, a few programs have incorporated mind-body skills and relaxation which are known to be effective anger management skills. Studies on yoga in schools have reported multiple benefits of yoga for promoting mental health and well-being in high school children (Laura White, 2009). Yoga in schools is effective in managing academic stress, anxiety, ADHD, depression and improving cognitive abilities

Implementation of yoga in education in secondary schools is considered feasible and acceptable (Rangan, Nagendra, Ramachandra Bhat, 2009; Khalsa, Lynn, Deborah, Naomi, Stephen, 2011; Shirley et al, 2013; Bethany, Marina, Shirley, Khalsa, 2015). Yoga can be an appropriate scientific approach that has potential for maintaining mental health among children (Shirley, 2012; Ingunn and Usha, 2014). Studies indicate positive impact of yoga on adolescent cognitive abilities (Chaya, Nagendra, Sumithra, Anura, Srinivasan, 2012), stress alleviation (Laura White, 2012; Miron, Bar, Strulov, 2010; Vernon, Lynnette, Frank, 2003), personality development (Jai et al, 2016), self-awareness, self-regulation (Donna and Marshall, 2016), behavioral and emotional maturity (Laura White, 2009).

Review studies on yoga as clinical application, therapeutical and as complementary therapy for adolescent population reports that the majority of the studies report benefits from yoga, but the evidence is low in methodological quality and quantity (Mary, Robyn, Lauren, 2008; Gurjeet et al, 2009; Lisa, John, Colleen, Emily, 2010). Research on the effects of yoga on anger management in school settings is in its infancy. However, emerging evidence from the above studies suggests that these practices may hold promise. Although effectiveness of yoga in schools for promotion of mental health is seen, available studies suffer from several limitations regarding study design, sample size, methodology, standardization yoga module, absence of control group etc. (Shirley, 2012; Ingunn and Usha, 2014).

A review study on implementation of yoga in schools for improving social-emotional learning and positive student outcomes finds yoga as an effective way to help students to develop Self-regulation, mind-body awareness and physical fitness. Available studies show low to moderate methodological quality (Bethany, Marina, Shirley, Khalsa, 2015). Among the available handful of school based yoga studies on adolescent mental health, anger is measured in a few studies that too as a subscale component. These studies are discussed below:

Table 3: Yoga Intervention studies assessing anger

Author, Year & title	Methodology	Results
Verman et al (2003) Impact of stress reduction on negative school behaviour in adolescents	Adolescents (15-18 yrs), with high normal sys BP; n=45 ; Yoga: 25 (6F,19M), Cont: 20 (7F, 13M), Trans dental Meditation, 15 min group session and 15 min home practice for 4 months	No significant change in anger control and anger out. Anger in – girls in yoga exhibited decrease and control group slight increase. Boys no change.
Khalsa et al (2011) Evaluation of the Mental Health Benefits of Yoga in a Secondary School: A Preliminary Randomized Controlled Trial	11 th & 12 th std students N=121 : Yoga 74 (34F, 40M), Cont 47 (17F, 30M) Yoga Ed Program Average 27 sessions with weekly 2 /3 sessions	Anger being subscale of BASC & POMS, Significant decrease of anger control in yoga. Anger/hostility has shown no significant difference
Noggle et al (2012) Benefits of Yoga for Psychosocial Well-Being in a US High School Curriculum: A Preliminary Randomized Controlled Trial	11 th and 12 th std students n=51: Yoga 36, PE 15 Kripalu program based yoga . Yoga 28 sessions with 2/3 sessions per week	STAXI 2 - Anger Exp Out, Anger Exp In, Anger Control POMS scale anger / hostility No significant changes observed in any anger parameter
Joshua et al (2016) Yoga in public school improves adolescent mood and affect	11 th & 12 th std students N 47, Yoga & PE Single yoga session to see immediate effect	Significantly greater decreases in anger, depression, and fatigue in yoga group compared to PE.

While these studies provide indicative results, as a study to assess efficacy of yoga for anger management, they considerably lack in conceptualization, methodology and measures used to assess anger in adolescents.

To summarize, anger is a strong influencing factor for many negative behaviour, conduct and health issues. Intertwined with other strong negative emotions such as fear and sadness, anger represents one of the most challenging emotions encountered by researchers. Adolescence is a transitional period which requires coping mechanisms to deal with Anger. Schools and colleges can pave way to implement such coping mechanisms as a part of curriculum in schools. There is also a need to develop rating scale to assess anger in Indian adolescent population. Research on Yoga in schools for promoting mental health is in its primitive stage. Study of yoga for anger management has not been carried out in its true sense. No studies have been carried out yoga as an anger management program in adolescent population in India. Review studies on yoga in schools calls for standardisation of yoga module. Lack of conceptual clarity, inadequate measurement tools and

dearth for holistic programs for anger management has become an impediment for progress of research work in the field.

Indian classical texts provide clarity on the concept of anger. They have enumerated many approaches to overcome anger. Great scope for developing a rating scale based on the principles derived from these texts. Yama Niyama concepts of astanga yoga provide strong base to overcome anger. Relaxation and meditation techniques have provided substantial evidence to calm down the mind and to neutralise the sympathetic arousal. Yoga module emphasising yama niyama for anger management in adolescents need to be explored. In this scenario, study of adolescent anger and its assessment and management in a holistic way has become essential and critical.

**Benefits of Yoga Education in High School Curriculum for
Anger Management: A Randomized Control Study**

SECTION – 4

AIM & OBJECTIVES



SECTION 4 : AIM & OBJECTIVES

Conclusions drawn from the findings of literature review from both perspectives were corroborated and considered while drawing the aims and objectives of the study.

Aim of the Study:

To study efficacy of yoga education in schools for anger management in high school children.

Objectives of the study :

- 1) To find out the prevalence of anger in Indian high school children
- 2) To develop a psychometric scale to assess anger in high school children in the Indian context.
- 3) To develop a Yoga module for anger management in adolescents based on IAYT (Integrated Approach to Yoga Therapy) and MEMT (Mastering Emotion Technique) concept
- 4) To assess the efficacy of yoga education for anger management in high school children

JUSTIFICATIONS FOR THE STUDY

Studies on adolescent anger and yoga in schools are in primitive stage. Hence there is ample scope for the proposed study. Below listed are a few scopes and justifications.

Table 4: Scope and Justification for the study

Scope	Justification
Study of adolescent anger is essential and critical considering its maladaptive nature and far reaching consequences. Require coping mechanisms for a smooth transition to adulthood	Research on adolescent anger is in its primitive stage especially in India.
Schools and Colleges can offer programs for anger management	Feasibility of available skill development based programs as curriculum is not studied adequately. Studies on yoga have shown promising results.
Lack of conceptual clarity on definition, demarcation and components of anger as a construct. Scope for evolving a new concept or theory of understanding anger	Literary review has provided sufficient evidences on the concept of anger and its assessment holistically.
Vedic science provides immense conceptual resources to contribute to the psychological processes in general	Anger is not explored yet. No studies are cited assessing anger in adolescence.
Available anger assessment inventories do not represent the anger construct adequately	Proposed scale aims holistic assessment of anger using Trikarana concept – assessing anger at behaviour, speech and mind level. No studies reported in this direction in any population.
Yoga in schools is popular and feasible. However, efficacy of these programs for establishing mental health is not examined thoroughly.	No studies cited for assessing yoga in schools as a curriculum in India especially for promoting mental health.
Handful of studies assessing anger with yoga as an intervention	Anger measured using scales that have anger as a subscale or adult versions. No research work is cited studying anger as a single parameter and yoga intervention
Ample scope for standardisation of yoga module for anger management. There is no specific IAYT module for anger management.	Development of yoga module emphasising yama–niyama concepts.

Hypothesis

The study hypothesised that in yoga practice in high schools will help the children to reduce anger. The anger scale developed will assess anger holistically and the yoga module is robust enough to bring the change in anger scores.

Null hypothesis

There is no significant difference in anger scores of yoga group and control group in the pre-post study. The anger scale lacks reliability and validity aspects and the module fails to show significant benefit for anger management.

**Benefits of Yoga Education in High School Curriculum for
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SECTION – 5 A

Prevalence Study

(Methods and Materials – Survey study)



SECTION 5 : METHODS

Considering the multi-dimensional aspect of the study, different approaches were adopted for each objective. Accordingly this methods section comprises of 4 phases with Phase A, B, C, D as Prevalence study, Anger Scale Development, Yoga Module Development and Pre-post Intervention study respectively.

PHASE A : PREVALENCE OF ANGER AMONG INDIAN HIGH SCHOOL CHILDREN

Participants :

The participants of the study are healthy adolescents studying in English medium private co-education high schools in south Bangalore.

Sample Size :

Sample size of 1220 had a good baseline match of gender but not of age, details of which are shown in Table 5.

Table 5: Age wise and gender wise details of the samples

	Girls	Boys	Total
12 years	42 (58%)	30 (42%)	72
13 years	325 (52%)	304 (48%)	629
14 years	163 (58%)	119 (42%)	282
15 years	103 (54%)	88 (46%)	191
16 years	46 (71%)	19 (29%)	65
Total	652 (53%)	568 (47%)	1220

Selection and Sources of Participants:

About 14 high schools were approached, out of which only 8 schools consented to participate in the study. They are Sri. Krishna International School, Prarthana School, Our School, Mahila Seva Samaja, Bangalore High School, Community High School, JSS High School and a private Coaching Centre.

Convenient sampling was done in terms of school selection, considering only those schools located in and around Banashankari (south Bangalore) area. All eligible children in that school / section participated in the processes. Hence no selection was done at children level.

Inclusion Criteria:

- Children studying in 8th, 9th and 10th standard in the age group of 12 to 16 years who have the ability to read, write and communicate in English
- Both boys & girls who are willing to participate in the study are included

Exclusion Criteria:

- Children who need special attention and support to fill up the self-reporting scales were excluded.

Ethical Consideration :

Consent to participate in the survey was obtained in writing by the children and approval obtained from school authorities. Authorized tools and software were used for measurements and assessment.

Design of the Study:

It is school based survey method with cross sectional study conducted in high schools with one time data collection in groups.

Variables of the study :

Anger is studied as an independent parameter in this survey. The components of anger include a) State Anger, b) Trait Anger, c) Anger Expression Out, d) Anger Expression In and e) Anger Control

Tools used in the study :

State-Trait Anger Expression Inventory-Child and Adolescents (STAXI 2 CA scale), a 35 item self-report scale that measures anger experience, expression and control in adolescents was used. STAXI-2 CA has five subscales - State anger - level of anger experienced at the time of testing (10 items), Trait Anger - general predisposition to experience anger (10 items), Anger Expression-Out - the tendency to express angry feelings verbally or via physically aggressive (5 items), Anger Expression-In - The tendency to experience anger but only express it inwardly (5 items) and Anger-Control How often expression or suppression of angry feelings are controlled using calming strategies (5 items). The tool divides the adolescent age range into three groups 9-11 years, 12-14 years and 15-18 years. Having 3 point Likert scale, STAXI-2 CA has high reliability and validity scores with internal consistency (α) 0.87 for state anger, 0.80 for trait anger, 0.70 for anger expression out, 0.71 for anger expression in and 0.79 for anger control in normative samples. STAXI-2-CA is a well-structured and most widely used inventory. It provides data of normative samples as well as conversion tables of percentile scores and t-scores, gender and age group wise.

Procedure:

As a pilot work, the scale was first administered to 30 children to assess the feasibility, content understanding, etc. A psychologist was present while administering the scale. Some of the terms like 'grumpy' 'grouchy' were difficult to understand by the children in the Indian context. The meaning of such terms was explained to the group and incorporated within brackets in the scale. Then the scale was administered in 8 schools during academic hours around 10 to 11 am. The scale was administered in groups (section wise). Children were briefed about the study and then asked to fill up the questionnaire. Children were instructed to answer all the questions and they took around 5-10 minutes for filling up the questionnaire.

Data Extraction:

Totally 1236 children participated in the survey, out of which 16 questionnaire were incomplete. The sample size mentioned above (1220) is after excluding these 16 cases. Raw scores of each subscale corresponding to each participant were converted into percentile scores and t-scores with the help of conversion tables provided in the professional manual. Percentile scores were used to calculate intensity of anger, gender difference and significance through multivariate analysis using General Linear Model; T scores were used to calculate correlation using bivariate Pearson product-moment correlation coefficients.

Data Analysis:

Multivariate General Linear Model and Pearson product-moment correlation coefficients were used to analyse the data.

Note : Remaining part such as analysis, results, discussion etc. are discussed in the respective sections, after explaining the methods of all four phases

**Benefits of Yoga Education in High School Curriculum for
Anger Management: A Randomized Control Study**

SECTION – 5 B

Scale Development

**(Methods and Materials - Development
of Adolescent Anger Assessment
Scale)**



PHASE B : DEVELOPMENT OF ANGER ASSESSMENT SCALE

Thorough survey of Indian classical texts and scientific paper was able to arrive at a holistic understanding of anger and its measurement. Accordingly, operational definitions were drawn and process of scale development using statistical methods was designed.

Participants:

High school children in the age group of 12 to 16 years.

Sample Size:

Different sample size was considered at different stages of scale development. 127 children participated in test-retest reliability process and 757 Children participated in the final validation of the scale.

Selection and Source of Participants :

Source of participants was mainly from high schools and community. Convenient sampling was done in terms of school selection by considering only those schools located in and around Banashankari area (south Bangalore). All eligible children in that school / section participated in the processes. Hence no selection was done at children level.

Inclusion Criteria:

Children studying in high schools willing to take part in the study are included. Both boys and girls are included.

Exclusion Criteria:

Children who had difficulty in understanding the rating scale in English and unable to respond were excluded. Incomplete questionnaires were excluded

Ethical considerations:

Written consent was obtained from the children and school authorities at every process of scale development. Authorized tools and software were used for measurements and assessment.

Design of the study:

It is a self-reporting Likert scale with items pertaining to anger experience and anger expressions at three domains - behavioural (*kayena*), verbal (*vacha*) and mental (*manasa*). This type of classification of anger has not been done in any other anger scale. The scale is developed in English language. Statistical procedures and tests were conducted throughout the process of scale development while considering the subjective feedback from experts and stakeholders.

The language and words were repeatedly modified after each administration and expert comments. Considering the overlapping and intricacies of anger expression at different domains, only predominance of expression in a particular domain is considered. Hence the process does not involve developing subscales.

Operational Definition:

Anger is defined as a wave of thought, born out of predominance in rajasic nature in the body. Anger has its origin in emotional body and manifests at three domains - behavioural (*kayena*), verbal (*vacha*) and mental (*manasa*). At these domains anger is either expressed directly or indirectly or in a veiled manner as detailed below.

Behavioural (*Kayena*): Anger expressions using body or gestures including assaultive, hurtful, rebellious, aggression, violent acts and self-defeating or addictive behaviours, walking out, crying, frowning face etc. i.e. Any action using body or gesture to express anger.

Verbal (*Vacha*): Anger expression through verbal assault, abusive language, insults, contempt, disrespect, cynical humour, disgust, blaming, teasing, name calling, critical, becoming silent etc. i.e. any expression through speech or voice including modulation of tone and tenor .

Mental (*Manasa*): Expressions of anger in terms of hostility, resentful, withdrawal, disruptive, non-cooperation, revengeful, suspicious, argumentative, unsympathetic etc. and many mental illness (depression) and psychosomatic disorders (hypertension).

Procedure :

The scale development process was carried out at three stages. First stage involved item generation and scale construction. In the second stage tests of reliability and validity were carried out and in the last stage, a pilot study was conducted on a larger sample.

Stage 1 : construction of scale

Scale construction process involved item generation, focus group discussions, expert consultation and item reduction.

Item generation: An item pool of 228 items was prepared with the help of the existing anger scales, anger quiz, questionnaires, tridosha (Ayurvedic concept of classifying body nature based on body constituents) and triguna (personality type classified based on the nature or attributes) questionnaires for children, and spiritual and psychological texts.

Focus group discussion (FGD): A group discussion was held with a group of high school children (40 children both girls and boys) in a school. A psychologist who is also a child counselor was present during the discussion of around 30 minutes. The purpose was to understand the concept of anger from their perspective. Structured questions such as what makes you angry? List the most common factors that cause anger in you? What do you do when you get angry? What could prevent

you from getting angry? Is there a change in your anger level from childhood to now? were asked and noted the responses.

Expert consultation : Many adolescent psychologists, psychiatrists, counsellors, teachers, parents, yoga experts were met and discussed to understand the concept of anger, triggers, expression styles and coping mechanisms that Indian adolescents adopt. To name a few Dr. Ruchi, Psychiatrist, Abhaya Hospital, Dr. Ravi Prakash, Psychiatrist MS Ramaiah Medical College, Dr. Meena Jain, the then Chairman of Child Welfare Committee, Govt of Karnataka, Dr. Gururaj Kharjagi, Sri. Gururaj, Educationist and a Counsellor, Smt. Shylaja Pratap, teacher.

Based on the FGD and experts' opinion, a list of triggers or factors that influence anger in adolescents was generated. Most common factors emerged are frustration, negation to their demands, teasing or bullying, humiliation or embarrassment, failures, discipline, injustice, possession deprived, stress, health, appearance, sibling rivalry. Another round of FGD was held informally with a group of 10 boys and 10 girls to prioritise these factors. Among the factors frustration, imposing discipline, injustice, teasing or bullying and negation to their demands are the main causes for anger in adolescents.

Construction of statements: Considering the input from FGDs and opinion, 100 statements covering the key trigger factors were selected. These 100 statements were further reviewed for readability, content validation and statements giving similar meaning. After thorough investigation, 58 items were retained.

Expert validation : These 58 statements were sent to five yoga experts, five psychologists, five parents, five teachers and 20 students (10 girls and 10 boys) to review the statements with respect to their relevance, category they belong (behaviour, verbal and mental) and also additional comments if any.

Based on their input, a 50 item scale was constructed with three response options ‘never’, ‘sometimes’ and ‘most of the times’. This 50 items list included questions pertaining to anger experience and anger expression.

At each stage of scale construction, emphasis was made to empirical evidences such as considering stakeholders’ particularly the children’s opinion and comments. Involvement of all stakeholders provided practical insights about the concept of anger, its dynamics and coping up mechanisms from different perspective. Items were also rephrased and reworded considering their input. For example the word ‘often’ was replaced with ‘most of the times’. ‘Stubborn’ is another word children could not relate themselves.

Stage 2 : tests of validity & reliability

Second phase processes included repeated administration of the scales to arrive at optimum number of items and to establish statistical reliability and validity aspects of the scale.

Field administration: The 50 items scale was administered to 278 high school children (102 boys and 176 girls). Factor analysis was carried out using varimax rotation with three factors to assess the loading on each of the component. . Thirty five items which had loading more than 0.350 were retained and remaining 15 items were dropped.

Field test 1 : The 35 items, 3 point Likert scale was administered to 60 children (29 boys and 31 girls). Along with this newly developed scale, existing western adolescent anger scale (STAXI 2 CA) was also administered and total scores were compared.

Field test 2: Further item reduction was tried considering the outcome of the field test. The items which received most response as never were discussed with the guides and removed from the list. Final scale with 23 items was made ready to use. The scale comprised of 9 items related to anger

experience, 4 each for expression at behaviour, verbal and mind level. Two opposite meaning items were included to use as a lie detector.

Test-retest reliability: The final scale of 23 items was administered twice with a gap of 10 days to 127 children in a school to assess the test-retest reliability. 't' test was carried out to ascertain gender wise mean and standard deviation scores for Test and Retest. Just to reconfirm the correlation coefficient, paired sample t test was also carried out.

Stage 3 - field study:

The final scale with 23 items was administered to 757 children and analysed for alpha coefficient and factor loading on each item. Cronbach's Alpha coefficient and Principal Component analysis were carried out.

**Benefits of Yoga Education in High School Curriculum for
Anger Management: A Randomized Control Study**

SECTION – 5 C

Module Development

**(Methods and Materials - Development
of Integrated Yoga Module for Anger
Management)**



PHASE C : DEVELOPMENT OF INTEGRATED YOGA MODULE FOR ANGER MANAGEMENT

This phase is aimed at developing an effective school based yoga module for anger management in high school children.

Source:

The major sources of references for the development of this module are a) Outcomes of Literary Survey, b) Integrated Approach to Yoga Therapy (IAYT) module and c) SVYASA developed Mastering Emotion Technique (MEMT). Another major source is the empirical knowledge of the yoga exponents. Many scholars in the field of yoga and children such as yogis, adolescent psychologists and educationists are consulted personally to seek guidance for development of this module.

Several texts on yoga for children were also formed basis for this module development. A few texts to mention are :

- a) Student Upliftment and Rejuvenation through Yoga (SURYA) (Omkar SN, 2007)
- b) Yoga for Children published by AYUSH Dept, Govt of Karnataka (AYUSH 2012)
- c) Yoga Education for Children Volume 1 and 2 by Bihar School of Yoga (Swami Satyananda Saraswati (1985) and Swami Niranjananada Saraswati (2008)
- d) Yoga Shastra (for Children) Volume 1-4 : by BKS Iyengar Institute (RIMMI 2012)
- e) Yoga for Children by Swati Chanchani & Rajiv Chanchani (Swati Chanchani, 1995)
- f) Krida Yoga books from Vivekananda Kendra Prakashan Trust (SVYASA 2009)
- g) Physical Education Text Books for 8th, 9th and 10th Standard. (which has Yoga Components) – (PE Text Book, 2014)
- h) Yoga – The Science of Holistic Living by Vivekananda Kendra Patrika (SVYASA 1988)
- i) Integrated Approach of Yoga Therapy for Positive Health by Dr. R Nagaratna & Dr. HR Nagendra (Nagaratna R and Nagendra HR 2008)

IAYT (Integrated Approach to Yoga Therapy)

In the yogic parlance, human existence is explained in five sheaths or levels. Annamaya (gross), Pranamaya (energy), Manomaya (emotion), Vijnanamaya (intellect) & Anandamaya (bliss) Koshas. Further texts like Yoga Vasista provides evidences for mind-body interconnectedness in defining, diagnosing and treating illnesses of all kinds. IAYT is a holistic yoga model which prescribes yogic techniques for each of these koshas. It is an integrative approach for a holistic treatment of any disease or condition. Yogic techniques in IAYT include 8 components of Astanga Yoga, Karma Yoga, Bhakti Yoga, Jnana Yoga, Kriyas (cleansing techniques) & Yogic Diet. (Maria DC, Aarti J, Nagarathna R, Jayashree R, 2014). Based on this understanding, yogic practices that can be prescribed for different koshas are as below.

- 1) Annamaya Kosha – Asanas, Yogic Diet, Loosening Exercise, Kriyas. A stable and comfortable posture engages musculo-skeletal system in a systematic way. This provides stimulation and deep relaxation to internal organs by thoroughly massaging them. Asanas promote functioning of all organs and systems in a harmonious manner. The mind becomes tranquil and expanded in a natural effortless way. The dualities of the mind cease to exist (PYS-2-47). Loosening exercises strengthens the muscles, reduces joint stiffness and increases physical stamina. Balanced diet (or Satvic diet) helps to maintain internal harmony in the body and well as mind. Kriyas not only purify the body but also has many hidden benefits (HYP 2-23)
- 2) Pranamaya Kosha – Breathing Exercises, Pranayama. Breathing exercises increases awareness about breathing, corrects breathing pattern, clears the lungs and increases lung capacity. Pranayamas helps to slow down breathing rate and restores autonomic balance thereby calming the mind. It promotes free flow of energy in the body thereby makes the mind ready for higher practices.

- 3) Manomaya Kosha – Meditations and Devotional Sessions, Bhakti Yoga. Guided meditations engaging the mind to promote emotional regulation. Devotional sessions or Bhakti yoga promotes emotional culture
- 4) Vijnanamaya Kosha – Lectures, Counselling, Satsang and Jnana Yoga. All these provide right knowledge. Eradicate ignorance. Helps to understand realities of life.
- 5) Anandamaya Kosha - Karma Yoga - leads to a state of blissful silence with awareness, perfect poise and freedom of choice where the mind is not troubled by stressful thoughts and fears

Mastering Emotion Technique (MEMT):

MEMT is an advanced meditation technique developed by SVYASA to gain mastery over emotions. This guided meditation includes 10 steps which include 1) Opening Prayer, 2) Thinking & Feeling 3) Art of sublimation, 4) Invoke, Intensify and diffuse, 5) Pair of Opposites 6) Action towards different emotional situations 7) Death experience 8) Silence, 9) Resolve 10) Closing Prayer. This technique promotes emotional intelligence and emotional regulation. Regular practice of this meditation helps in thinning down negative emotions and culturing positive emotions there by leading to bliss, peace and good health.

Yoga Module Design:

The module is intended to be taught in schools for high school children, during the academic periods for a period of 4 months with weekly two sessions of 35 minutes each. Home assignments and daily home practice are also part of the module. Since the module is being used in schools, utmost care is taken to minimize the religious facets of yoga and only essential practices are included.

Development Process :

The module comprises of 4 broad components 1) Opening & closing prayers 2) Asanas & Pranayamas, 3) Meditation & Relaxations and 4) Jnana Yoga (Knowledge Points).

Opening & Closing Prayers:

Bhagavad Gita chapter 2, verse 62 and 63 which explain the genesis of anger and its consequences were used as opening prayer. Verse 37 of chapter 3 was the closing prayer. The prayers followed by the narration of the meanings.

Opening Prayer:

डुह्वेश्वनुद्विगमनाह् सुखेशु विगतस्प्रिहह् एतरागभयक्रोधह् स्थितधेर् मुनिर् उच्यते । द्यायतो विशयान् पुम्सह् सन्नास् तेशुपजायते षन्नात् सन्जायते कामह् कामात् क्रोधोभिजायते । (BG 2-62,63)

Meaning: Looking at an object or thing, an interest develops, which leads to attachment then the desire to have it. From the desire, anger arises. Anger leads to mesmerisation which leads to loss of memory which in turn leads to loss of decision making ability. With that one ruins.

Closing Prayer

काम एश क्रोध एश रजोगुण समुद्भवह् महाशनो महापाप्मा विद्ध्येनम् इह वैरिनम् । (BG 3-37)

Meaning : Desire and Anger are same. It arises from the Rajasic nature. Anger is most sinful and heinous character. It is said to be biggest enemy of man.

Asanas & Breathing Techniques:

Asanas which empirically considered promoting concentration, attention and balance were included. Surya Namaskara (Sun Salutation) which is a complete mind-body yogic program is the key part of this section is known to multiple benefits. (Milind VB, Pratima MB, Govind BT, Anil DS, 2011). Physiological and Psychological benefits are explained during the practice.

Considering the age of adolescence and school environment, only breathing practices such as conscious breathing, deep abdominal were included. These practices intended to bring awareness and relaxation.

Short Meditations:

Short meditations for anger management was developed based on MEMT and the anger management approaches derived from literary review. This meditation was developed in close consultation with the authors of MEMT. The anger management techniques that are adopted in this meditation are a) Parijnana (awareness), b) Manaprashamana (sublimation) c) Pratipaksha Bhavana (shifting of emotions) and d) Sadguna (development of positive virtues). The adaptation of these concepts is explained below:

- a) Parijnana (awareness) – Thinking and feeling of anger by evoking, intensifying and defusing the anger emotion. This helps children to become aware of their anger emotion, physiological and psychological changes that occur during anger.
- b) Manaprashamana (sublimation) – Art of sublimation of anger thoughts. The process involves recognition of speedy repeatedness of angry thoughts. Then the speed is reduced by slowing down the thought process.
- c) Pratipaksha Bhavana (shifting of emotions) – It is a process of experiencing opposite emotions one after the other. This helps in recognising the emotion and to evoke an opposite emotion swiftly. Pair of opposite emotions such as heat and cold; stretch and relax; happiness and sorrow are employed in this process.
- d) Sadguna (developing positive virtue): Forgiveness is one of the positive virtues that turn away the anger emotion. Forgiveness appears crucial to the treatment of anger because so much anger arises from condemning those who have trespassed against us. This process involves calling or re-living an instance once with anger driven response and recalling it again with forgiveness driven response.

These techniques were embedded in the form of short meditations that had three parts. The first part is the preparation process, middle part is one of the above mentioned techniques and concluding process is the final part. Preparation process includes sitting or adopting a meditative posture, bringing the mind-body-breath awareness by just observing the posture and breathing. The concluding process includes observing silence and to make a resolve. Further repeating the resolve 5 times and then chanting of shanti mantra.

With the above concept, a script for each process was prepared ensuring children are able to a) relate themselves with the meditation b) experience the meditation and c) understand and internalize the concepts of coping mechanisms stated in meditation. It was further reviewed, modified in consultation with experts. The final script was then voice recorded in the form of guided meditation to check the time taken and voice modulation etc. Then a trial run of this was run with a small group of four high school children (two boys and two girls) at home setting. With some minor corrections, the four short meditations, each of 5 minutes duration was ready to use it in the proposed yoga module for anger management.

Knowledge Points (Jnana Yoga)

Under the premise of Jnana yoga a few aspects of Yama, Niyama and Pratyahara which are relevant to Anger and also physiology and psychology of anger are considered. The topics included Ahimsa, Brahmacharya, Santosha, Swadhyaya, Iswara Pranidana, Pratyahara, Yogic concept of food and brief introduction to physiology and psychology of anger. Jnana yoga topics are taught through short stories and lectures.

Under these heading, the points to be highlighted were noted down and stated as against each topic in the yoga module developed which was sent to expert validation.

Home Practice & Dairy maintenance:

Yoga module also suggested home practice of suryanamaskar every day morning. A check list of daily routine activities was prepared and given to students. Students were asked to fill up the same on a daily basis and return it to the researcher at the end of the program. The components included in the check list were date, work-up time, went-to-bed time, number of Surya Namaskara practiced, number of times got angry, with whom, situation, ate non-veg, ate-junk food etc.

Module Validation :

Then a frame work of yoga module was prepared providing justification for each technique selected. This framework was sent to 5 yoga experts and 5 psychologists. They were asked to review the module in terms of it's

- a) Relevance meaning whether the technique significantly works for anger
- b) Specificity meaning whether the technique is precise for anger;
- c) Sensitivity meaning whether the technique is sensitive to be practiced by children (both girls and boys) in school setting; and its
- d) Evidence base whether the reference or justification provided is adequate?.

They were further requested to rate their response with respect to each of the above points in a Likert scale of 0 - 4 with 0 being the least score and 4 being the highest score.

The comments received were reviewed, incorporated wherever necessary and the final module was made ready to be used in the main study. The yoga module has the following components. Time earmarked for practice of each component is mentioned in the framework. However minor adjustment in time, whenever needed is made.

- | | | |
|--------------------------------|---|------------|
| 1) Opening and closing prayers | : | 5 minutes |
| 2) Asanas & Pranayamas | : | 20 minutes |
| 3) Meditation | : | 5 minutes |
| 4) Knowledge Points | : | 5 minutes |

The framework of yoga module sent to experts is placed as an annexure to this report.

PHASE D : PRE-POST CONTROL STUDY

PARTICIPANTS:

Sample / Subjects:

High School students studying in 8th standard, aged between 13 – 15 years participated in the study.

Both boys and girls participated in the study.

Sample size & sampling technique:

Total of 187 children participated in the study with 114 children in yoga group and 73 children in control group. Convenient sampling was done in selecting the schools by considering schools located in and around Banashankari Area (South Bangalore). Block Randomization technique was used to select the yoga group and control group in that school. As sections were considered as Blocks, selection or sampling at the student level has not been done. Understood from the schools that randomisation considering gender, names and academic performances was already done by them while allotting the sections.

Sample size was considered keeping in mind to carry out the study in two schools with minimum of 60 children per school. Each school has different number of children per section. Hence the sample size included 109 students in one school and 78 students in the second school.

Also, a pre-post yoga study in school which recorded one of the anger parameter was considered to recheck the sample size. G-Power software estimated a sample size of 170 based on this study.

Selection and Source of Participants :

Out of 11 schools approached, following two schools gave permission to conduct the study. One more school did give the permission but the subject did not fit into inclusion criteria. Hence could not consider that school.

- 1) Jyoti Kendriya Vidhyalaya (JKV), Kanakapura Road, Bengaluru
- 2) Auden High School (AHS), BSK 3rd Stage, Bengaluru

JKV had 5 sections of 8th standard and AHS had 2 sections of 8th Standard. School authorities insisted to choose groups section wise for convenience of allotting periods. Since yoga sessions were conducted during school hours, they had to identify two free periods and allot. Details of section wise sample is given below

Table 6: Sample details

Schools	Yoga Group			Control Group			School wise total
	Section	Boys	Girls	Section	Boys	Girls	
JKV	Section A & Section E	29	42	Section D & Section C	15	23	109
AHS	Section B	26	17	Section A	18	17	78
Group wise total →		55	59		33	40	187

Inclusion criteria:

English Medium CBSC syllabus private schools were included in the study. Schools having minimum two sections of 8th standard were included in the study.

- 1) 8th Standard students willing to participate in the programme.
- 2) Both male and female students in the age group of 13 to 15 years.

Exclusion criteria:

Students who have severe physical impairment or medical conditions that interfere in administration of tools or proposed yoga intervention are excluded from the study.

Ethical Issues:

Study proposal with all the details was submitted to schools and permission was obtained to conduct the study. Consent forms were sent to parents of each child in both yoga and control group. Only those children for whom consent was received were part of the study. Assent form was also signed by children of both the groups.

The study was co-guided by two external experts in the field. They are associated with two reputed govt institutions (Indian Institute of Science and National Institute for Mental Health And Neuro Sciences). Official communication was sent by SVYASA to both the institutions and clearance was obtained for co-guidance.

The project proposal (synopsis) was submitted to Institutional Ethical Committee (IEC) and presentation was made accordingly.

Design of the Study:

Pre-post control study conducted in two high schools with yoga as an intervention and passive control group. Both the schools had yoga and control groups. A kind of multi-location study. Yoga sessions were conducted during school hours. School authorities re-adjusted the time table and allotted two periods for yoga sessions for the yoga group. The control group hence attended regular classes and therefore called passive control group.

Parameters studied & Measurement tools (scales) used:

- 1) Anger experience and expression at Behavioural, Verbal and Mental were assessed using Anger Scale developed for the study (KVM Anger Scale). This self-reporting scale has 23 items, measuring anger at *Kayena* (behavioural), *Vacha* (verbal) and *Manasa* (Mental) domains. There are no sub-scales.
- 2) State Anger, Trait Anger, Anger Expression-Out, Anger Expression-In and Anger Control using State-Trait Anger Expression Inventory-Child and Adolescents (STAXI 2 CA scale), a 35 item self-report scale. This highly structured scales provides manual for the total normative sample as well as three male age groups and three female age groups. The manual also provides range of percentile scores based on which degree or magnitude of proneness to anger experience, expression and anger control could be assessed.

Time & Duration of Yoga Intervention:

Yoga sessions were conducted for four months with a frequency of 2 sessions per week. Each session was for 40 minutes (1 period). Yoga sessions were conducted on school working days except the days of examinations or special events held in schools. Children used to take about 3 to 5 minutes to assemble at Yoga Room after the bell rang. Literally Yoga Sessions ran for about 35 minutes.

Yoga sessions were conducted in JKV on Mondays (10.40 to 11.20 & 11.20 to 1200) & Thursdays (10.00 to 10.40 and 10.40 to 11.20) and in AHS on Tuesdays (11.00 to 11.40) and Saturdays (10.20 to 11.00).

Yoga sessions were conducted in-door in the auditorium with tiled flooring. Children practiced yoga in their uniform in bare feet, removing the shoes and socks. Waist belts were either loosened or removed. JKV had salwar suit as uniform for girls and pant shirt for boys. AHS had pant, shirt & blazer as uniform for both girls and boys. In AHS children used to remove their blazer during practice. Girl children during menstrual cycle were refrained from practicing yogic postures but are asked to be present in the session. Children whose health condition did not permit practicing yoga postures were asked to remain seated in the session. Eventhough Jamkhanas were provided, children opted to practice asanas on the floor.

Yoga Module:

Yoga sessions were conducted by the researchers herself and with the assistance of one YIC certified instructor for demo and monitoring. The module developed for the study was used. Practice of 6 rounds of Surya Namaskara (Sun Salutation) was part of every session. Children were asked to practice surya namaskara at home from the 2nd month onwards once they learnt it in school sessions. Children submitted the dairy sheets duly signed by their parents on the last day of the program.



Figure 6 : Yoga session at Jyoti Kendriya Vidyalaya



Figure 7 : Opening Prayer at Auden High School



Figure 7 : Yoga sessions at Auden High School

Procedure Scale Administration & Data Collection :

These self-reporting questionnaires were administered in group. Printed copy of the questionnaire was given to each subject and a brief explanation of each question was orally made to facilitate the children in filling up the same. Questionnaires were administered by a psychologist in presence of researcher.



Figure 8 : Administration of Anger Scale at Auden High School

Demographical data was collected using a demographic information form. Data about the food habits was collected using a questionnaire developed by a leading Medical Nutritionist and a Yoga Scholar Ms. Gauri Rokkam. Both demographic information form and diet questionnaire are placed as annexure to this report.

First a brief note on the proposed study was given to all the children explaining all the details including their right to withdraw from the study at any point of time. Along with this, the consent form and assent forms were also distributed. Templates of all these documents are placed as annexure to this report.

Since yoga and control group was selected using randomization at section level, children had no choice or chance of selection to either group. However, they had the option to be part of the study or not. Children in the yoga section had the option to be part of the study or not, but were instructed by the school to remain seated in the yoga classes. Since the yoga sessions were held during academic hours, abandoning a few students was not allowed.

Children carried home the brief note on the study, consent form and assent form to get their parents' consent. The forms were collected from the children on the next day. Then demographic form, anger-scales and diet questionnaires were administered to all those students whose consent was obtained. A psychologist was present during administration of scales and questionnaire.

Data Extraction:

The data obtained from Self-reporting anger scales were entered in an excel sheet for all the subjects. The manual of STAXI-2-CA scale provides percentile and t scores of every raw day. The percentile and t score data was computed for all the raw data.

Data Analysis :

Total of 187 subject's data was considered for analysis which comprised of 114 children (55 boys and 59 girls) in yoga group and 73 children (33 boys and 40 girls) in control group. Further in all, there were 88 boys and 99 girls in the study. The age group of children was 13-14 years. The data was analysed using SPSS 10 software.

There was no attrition in the sample size during the study. The reason could be the yoga classes were held during academic hours (periods) and children had limited options. There was one boy in the yoga group with loco-motor disability and had difficulty to perform yoga postures. He used to remain in his class room and not attended yoga sessions. Hence he was considered as a subject in control group. The difference in sample size of yoga group and control group was due to non-receiving the consent from many students in control group.

Anger assessment is done using two psychometric scales i.e. KVM Anger Scale and STAXI-2-CA scale. As the scales differ in subscales and domains of measurement, data obtained from two scales were analysed separately and interpreted accordingly. Using paired t-test most of the comparisons are made. Pre-post data of both yoga and control group is further analysed with reference to gender and school.

SECTION 6 : ANALYSIS AND RESULTS

This section includes analysis of all phases of the study and the results. However, each phase has been analysed independently and the details are presented one after the other. Results of all the four phases are presented at the end of this section. Phase C being module development did not have any statistical analysis of data. Hence analysis details of Phase A, B & D are given below:

Phase A - Prevalence Study:

The data obtained from the survey of 1220 children was checked for gender wise mean and standard deviation scores.

Table 7 : Mean and Standard Deviation of Raw scores

	SA	TA	AO	AI	AC
Scoring Range	10-30	10-30	5-15	5-15	5-15
Girls (n=652)	14.9 (± 3.7)	19.5 (± 3.6)	9.1 (± 2.0)	9.2 (± 2.2)	11.6 (± 2.3)
Boys (n=568)	15.4 (± 3.8)	18.9 (± 3.3)	9.2 (± 2.1)	9.2 (± 2.1)	11.1 (± 2.4)
Total (n=1220)	15.1 (± 3.8)	19.2 (± 3.5)	9.1 (± 2.0)	9.2 (± 2.2)	11.4 (± 2.4)

SA-State Anger, TA-Trait Anger, AO-Anger Expression Out, AI-Anger Expression In, AC-Anger Control

Table 7 shows mean and standard deviation values of all five components of anger gender wise. The scoring range is also provided in the table. We can see overall higher levels of trait anger scores (19.2 with Girls 19.5 and Boys 18.9) which indicate higher levels of anger proneness. It also implies these children frequently experience intense angers without specific provocation. Not much of the difference is seen gender wise.

Moderate level of anger control (11.4) is also observed denoting the tendency to control expression of anger. Anger control scores are highly influenced by anger suppression in addition to calming down modalities.

Marginal difference is seen between genders in all subscale except anger expression-in. Clarity on these will be obtained analysing the percentile and t scores in the subsequent tables.

Table 8: Intensity of anger among boys and girls

Intensity →		Low < 25		Average 25-75		Elevated 76-89		Very High 90+	
Subscale ↓		Count	% within gender	Count	% within gender	Count	% within gender	Count	% within gender
SA	F	0	.0%	287	44.0%	313	48.0%	52	8.0%
	M	40	7.0%	346	60.9%	143	25.2%	39	6.9%
	Total	40	3.3%	633	51.9%	456	37.4%	91	7.5%
TA	F	131	20.1%	336	51.5%	122	18.7%	63	9.7%
	M	110	19.4%	366	64.4%	64	11.3%	28	4.9%
	Total	241	19.8%	702	57.5%	186	15.2%	91	7.5%
AE-O	F	242	37.1%	263	40.3%	103	15.8%	44	6.7%
	M	100	17.6%	375	66.1%	66	11.6%	27	4.6%
	Total	342	28.1%	638	52.3%	169	13.9%	70	5.7%
AE-I	F	35	5.4%	332	50.9%	186	28.5%	99	15.2%
	M	27	4.8%	292	51.4%	168	29.6%	81	14.3%
	Total	62	5.1%	624	51.1%	354	29.0%	180	14.8%
AC	F	129	19.8%	262	40.2%	132	20.2%	129	19.8%
	M	59	10.4%	283	49.8%	82	14.4%	144	25.4%
	Total	188	15.4%	545	44.7%	214	17.5%	273	22.4%

SA: State Anger; TA: Trait Anger; AE-O: Anger Expression Out; AE-I: Anger Expression In; AC: Anger Control ; M: Boys; F: Girls

Table 8 reports 37.4 % of children experiencing elevated state anger and 7.5% of children experiencing very high state anger indicating children experiencing relatively intense anger at the time of scale administration. More number of girls (48%% and 8%) than boys (25.2% and 6.9%) have shown higher levels elevated and very high state anger respectively.

Trait anger scores also show more in girls (18.7% and 9.7%) than boys (11.3% and 4.9%) in elevated and very high trait anger zone respectively. Prevalence of 23% (15.2+7.5) of children experiencing higher levels of trait anger indicate very high proneness to anger which is an alarming situation.

Relatively low anger expression-out scores indicate children having hostile attitude and exhibit aggressive tendencies with a lesser frequency. More girls (15.8% and 6.7%) than boys (11.6% and 4.6%) have shown elevated and very high anger expression out.

High anger-expression-in scores of elevated (29%) and very high level (14.8%) indicate adolescents hold-in or suppress anger when they are angry or furious.

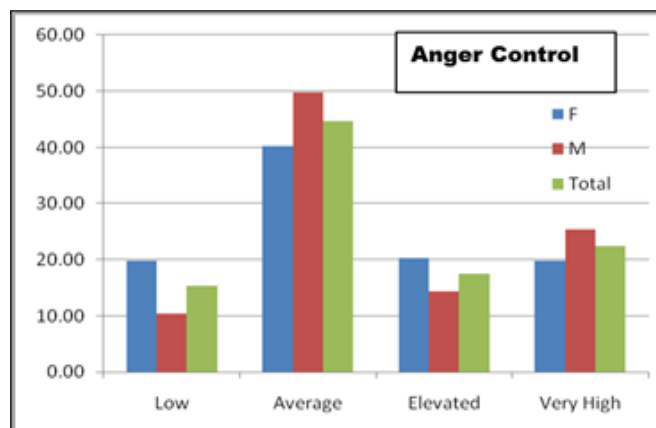
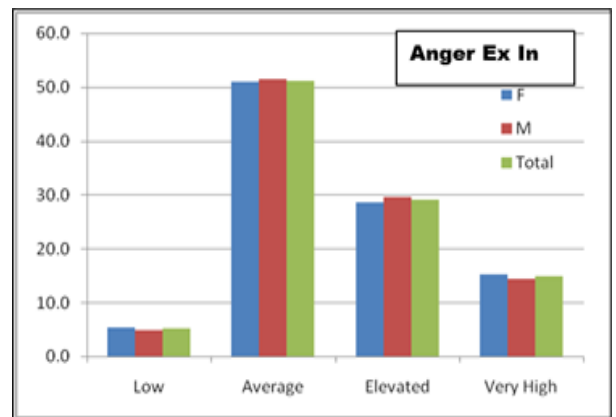
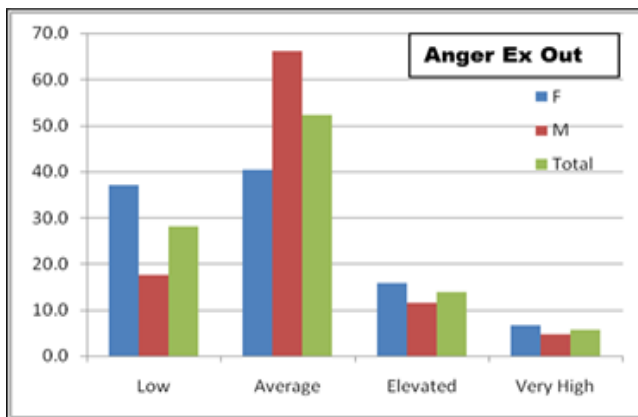
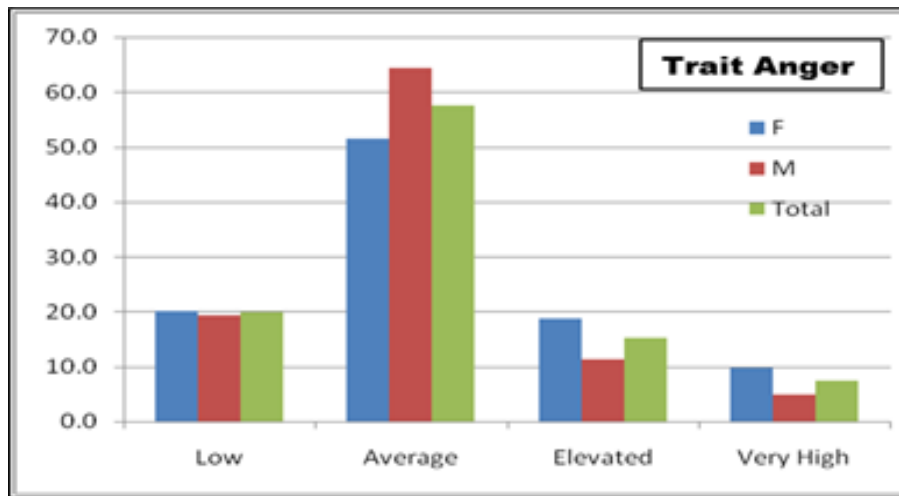
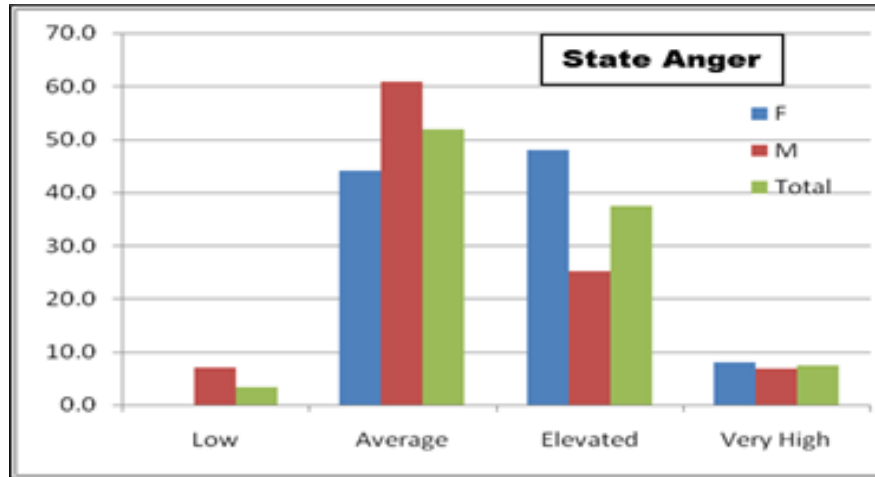
In all 15%, 45%, 18%, 22% of children reported low, average, elevated and very high extent of anger control respectively. This shows 60% of the children are in low and average anger control zone where they tend to control angry feelings less frequently, modulating their anger expression or hiding their feelings. 40% of children have shown elevated and very high anger control abilities. This indicates children are tolerant, understanding and or patient with others. They control their anger by relaxing, calming down and reducing the feelings.

Mixed pattern is seen in gender wise distribution across intensity levels of anger control. Low anger control (girls 20%, boys 10%), average control (girls 40%, boys 50%), elevated anger control (girls 20%, boys 15%) and very high anger control (girls 20%, boys 25%). Further analysis is needed to substantiate gender difference.

Chi-square test was carried out to examine the gender difference in all the subscale. P value of $p=0.001$ for all the subscales except Anger Expression in ($p=0.912$) indicate significant gender difference in State Anger, Trait Anger, Anger Expression Out and Anger Control.

Graphical representation of percentage scores gender wise against each anger component is given in Figure 9.

Figure 9 - graphical representation of anger scores (5 graphs)



Correlation between state anger and trait anger and also state and trait anger with anger expression out, anger expression in and anger control was carried out using Pearson product correlation test. The results are shown in Table 9 below.

Table 9 : Pearson Correlation of Anger Experience, expression and control

Gender		TA	AO	AI	AC
Girls (n=652)	SA	.411**	.356**	-.076	-.110**
	TA	1	.542**	.013	-.061
Boys (n=568)	SA	.469**	.477**	.053	-.075
	TA	1	.566**	.189**	-.007
Total (n=1220)	SA	.439**	.395**	-.017	-.098**
	TA	1	.535**	.085**	-.045

SA-State Anger, TA Trait Anger, AO-Anger Expression Out, AI-Anger Expression In, AC-Anger Control

Table 9 provides gender-wise correlation coefficient values for all subscales. High positive correlation between State and Trait Anger (0.439) with 0.001 level of significance is observed. Similarly high positive correlation is seen between Anger expression out and State anger (0.395) as well as Trait anger (0.535). However, Anger expression-in and Anger control have not shown any strong correlation with either state or trait anger.

Frequency of answering various options for Q 21 (I show my anger) and Q 25 (I hide my anger) were analysed to check the authenticity of response for two contradictory questions. Both questions were answered 'never' by 85 (6.98%) children and 'often' by 35 (2.87%) children which indicates high reliability of responses.

Phase B - Scale Development study – ANALYSIS & RESULTS

The scale development had three stages. Stage 1 was explained in methodology section as it was more of conceptual and construction of the scale. The remaining two stages are analysed here below:

Stage 2 : Tests of Validity and Reliability

Field administration: The 50 items scale was administered to 278 high school children (102 boys and 176 girls). Cronbach's alpha coefficient for the 50 items scale administered to 278 children recorded as α 0.803.

The interrelations among the 50 items were examined in order to identify the underlying structure of these variables. Factor loadings on each of the item tell us how much of the variation in a variable. Higher the loading, higher is the uniqueness of the item. In order to ensure each item in the scale is different from other or it elicit a unique response pattern, factor analysis is being carried out. Factor analysis carried out using varimax rotation with three factors to assess the loading on each of the 50 component. Factor loading against each item is shown in Table 10.

Table 10 : Rotated component matrix

Item No.	Component			Item No.	Component			Item No.	Component		
	1	2	3		1	2	3		1	2	3
1	.107	.484	-.144	18	.004	.137	.430	35	.467	-.033	-.151
2	.060	.503	-.236	19	-.055	.452	.222	36	.154	-.456	.372
3	.320	.057	-.114	20	.173	.142	.179	37	-.042	-.140	.482
4	.450	.090	-.049	21	-.046	.074	.228	38	.439	.300	-.009
5	.387	.075	-.004	22	-.103	.277	.283	39	.139	.089	.295
6	.222	.115	.075	23	.547	.133	-.334	40	.177	.524	-.054
7	.046	.104	.403	24	.540	.079	.002	41	.475	.246	.150
8	.220	.268	.130	25	.273	.443	.127	42	-.111	.381	.249
9	-.095	.344	.359	26	.378	.490	.025	43	.116	.177	.375
10	.497	-.018	-.019	27	.497	-.094	-.042	44	.381	.277	.013
11	.284	-.104	.092	28	.595	-.063	-.120	45	.021	-.068	.417
12	-.091	.290	.270	29	.345	-.084	.085	46	-.170	-.075	.377
13	.249	.389	.035	30	.220	-.100	.337	47	-.033	.358	.141
14	.263	.197	.318	31	.392	.102	.102	48	.500	-.161	.080
15	-.215	.550	.250	32	.519	.025	.039	49	.056	.283	.389
16	-.222	.478	.129	33	.392	.033	.156	50	.246	.441	.039
17	.218	.400	.232	34	.344	.152	.278				

Factor loading was considered as a base for item reduction. In consultation with the guide and experts 35 items were selected. The items selected had a loading more than 0.350.

Field test1 : The 35 items, 3 point Likert scale was administered to 60 children (29 boys and 31 girls). Along with this new developed scale, existing western adolescent anger scale (STAXI 2 CA) was also administered and total scores were compared. The Cronbach's Alpha coefficient at this stage was 0.771. The paired t test run on the total scores of new scale and that of STAXI-2CA scale provided scores as in Table 11.

Table 11: Field test - Paired Sample Statistics

Scales	Mean	Std. Deviation	Std Error Mean
New Scale (35 items)	66.18	8.154	1.053
STAXI 2 CA (35 items)	65.53	7.965	1.028

Paired sample t test results further provide strong evidence ($t = 0.599$ and $p=0.551$) that the two scales do not differ in terms of their total mean scores.

Test-retest reliability: The final scale of 23 items was administered twice with a gap of 10 days to 127 children in a school to assess the test-retest reliability. Pearson Correlation coefficient was observed at $r= 0.835$ which is significant at the 0.001 level (2-tailed). 't' test was carried out to ascertain gender wise mean and standard deviation scores for Test and Retest (Table 12)

Table 12 : Test-retest – total means scores gender wise

	Gender	N	Mean	Std. Deviation	Std. Error Mean
TT	F	63	47.32	5.866	.739
	M	64	46.09	6.399	.800
RTT	F	63	47.92	5.305	.668
	M	64	46.59	5.215	.652

Just to reconfirm the correlation coefficient, paired sample t test was carried out. No statistically significant difference was observed in mean scores of test and retest as shown in Table 14.

Table 14 : Paired Samples Test

Pair 1 TT – RTT	Paired Differences				t	df	Sig. (2-tailed)	
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower				Upper
	-.551	3.389	.301	-1.146	.044	-1.833	126	.069

Stage 3 – Field Study:

The final scale with 23 items was administered to 757 children. **Cronbach’s Alpha coefficient value was observed at 0.804.** Principal Component analysis value for each item is given in table 15. Table 16 below shows the 23 items and their domains.

Table 15: Item wise factor loading

Item No	Loading	Item No	Loading	Item No	Loading
Item 1	.524	Item 9	.559	Item 17	.559
Item 2	.456	Item 10	.365	Item 18	.430
Item 3	.456	Item 11	.403	Item 19	.531
Item 4	.482	Item 12	.576	Item 20	.546
Item 5	.397	Item 13	.415	Item 21	.369
Item 6	.440	Item 14	.415	Item 22	.397
Item 7	.546	Item 15	.558	Item 23	.470
Item 8	.464	Item 16	.510		

Items are listed as annexure 1

Table 16 : Items in the Scale and their predominant domain

Item No.	Items	domain
1	I get angry easily / very fast	Experience
2	Whenever I become angry, I express it off	Lie Detector(1)
3	I feel like scolding or yelling whenever I am angry	Verbal
4	I don't feel like doing anything when I am angry	Mental
5	I get angry when I am compared	Experience
6	I take out my anger on things around me	Behaviour
7	I become angry when I am mocked at or teased	Experience
8	When I am angry, I do not know what to do and what I do	Behaviour
9	I get angry when I am treated unfairly	Experience
10	Whenever I am angry, others can easily understand that I am angry by looking at my face or behaviour	Behaviour
11	When I am angry, I don't have control on what I speak	Verbal
12	I try not to show my anger	Lie detector (2)
13	I get frustrated when I don't get what I want	Experience
14	I become rough with others when I am angry	Behaviour
15	When others shout at me or tease me, I do the same with them	Verbal
16	It takes long time for me to come out of my angry state	Mental
17	I feel angry when others irritate me	Experience
18	When I am angry I do not listen to anyone (I become stubborn)	Mental
19	I become angry when I am blamed for something I did not do	Experience
20	I feel annoyed when others don't appreciate my work	Experience
21	I don't feel normal when I am angry	Mental
22	I get angry when I cannot cope with the expectations of myself /others	Experience
23	I humiliate others when I am angry	Verbal

Experience of Anger – 9 items; Expression at Kaya level (Behavioural) - 4 items; Expression at Vak level (Verbal) - 4 items; Expression at Manas level (Mental) - 4 items; Lie Detector - 2 items

Manual for Adolescent Anger Assessment Scale

This adolescent anger scale is developed by S-VYSASA Yoga University, Bengaluru with help of the financial assistance by Sri Venkateswara Vedic University, Tirupati. A detailed study of Vedic and Vedantic texts was carried out to draw the principles to derive the concept of anger. In addition, thorough study of scientific literature on adolescent anger was also carried out. Psychometric properties of the scale were obtained by adopting scale development processes throughout the process.

Introduction: Anger is the most common and most frequently occurring negative emotion and its consequences have far reaching effects. Therefore assessment of anger is essential. Because of the complexity of anger experience and expression, the problem of assessing anger to a large extent still remains unsolved. The difficulty in assessing anger is that the concept of anger is not very well defined and is in a state of flux. There are several terms that are virtually synonymous such as aggression, hostility etc.

Examination of various instruments developed to assess anger reveals that these scales have not incorporated many important components of anger. The scales provide narrow and limited information and do not deal with all aspects of anger.

Study of ancient Indian Scriptures reveal that assessment of anger is holistic and complete when measured at physical (kaya), verbal (vak) and mental (mana) domains. These domains are intertwined so closely that it is difficult to distinguish and assess separately. Hence predominant expression or experience at these domains is considered for assessment.

Adolescence is a transitional period with its own peculiar characteristics and problems. It is also a period where they establish patterns of behaviour and make lifestyle choices that have long-lasting effects on future health and well-being. Adolescent anger has been associated with devastating social events besides its negative impact on academic performance. Problems associated with

inappropriate expressions of anger are the most serious concerns of parents, educators, and the mental health community. Assessing anger during adolescence is hence critical and becomes a priority.

Description of this Adolescent Anger Scale: This scale provides holistic assessment of anger by considering three domains (Physical, Verbal & Mental). The operational definitions of these three domains are :

Behavioural (Kayika): Expressions of anger using body or gestures including assaultive, hurtful, rebellious, aggressive, violent acts, self-defeating or addictive behaviours, crying etc.

Verbal (Vachika): Expressions of anger through verbal assault like abusive language, insults, contempt, disrespect, cynical humor, disgust, blaming, teasing, name calling, critical etc.

Mental (Manasika): Expressions of anger in the form of hostility, resentment, withdrawal state, disruptive thought patterns, non-cooperation, vengeance, suspiciousness, argumentative attitude, unsympathetic feeling and mental illness such as depression, anxiety, suicidal tendency etc.

The scale comprised of 9 items related to experience of anger, 4 items each for expression of anger at behaviour, verbal and mind levels. Two opposite meaning items were included as a lie detector. It is a 3 point liker scale having 3 options for answering against each item (Never, Sometimes and Most of the times). Responses are obtained on the test booklet itself by asking the respondent to tick mark the appropriate response. There is no time limit but generally 10 minutes is found sufficient for responding all the items.

Target Population and setting: This self-reporting scale is developed in English language and hence could be administered in group or individually to high school children in the age group of 12

to 15 years who are conversant with English language. Class rooms could be ideal setting for administration of the scale.

Instructions for administering the Adolescent Anger Scale : Let the students be seated with proper seating arrangement with a pen / pencil in their hand. Tell them the purpose of the test and ensure that the instructions have been understood by them correctly.

Scoring method : There are options provided for response. Assign number 1, 2, 3 for never, sometimes and most of the times respectively. If the respondent puts the tick mark (✓) for the first option the score is 1, for the second option the score is 2 and for the third option the score is 3. The summated score of all the 23 items provide the total anger score of an individual. A high score indicates higher levels of anger while the low score shows lower levels of anger.

Reliability and Validity: Reliability of the scale was found by test-retest method and it was found to be 0.835 for the total anger measure. The Cronbach's alpha coefficient for internal consistency reliability of this scale is 0.804. Content and Construct Validity was established by experts opinion (psychologists, yogis, parents, teachers, students). Factor loading against each domain was ascertained using factor analysis. Item reduction was done from 228 items to 23 items in consultation with experts and repeated administration of the scale.

Standardisation: The adolescent anger scale was standardised by administering it on 757 students (427 girls and 330 boys) in 12 different English medium high schools in south Bangalore. Age group of students remained between 12 to 15 years of age.

Authors: The scale is developed by S-VYASA Yoga University. This scale development is a part of the research project funded by Sri Venkateswara Vedic University, Tirupati. All rights on this scale are reserved by both the institutions.

phase D – pre-post study – ANALYSIS & RESULTS

The data obtained from two different anger assessment scales are analysed separately.

Analysis of data from newly developed Anger Assessment Scale :

The pre data was first checked for baseline match of both yoga group (n=114) and control group (n=73) using Independent ‘t’ test. Observed no significant difference between the mean data of both the group (p=0.152). Cronbach’s Alpha coefficient for the scale was checked and found at $\alpha = 0.812$. Test of normality was conducted for pre data and post data separately. Also normality check was done for yoga group and control group pre data. Data is shown in Table 17.

Table 17 : Test of Normality for pre-data

Group	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
Pre data	0.06	187	.200*	.993	187	.460
Post data	0.06	187	.087	.990	187	.198
CG	.092	73	.200*	.988	73	.713
Yoga	.072	114	.200*	.986	114	.306

Table 17 shows that the pre data, post data and also control group pre data and yoga group pre data all fall in the normal distribution. This test of normality confirmed normal distribution of data and parametric tests can be employed for further analysis of data.

Mean and Standard Deviation of pre and post data was calculated for yoga and control group. Significant reduction in mean scores in yoga group and a slight increase in the mean scores in the control group was observed as in Table 18.

Table 18 : Mean & SD, group wise

	Pre-data		Post data	
	Mean	SD	Mean	SD
Yoga Group	46.20	6.92	42.41	7.31
Control Group	46.36	8.15	46.73	7.00

Paired t-test was carried out to see pre-post difference. The results of pre-post data of yoga group and control group is shown in Table 19.

Table 19 : Paired Samples Test

Group	Pair	Sample Size	Paired Differences					t	df	Sig. (2-tailed)
			Mean	SD	Std. Error Mean	95% Confidence Interval of the Difference				
						Lower	Upper			
Yoga Group	Pre - post	114	3.789	6.992	.655	2.49	5.09	5.79	113	.000
Control Group	Pre - post	73	-.110	6.590	.771	-1.65	1.43	-.142	72	.887

From the table 19, it is observed that the yoga group showed significant change in the pre-post scores confirming the effect of yoga intervention whereas there was no significant change observed in the control group.

Data Analysis of STAXI 2 CA Scale

Baseline match was done using independent t test for all the five subscale components for both yoga and control group. The data tend to have excellent base line match with p value at 0.582, 0.451, 0.949, 0.260 and 0.559 for State anger, Trait Anger, Anger Expression Out, Anger Expression In and Anger Control scores respectively.

The raw scores of five subscales were analysed separately for yoga and control group. The mean and standard deviations are provided in table 20:

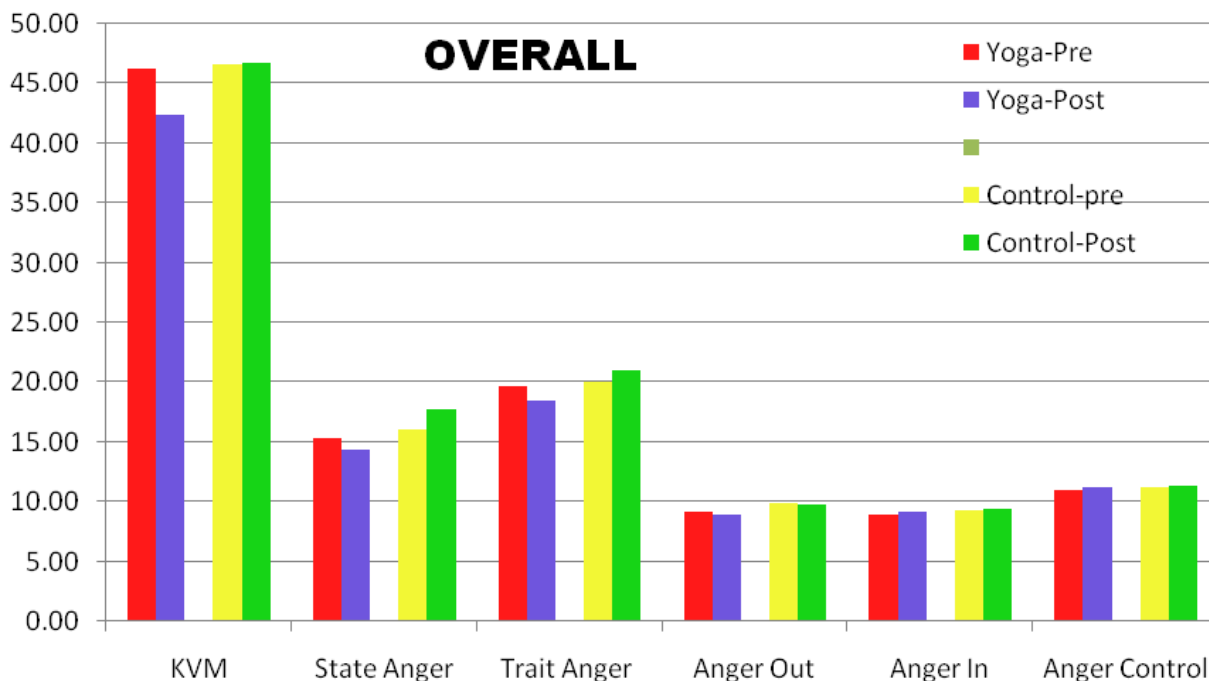
Table 20 : Mean & SD of pre and post data of both groups

		State	Trait	AE Out	AE In	A Control
Yoga Group	Pre data	15.39	19.73	9.23	8.98	11.02
	Post Data	14.39	18.46	8.95	9.13	11.25
	p value	0.03	0.00	0.25	0.47	0.40
Control Group	Pre data	16.04	20.00	9.88	9.36	11.26
	Post Data	17.73	20.96	9.84	9.40	11.37
	p value	0.00	0.07	0.89	0.90	0.70

There is a significant reduction in observed in state anger scores (15.39 to 14.39 with p=0.03) and trait anger scores (19.73 to 18.46 with p=0.00) of yoga group while a significant increase in mean state anger scores (16.04 to 17.73 with p=0.00) were observed in control group. Trait anger scores

have also increased in control group (20.00 to 20.96 with $p=0.07$) but not significant. There is no significant change observed in anger out, anger in and anger control scores of yoga and control group. Pictorial representation of means scores of all the subgroups and both yoga and control group and for both KVM & STAXI scale are given Figure 10

Figure 10 : Overall pre post scores group wise and sub scale wise



A definite pattern of change in scores is seen between yoga group and control group. Similar pattern is also seen between the two scales. Pictorial representation of school wise data is given in Figure 8 (JKV) and Figure 9 (AHS) .

Figure 11- School JKV

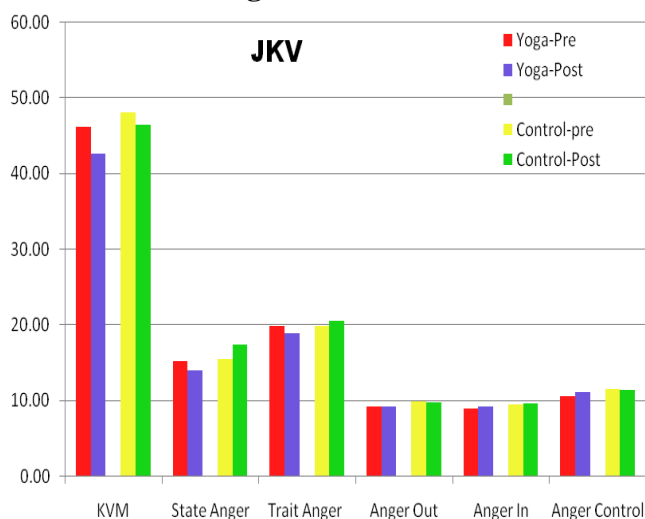
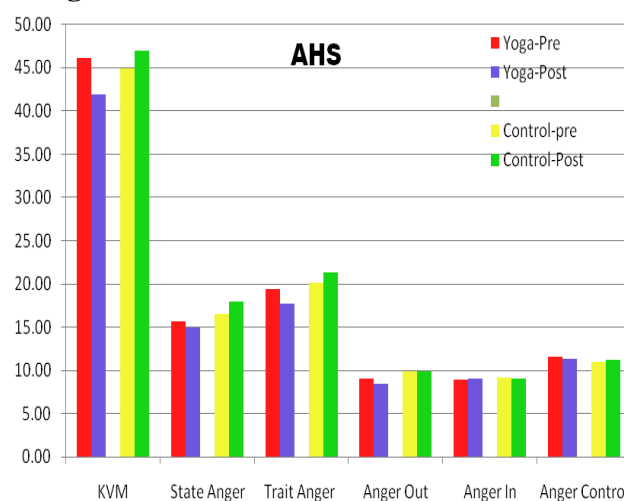


Figure 12 – School AHS



Significant difference is observed between yoga and control group in both the schools. There is a similar pattern of change in both the schools with respect to all components.

Gender wise analysis is also done for both the scales and for all the parameters. Results are provided in graphical form in Figure 10 (girls) and Figure 11 (boys).

Figure 13 – Overall results - Girls

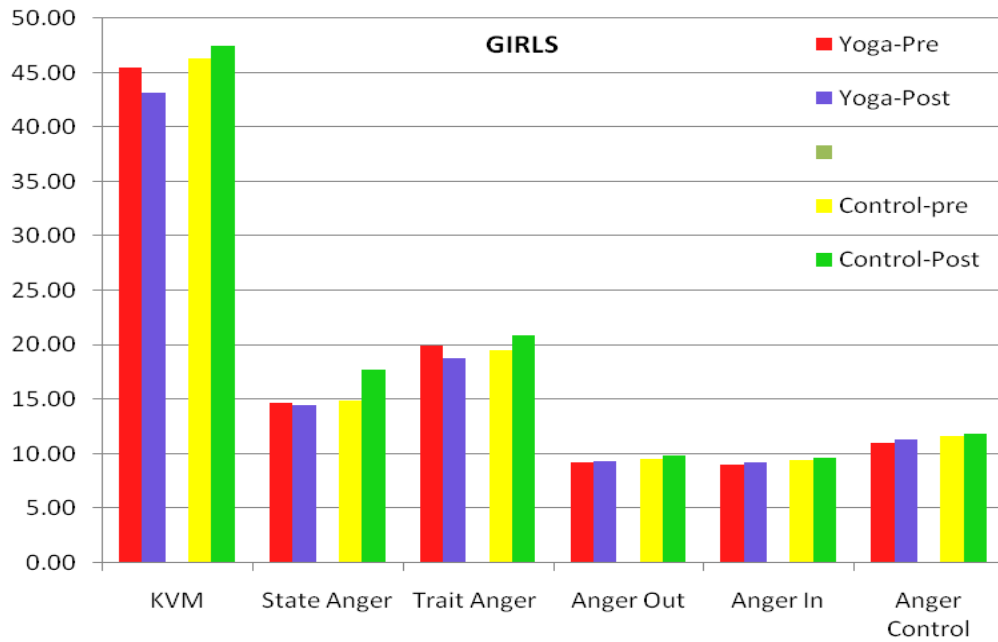
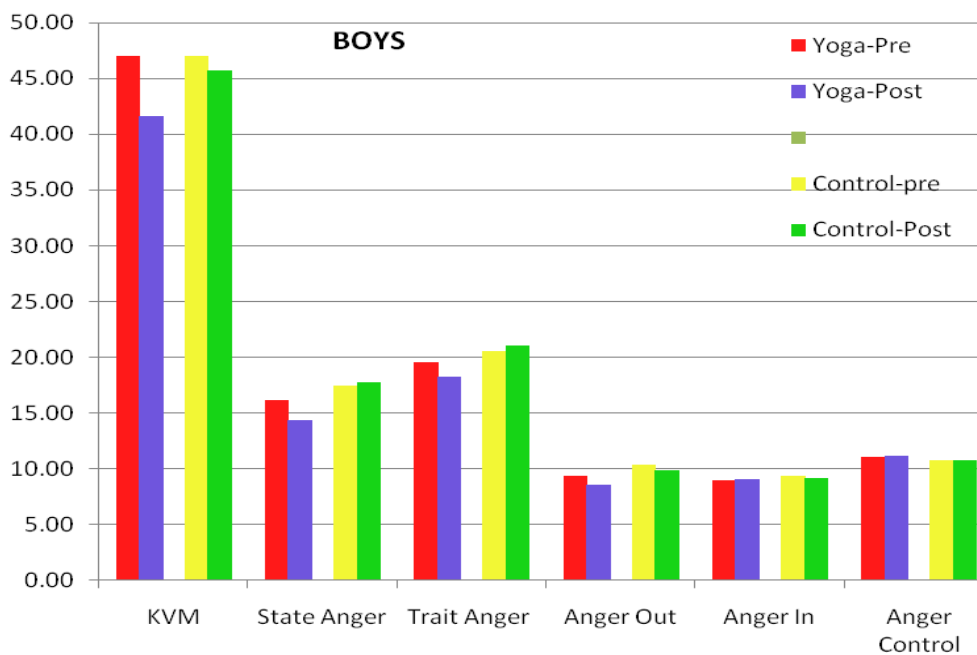


Figure 14 – Overall results - Boys



RESULTS IN BRIEF

To summarise, results of all four phases are stated below:

Results of Phase A – Prevalence Study:

About 45% of the children experienced elevated and high state anger and 23% experienced elevated & high trait anger. Higher scores of state and trait anger were observed in girls than boys. Significant positive correlation was observed between anger expression out with both state and trait anger. Higher levels of anger experience and lower levels of anger control are observed in girls than boys.

Results of Phase B - Development of Adolescent Anger Scale:

The anger scale developed recorded a Co-efficient of Alpha values at 0.804. Test-retest reliability showed 0.835 correlation. The scale consists of 23 items assessing anger experience and expression at behaviour, speech and mental level.

Results of Phase C - Module Development :

Short guided meditations for anger management based on the scriptural evidences are developed. Yoga Module having strong justifications for each practice was validated by 10 experts (5 yogis and 5 psychologists). .35 minutes module comprises of opening and closing prayers, āsanas, breathing practices, meditations and knowledge points emphasizing Yama Niyamas.

Results of Phase D - Pre-Post Control Study :

Significant reduction in mean anger scores in yoga group as compared to control group. Pre-post results indicate strong psychometric properties of KVM scale. Subjective feedback on yoga module for anger management is encouraging

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SECTION – 7

DISCUSSIONS



SECTION 7 : DISCUSSIONS

The results of this comprehensive study indicate higher prevalence of anger in High school children. The study was able to come out with an anger scale with good statistical validity and reliability scores. The scale also had shown the similar pattern in trends of anger experience and expression when compared with the most widely used western origin scale. Grounded on the principles of IAYT, the yoga module developed was able to significantly influence the intervention group to bring in reduction of anger scores. The pre-post study conducted during academic hours in the school not only provided evidence for yoga as an effective anger management program in schools but also validated the newly developed anger scale and the yoga module.

Since the study is first of its kind, corroboration with the previous studies could not be established. The study was more focused on bringing in universally accepted principles that could be adopted for development of anger scale as well as development of a yoga module for anger management. There is a lot score to work on these principles as well as methodology and other aspects of the study.

Only four studies are cited wherein anger was assessed with yoga as an intervention. Even in these studies anger was a subcomponent of some other scale such as BASC (Behaviour Assessment Survey for Children), POMS (Profile of Mood States) and BRUMS (Brunel University Mood State). Only one study has used adult version of STAXI-2 to study adolescents of mean age 17 years and found no significant reduction of anger with the yoga module they used (Noggle et al, 2012). Out of the four studies two studies report significant reduction of anger in yoga group and other two studies report no significant difference. The smaller sample sizes (n=45, n=47, n=51 and n=121) and many parameters might have influenced the results.

As regards, many studies have used STAXI 2 CA to measure all the five components of anger or partially (only anger expression or anger control etc). The studies on STAXI-2-CA have not reported assessing the data for intensity as is done in the present study. The STAXI2-CA manual provides percentile scores as well as t scores for normative sample in different age groups, gender wise. In the present study conversion of raw scores to percentile scores was done and the analysis was done to see gender wise distribution of children in different intensities of anger zone.

During the study, a lot data related to the concepts were collected but could not be analysed. For instance, dairy sheets were given to yoga group but missed to give it to control group. Feedback from the parents at the end of the program was collected from both the groups but could not be analysed. The questions were open ended and variety of responses has been received. However, qualitative analysis of this data could be done as next step.

The study selected schools of similar type. Future studies recommended to conduct the study in different adolescent population including different types of schools such corporation schools, residential schools etc.

The strength of the study is that it is a inter-disciplinary study (yoga, behaviour science and spirituality). The study was able to extract a good amount of scriptural evidences. The concept of assessing any manifestation at behaviour, verbal and mental level is Holistic. This provides a base for any holistic assessment. Strength of the study is usage of two psychometric scales. The sample size is relatively large and provides good characteristics of generalizability. Study was conducted in two schools and found same results which are also a strong strength of the study. The strength of the study also lies in prevalence identified, customised assessment and customised yoga module which gave a comprehensive approach to study.

Limitations of the study to could be attributed to passive control group, block randomisation approach giving limited scope for recruitment and selection of subjects, different sample size in yoga (114) and control group (73). Another limitation was the researcher developed the scale, developed the module and also administered the intervention program. No blinding was done at any level. Further, entire analysis of pre-post data was done using paired-t test. Advanced methods can be applied to ensure subtle aspects that influence the results may also be captured. There is ample scope for further sub group analysis and comparison between the scales.

The limitation in terms of scale development, the scale does not include anger management component leaving a wide scope for improvisation. The module validation process was not analyzed completely which need to be done as post-doctoral work. There is ample scope for improvisation of both scale and the module.

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SECTION – 8

APPRAISAL



SECTION 8 : APPRAISALS

CONCLUSIONS :

- 1) Raising anger issues in Indian adolescents is an alarming situation. High school children exhibited higher levels of anger experience and expression and moderate levels of anger control.
- 2) Indian Classical Scriptures provide enormous resources for developing concept of anger and its management. Identifying trikarana (kaya-vak-manas) concept for holistic assessment of anger is a phenomenal outcome. Concept could be used across any assessment.
- 3) The first of its kind, anger assessment scale for adolescents enjoys strong psychometric properties. Statistically reliable and validated scale found very robust in assessment of anger at behavioural (*kayena*), verbal (*vacha*) and mental (*manasa*) dimensions.
- 4) Yoga Module developed for anger management in adolescents is an effective program for bringing down the anger levels of high school children.
- 5) Yoga Module for anger management in adolescents is feasible to be used as a curriculum in high school children as a holistic anger management program.

IMPLICATIONS OF THE STUDY

The scale developed can be used in any study to assess anger, aggression or violence in adolescent population. The questions can be reworded or edited keeping the underlying principle to suit any culture or gender or age group.

Kaya-Vak-Manas concept could be applied to any bio- assessment. This study provides the foundation to study other core emotions in adolescents.

SUGGESTIONS FOR FUTURE STUDIES

This is only a beginning of understanding the concept of anger and its dynamics especially in adolescent population. There is ample scope for future studies taking this work forward. Few of them are mentioned below :

- 1) Further examining the Traditional Texts to provide further evidence to the derived principles. Current study examined only Vedic and Vedantic Texts. Traditional Texts of other philosophies could also be explored.
- 2) Prevalence of anger issues could be carried out with representative samples of adolescents across India. Current study examined only two English medium high schools.
- 3) The newly developed scale can be improved focusing on gender and age within adolescence. The scale can be translated to other languages too. Emotions are best explained in the mother tongue language.
- 4) The scale can also be improved and standardised to identify domain wise expression as well as to provide range for Mild, Moderate, High and Severe Anger levels.
- 5) Scope for improvement of yoga module by including relaxation component in the module which is found to be effective in reducing the speed and repeatance of any thought process, particularly anger thoughts.

- 6) Longer duration intervention may be required to drive the concept of anger. The current study duration of four months with 2 sessions per week could only yield about 22 to 25 sessions considering holidays, exams, inspections etc.
- 7) Future studies also could consider subjective feedback, experiential aspects and also different types of assessment of anger. The present study only examined the self-reported scales. Further studies could also consider evaluation of individual's anger by teachers, parents and peers.
- 8) The present study focused only on one age group (13-14 years) give huge score for exploring other age group within adolescents.
- 9) The Ayurveda based concepts of Triguna and Tridosha has strong correlation with anger. Studies could be focused in this direction also.
- 10) Current Study tried collecting data related to a number of probable confounding or influencing factors such as food pattern (veg or non-veg), parental anger styles, socio-economic background, personality type etc. However, analysis could be done as the data collected was incomplete and it was beyond the scope of the study. Future studies could work in this line.
- 11) Future studies could also develop the scale and module for adult population too based on the same principles.

SPECIAL MENTION

Supporting this kind of study by SVVU is indeed a great move in the research field. In addition to extending financial support, SVVU showed special interest in executing this project with high quality. The then Vice Chancellor himself was personally monitoring the project work.



Figure 15 : Photograph taken after the pre submission review presentation at sri venkateswara vedic university, tirupati on 2nd February 2017. Dr. Umesh Bhat, Project In-Charge (1st from the left), Dr. K E Devanathan, the then Vice Chancellor (3rd from the left) are seen in the picture.

This project work was exhibited as a Poster Presentation on the following occasion

Figure 16 : Poster Presentations made



Poster Presentation at Kaivalyadham
With the Jury Dr. A M Murthy



Poster Presentation at NIMHANS

- 1) International Conference on Yoga and Education held at Kaivalyadham Yoga Institution, Lonavala during December 26-30, 2015.
- 2) One day workshop on 'Overview of Meditation: Clinical and Research Aspects (OMCARA 2016)' being organized by NIMHANS Integrated Centre for Yoga on June 26, 2016.

Four papers from this work are published in Scientific Journals as detailed below:.

- a) Yogic Management of Anger in High School Children – published in International Journal of Current Research and Academic Review ; ISSN: 2347-3215 Volume 4 Number 12 (December-2016) pp. 93-102; Journal home page: <http://www.ijcrar.com> (Paper annexed)
- b) Anger assessment among high school children – published in International Journal of Current Medical and Pharmaceutical Research, Available Online at <http://www.journalcmpr.com>
- c) Validation of Adolescent Anger Scale - International Journal of Current Microbiology and Applied Sciences ISSN: 2319-7706 Volume 6 Number 1 (2017) pp. xx-xx Journal homepage: <http://www.ijcmas.com>
- d) Holistic assessment of anger in adolescents – Development of a rating scale – Accepted for publication in Journal of Ayurveda and Integrated Medicine, an open-access, peer reviewed journal published on Elsevier.

This research work is unique, innovative and first of its kind study in many areas. They are

- Identifying **Trikarana concept** for holistic assessment of anger and using the same for scale development for anger (combination of Veda and Science in a true sense)
- Adolescent anger assessment scale developed in this study is the **first scale** developed for anger management in India
- The newly developed Integrated Yoga Module for Anger Management in high school children was validated by 5 psychologists and 5 yoga experts. Further it was standardised by administering it on 278 children. This is the **first validated and standardised yoga module specifically developed for anger management in high school children.**
- Short Meditations developed for anger management using **principles derived from Vedic science** is again an innovative work .
- **Emphasising Yama Niyama** in the Yoga Module for anger management and **minimising the religious aspects** makes the module universally acceptable and adoptable.
- Assessing efficacy of **yoga as curriculum** in Schools in India is again the first study.

INDICATORS FOR PROJECT EVALUATION

- a) **Input indicators:** Technical expertise of S-VYASA Yoga University, Bengaluru and financial support from Sri Venkateswara Vedic University, Tirupati. In addition, having two external co-guides one from IISc (Dr. S N Omkar) and other from NIMHANS (Dr. Manoj Kumar Sharma) is a strong input indicator. Studying anger from two perspectives (spirituality & science) is another strong input indicator which is in line with the visions of SVYASA and SVVU.
- b) **Process indicators:** Identifying the Vedic sources and concepts is a landmark process indicator. Developing anger scale based on Vedic principles and also yoga module for anger management emphasising Yama and Niyama provide an holistic outlook to the process. Conducting study in multiple schools and considerably large samples are strong indicators of the process evaluation in this study. Inter-disciplinary (science and spirituality) research work in an another indicator.
- c) **Output Indicators:** a) Excellent psychometric properties of the developed anger scale, b) effectiveness of integrated yoga module for anger management and c) statistically significant reduction in anger in yoga group and no reduction in the control group were a strong output indicator.
- d) **Outcome Indicators:** a) Feasibility of Yoga Module for anger management in schools as a curriculum, b) holistic assessment of anger at Behavioural, Verbal and Mental level and c) validated and standardised Intergrated Yoga Module for Anger Management in High School Children.

e) **Impact Indicators:** Applying trikarana concept can bring in a paradigm shift for assessment and treatment of diseases or conditions. Integrated Yoga Module for Anger Management can contribute to minimise adverse effects of anger such as violence, self-harm, road accidents, substance abuse etc.

f) **Social responsibility indicators:** School has a definite and inevitable role to play in providing moral education in a multicultural society especially in the urban setting where both parents are employed. Akrodha (not getting angry) being one of the key moral value needs to be inculcated during childhood and adolescents as a part of moral education. Adolescent Anger Assessment Scale and Integrated Yoga Module for Anger Management can act as a powerful tool in this direction.

India is going to be the youngest nation by 2020 with 64% of its population comprising of adolescents and youth. Addressing anger issues in this age group is hence very critical. The developed anger assessment scale and the integrated yoga module for anger management can be considered as a dedication to the nation by both the institutions.

g) Holistic assessment of anger also has implications for promotion of mental health thereby enhancing quality of social relationships in adolescent population.

**Benefits of Yoga Education in High School Curriculum for
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SECTION – 9

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**Benefits of Yoga Education in High School Curriculum for
Anger Management: A Randomized Control Study**

SECTION – 10

ANNEXURES



Manual for

ADOLESCENT ANGER ASSESSMENT SCALE

**FOR HOLISTIC ASSESSMENT OF ANGER IN HIGH SCHOOL
CHILDREN**

By
S-VYASA Yoga University, Bengaluru



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Manual for Adolescent Anger Assessment Scale

This adolescent anger scale is developed by S-VYASA Yoga University, Bengaluru with help of the financial assistance by Sri Venkateswara Vedic University, Tirupati.

A detailed study of Vedic and Vedantic texts was carried out to draw the guiding principles for assessment of anger. In addition, thorough study of scientific literature on adolescent anger was also carried out. Psychometric properties of the scale were obtained by adopting statistical methods and processes throughout the development process.

Introduction: Anger is the most common and most frequently occurring negative emotion having far reaching consequences. The concept of anger is not very well defined and is in a state of flux. There are several terms that are virtually synonymous such as aggression, hostility etc. Because of the complex nature of its experience and expression, the problem of assessing anger to a large extent still remains unsolved.

Examination of various instruments developed to assess anger reveals that these scales have not incorporated many important components of anger. The scales provide narrow and limited information and do not deal with all aspects of anger.

Study of ancient Indian Scriptures reveal that assessment of anger is holistic and complete when measured at physical (kaya), verbal (vak) and mental (mana) domains. The concept of Trikarana (three instruments i.e. mano-vak-kaya) is the popular concept used in almost all scriptures to give holisticsity or completeness. These domains are intertwined so closely that it is difficult to distinguish and assess separately. Hence predominant expression or experience at these domains is considered for assessment.

Anger assessment is generally done using self-reporting scales in a non-clinical setting. At clinical setting, it is also assessed by observation method or studying the physiological parameters.

Adolescence is a transitional period with its own peculiar characteristics and problems. It is also a period where they establish patterns of behaviour and make lifestyle choices that have long-lasting effects on future health and well-being. Adolescent anger has been associated with devastating social events besides its negative impact on academic performance. Problems associated with inappropriate expressions of anger are the most serious concerns of parents, educators, and the mental health community. Assessing anger during adolescence is hence critical and becomes a priority.

Description of this Adolescent Anger Scale: This scale provides holistic assessment of anger by considering three domains (Physical, Verbal & Mental). The operational definitions of these three domains are :

Behavioural (Kayika): Expressions of anger using body or gestures including assaultive, hurtful, rebellious, aggressive, violent acts, self-defeating or addictive behaviors, crying etc.

Verbal (Vachika): Expressions of anger through verbal assault like abusive language, insults, contempt, disrespect, cynical humor, disgust, blaming, teasing, name calling, critical etc.

Mental (Manasika): Expressions of anger in the form of hostility, resentment, withdrawal state, disruptive thought patterns, non-cooperation, vengeance, suspiciousness, argumentative attitude, unsympathetic feeling and mental illness such as depression, anxiety, suicidal tendency etc.

The scale comprised of 9 items related to experience of anger, 4 items each for expression of anger at behaviour, verbal and mind levels. Two opposite meaning items were included as a lie detector. It is a 3 point liker scale having 3 options for answering against each item (Never, Sometimes and Most of the times). Responses are obtained on the test booklet itself by asking the respondent to tick mark the appropriate response. There is no time limit but generally 10 minutes is found sufficient for responding all the items.

Target Population and setting: This self-reporting scale is developed in English language and hence could be administered in group or individually to high school children in the age group of 12 to 15 years who are conversant with English language. Class rooms could be ideal setting for administration of the scale.

Instructions for administering the Adolescent Anger Scale : Let the students be seated with proper seating arrangement with a pen / pencil in their hand. Tell them the purpose of the test and ensure that the instructions have been understood by them correctly.

Scoring method : There are options provided for response. Assign number 1, 2, 3 for never, sometimes and most of the times respectively. If the respondent puts the tick mark (✓) for the first option the score is 1, for the second option the score is 2 and for the third option the score is 3. The summated score of all the 23 items provide the total anger score of an individual. A high score indicates higher levels of anger while the low score shows lower levels of anger.

The summated scores range from a minimum of 23 to maximum of 69. Considering the normative sample, the summated score can be interpreted to define the anger levels as detailed below

Sl No	Summated Score Range	Description
A	23 – 30	Low Anger
B	31 – 45	Average Anger
C	46 – 60	Elevated Anger
C	61-69	Very High Anger

Although subscale analysis is not considered in this study, the examiner can confidently interpret the predominant anger expression type by assessing the scores against the questions as detailed below

Sl No	Item Numbers	Predominant Anger Expression Type
1	6, 8, 10, 14	Behavioural Expression (Kayika)
2	3, 11, 15, 23	Verbal Expression (Vachika)
3	4, 16, 18, 21	Mental Exression (Manasika)

Reliability and Validity: Reliability of the scale was found by test-retest method and it was found to be 0.835 for the total anger measure. The Cronbach's alpha coefficient for internal consistency reliability of this scale is 0.804. Content and Construct Validity was established by experts opinion (psychologists, yogis, parents, teachers, students). Factor loading against each domain was ascertained using factor analysis. Item reduction was done from 228 items to 23 items in consultation with experts and repeated administration of the scale.

Standardization: The adolescent anger scale was standardized by administering it on 757 students (427 girls and 330 boys) in 12 different English medium high schools in south Bangalore. Age group of students remained between 12 to 15 years of age.

Authors: The scale is developed by S-VYASA Yoga University. This scale development is a part of the research project funded by Sri Venkateswara Vedic University, Tirupati. All rights on this scale are reserved by both the institutions. Any queries or clarification on the scale, contact Smt. Alaka Vishwanath through e-mail id: alka.yoga@yahoo.com

Adolescent Anger Assessment Scale

Name : Date :.....

Roll No..... Age : Sex : Boy Girl

Instructions: Please read the following statements carefully and put a '√' mark against the answer you find suitable to you. There is no right or wrong answers. Be honest and answer all the questions.

SI No	Description	Never	Some times	Most of the time
1	I get angry easily / very fast			
2	Whenever I become angry, I express it off			
3	I feel like scolding or yelling whenever I am angry			
4	I don't feel like doing anything when I am angry			
5	I get angry when I am compared			
6	I take out my anger on things around me			
7	I become angry when I am mocked at or teased			
8	When I am angry, I do not know what to do and what I do			
9	I get angry when I am treated unfairly			
10	Whenever I am angry, others can easily understand that I am angry by looking at my face or behaviour			
11	When I am angry, I don't have control on what I speak			
12	I try not to show my anger			
13	I get frustrated when I don't get what I want			
14	I become rough with others when I am angry			
15	When others shout at me or tease me, I do the same with them			
16	It takes long time for me to come out of my angry state			
17	I feel angry when others irritate me			
18	When I am angry I do not listen to anyone (I become stubborn)			
19	I become angry when I am blamed for something I did not do.			
20	I feel annoyed when others don't appreciate my work			
21	I don't feel normal when I am angry			
22	I get angry when I cannot cope with the expectations of myself / others			
23	I humiliate others when I am angry			

Manual for

INTEGRATED YOGA MODULE FOR ANGER MANAGEMENT IN HIGH SCHOOL CHILDREN

A HOLISTIC SCHOOL BASED PROGRAM

By

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INTEGRATED YOGA MODULE FOR ANGER MANAGEMENT IN HIGH SCHOOL CHILDREN

This Integrated Yoga Module for Anger Management in High School Children is developed by S-VYASA Yoga University Bengaluru with help of the financial assistance by Sri Venkateswara Vedic University, Tirupati.

Anger is defined as an innate emotion which is harmful to the self as well as others. Anger manifests at three domains namely Kayika (behavioural), Vachika (verbal) and at Manasika (mental). This yoga module is aimed at overcoming anger rather than controlling anger at all these three domains.

This is a school based yoga program for anger management which has been validated by experts, psychologists, parents and teachers. Standardization of the module is done by administering it in three schools.

Introduction: Adolescence is a period of transition which is susceptible to many adverse effects of health and safety. Anger which is the most commonly occurring powerful emotion, has strong influence on adolescents' mental health. Yoga is a time tested effective coping mechanism that can be adopted for a smooth transition from childhood to adulthood.

This yoga module is intended to be taught in schools for high school children, during the academic periods. Around 30 sessions / periods (ideally two sessions per week or at least one session per week) are good enough to master this module. Each session is around 30 minutes considering 40 minutes duration of a period and children might take some time to assemble. Utmost care is taken to minimize the religious facets of yoga and only essential practices are included.

The module comprises of 5 broad components 1) Opening & closing prayers 2) Asanas & Pranayamas, 3) Meditation & Relaxations 4) Jnana Yoga (Knowledge Points) and 5) Home practice and diary maintenance. Details of each of these components are given below:

Opening & Closing Prayers: Opening prayer is Bhagavad Gita chapter 2, verse 62 and 63 which explain the genesis of anger and its consequences. Closing prayer is the Verse 38 of chapter 3 of Bhagavad Gita and Shanti Mantra Sarve Bhavantu.... The prayers should be followed by the narration of the meanings.

Asanas & Breathing Techniques: Emotions like Anger causes distraction and make focus difficult. To counter this, Asanas which empirically considered promoting concentration and attention were included. They include balancing postures and forward bending postures. Surya Namaskara (Sun Salutation) which is a complete mind-body yogic program is the key part of this section. Physiological and Psychological benefits are explained during the practice.

Considering the age of adolescence and school environment, only breathing practices such as conscious breathing, deep abdominal were included. These practices intended to bring awareness and relaxation.

Short Meditations: MEMT (Mastering Emotion Technique) is an advanced meditation technique developed by SVYASA to gain mastery over emotions. Short guided meditations for anger management was developed based on MEMT and the anger management approaches derived from various Vedic and Vedantic texts such as a) Parijnana (awareness), b) Manaprashamana (sublimation) c) Pratipaksha Bhavana (shifting of emotions) and d) Sadguna (development of positive virtues). These meditations help the children to a) relate themselves with the meditation b) experience the meditation and c) understand and internalize the concepts of coping mechanisms stated in meditation.

Knowledge Points (Jnana Yoga): Under the premise of Jnana yoga, a few aspects which are relevant to anger were covered. The topics included Ahimsa (non-violence), Brahmacharya (living in moderation), Santosha (contentment), tapas (training the senses / austerities), Swadhyaya (self-awareness), Pratyahara (control over senses), Yogic concept of food and brief introduction to physiology and psychology of anger. Jnana yoga topics are taught through short stories and lectures.

Home Practice & Dairy maintenance: Yoga module also suggests home practice of suryanamaskar every day. It also includes maintaining a check list of daily routine activities (format attached). Students are asked to fill up the same on a daily basis and return it at the end of the program. The components included in the check list were date,

work-up time, went-to-bed time, number of Surya Namaskara practiced, number of times got angry, with whom, situation, ate non-veg, ate-junk food etc.

Instructions for administering the Yoga Module: The module to be taught in a well-ventilated and lit clean place. Yoga mat or Jamkhana can be used. Children can practice this module in their uniform and loosening the tie and belts. Girls are advised to wear leggings during the practice.

The practices employed in this module are quite simple and safe. Children having conditions such as injury, fever, severe calf and cold, pains and aches are advised not to practice the postures but can remain seated in the room. Girls during menstrual cycle are also advised to remain seated in the room.

Validity and Reliability of the module : The module is prepared by thorough study of yogic texts as well as physiology and psychology of adolescents. Then it was sent to 5 yoga experts and 5 psychologists to assess its Relevance (whether the technique significantly works for anger), Specificity (whether the technique is precise for anger), Sensitivity (whether the technique is sensitive to be practiced by children (both girls and boys) in school setting) and its Evidence base (whether the reference or justification provided is adequate). The comments and suggestions received were reviewed by the project team and based on that, changes were made in the yoga module accordingly. Standardization of the module was carried out by conducting an intervention study for about 278 students in three schools.

Reference : The major sources of references and inputs for the development of this module are a) Outcomes of Literary Survey, b) Integrated Approach to Yoga Therapy (IAYT) module, c) A Yogic program called Mastering Emotion Technique (MEMT) developed by S-VYASA and d) Books on Yoga for Children from Bihar School of Yoga, BKS Iyengar Institution, SVYASA University and SURYA booklet authored by Dr. S N Omkar. Another major source is the empirical knowledge of the yoga exponents. Many scholars in the field such as yogis, psychologists and educationists are consulted personally to seek guidance for development of this module in a more scientific way while.

* * * * *

The frame work of Yoga Module

Each session begins with a prayer and also concludes with a prayer. The sessions are structured earmarking sufficient time for each of the components. Time earmarked for practice of each component is mentioned in the framework. However, minor adjustments can be made depending on the situation.

1) Opening Prayer (3 minutes per session) :

ध्यायतो विषयान्पुंसः सङ्गस्तेषूपजायते। सङ्गात् संजायते कामः कामात्क्रोधोऽभिजायते।

क्रोधाद्भवति संमोहः संमोहात्स्मृतिविभ्रमः। स्मृतिभ्रंशाद् बुद्धिनाशो बुद्धिनाशात्प्रणश्यति॥

Meaning : Looking at something, an interest develops which leads to attachment then the desire to have it. From the desire, anger arises. Anger leads to mesmerisation which leads to loss of memory which leads to loss of decision making ability. With that one ruins. Om Shanti Shanti Shanti

2) Asanas (10 Minutes per Session) : Following Asanas that promotes concentration, attention and balance are to be practiced

a) **Dynamic series** – Shashankasana, bhujangasana, adhomukha swanasana

b) **Practice of Surya Namaskara – 10 steps type** – Namaskarasana, Urdhvasana, Uttanasana, Ekapada Prasaranasana. Dwipada Prasaranasana, Chaduranga Dandasana, Bhujangasana, Adhomuka Swanasana, Ekapada Prasaranasana, Uttanasana

c) **Balancing and Forward Bending postures** – Tiryaka Tadasana, Ostrich Pose, Standing Vrikshasana, Veerabhadrasana 3, Natarajasana, Paschimottanasana

3) Pranayama (5 minutes per session): Simple breathing practices that promote calmness and tranquility such as Conscious breathing, Abdominal breathing, Alternate nostril breathing and Brahmari pranayama are taught.

4) Meditation (10 - 15 minutes per session) : Modified version of MEMT. The meditations are designed in such a way that it can be done at one sequence or in parts. The meditations are practiced in a sitting position with eyes closed. A brief description of the meditations is explained below:

a) **Prajna (awareness)** – Thinking and feeling of anger by evoking, intensifying and defusing the anger emotion. This helps children to become aware of their anger emotion, physiological and psychological changes that occur during anger. This guided process takes about 2 to 3 minutes.

- b) Manaprashamana (sublimation) – Art of sublimation of anger thoughts. The process involves recognition of speedy repeatedness of angry thoughts. Then the speed is reduced by slowing down the thought process. This guided process takes about 2 to 3 minutes.
- c) Pratipaksha Bhavana (shifting of emotions) – It is a process of experiencing opposite emotions one after the other. This helps in recognising the emotion and to evoke an opposite emotion swiftly. Pair of opposite emotions such as heat and cold; stretch and relax; happiness and sorrow are employed in this process. This guided process takes about 3 to 4 minutes.
- d) Sadguna (developing positive virtue): Forgiveness is one of the positive virtues that turn away the anger emotion. This process involves calling or re-living an instance once with anger driven response and recalling it again with forgiveness driven response. This guided process takes about 3 to 4 minutes

These techniques were embedded in the form of short meditations that had three parts. The first part is the preparation process (around 1 minute), middle part is one of the above mentioned techniques and concluding process is the final part (around 1 minute). Preparation process includes sitting or adopting a meditative posture, bringing the mind-body-breath awareness by just observing the posture and breathing. The concluding process includes observing silence and to make a resolve. Further repeating the resolve 5 times and then chanting of shanti mantra.

- 5) Jnana Yoga (5 minutes per session) :** Following topics are covered
- Physiology & Psychology of Anger
 - Yogic concepts – Ahimsa, brahmacharya, santosha, swadhyaya, Iswara Pranidana, pratyahara
 - Food & Anger Yogic concept of Food
 - Moral Stories on Anger ;

6) Closing Prayer (2 minutes per session) :

काम एष क्रोध एष रजोगुणसमुद्भवः। महाशनो महापाप्मा विद्ध्येनमिह वैरिणम्।

सर्वे भवन्तु सुखिनः सर्वे सन्तु निरामया, सर्वे भद्राणि पश्यन्तु मा कश्चिद् दुःख भागभवेत्। ॐ शान्तिः शान्तिः शान्तिः

Meaning : Desire and Anger are same. It arises from the Rajasic nature. Anger is most sinful and heinous character. It is said to be biggest enemy of man.

May All Be Prosperous and Happy, May All Be Free from Illness , May All See What Is Spiritually Uplifting, May No One Suffer In Any Way, Om Peace, Peace, Peace

JUSTIFICATION FOR EACH PRACTICE

Please find below yoga practices and their details. Against each practices, details and justifications are mentioned.

Yogic Technique	Details and Justification
<p>Dynamic practice of these asanas in sequence</p> <p>Shashankasana, Bhujangasana, Adhomukha swanasana,</p>	<ul style="list-style-type: none"> • Provides gentle movement, flexion and extension to all major joints - head to toe • Enhanced blood flow throughout the body • Induces cycle of relaxation and activation • Bhujangasana – has balancing effect on some hormones, keeps the spine supple • Shashankasana – regulates the functioning of adrenal glands and good for anger • Strengthens the nerves and muscles of arms and legs. <p><i>(ref : book 'Yoga Education for children' by Bihar School of Yoga)</i></p>
<p>Triyak Tadasana</p>	<ul style="list-style-type: none"> • Lateral bending and lateral balancing posture. • Simple movement in coronal plane as opposed to sagittal plane movements in the previous step <p><i>(ref : book 'Yoga Education for children' by Bihar School of Yoga)</i></p>
<p>Ostrich Pose</p>	<p>Develops balance, attention and concentration</p>
<p>Vrikshasana, veerabhadrasana-3, Natarajasana</p>	<p>balancing postures</p> <ul style="list-style-type: none"> • Enhance focusing, strengthen the lower extremities, • Awareness of sensory input perception • Balancing enhances concentration / attention. (anger is associated with restlessness or lack of attention and concentration)
<p>Paschimottanasana</p>	<p>Good for strengthening lower extremities, Thymus gland activation</p>
<p>Suryanamaskara</p>	<p>Mind-body-breath coordination;</p> <ul style="list-style-type: none"> • 80% of the musculoskeletal system gets activation, sub maximum pressure on joints, <i>(SN Omkar 2009, SN Omkar 2011, Milind VB, 2011, Parag Javedkar 2012)</i> • Enhances executive function and Academic achievement <i>(Grace O'Malley 2011)</i> • Positive outlook; improved memory, concentration and attention; induces peace and calmness; promotes well-being; enhances depth of perception; <i>(Ref: Book - Dynamic Suryanamaskar-Krzysztof Stec)</i>

Conscious Breathing	<ul style="list-style-type: none"> • Awareness of breathing • Helps to calm down. • Easy and simple way to practice – be in the present
Abdominal breathing	<ul style="list-style-type: none"> • Abdominal breathing is the natural breathing pattern. It can also avoid upper chest breathing which is associated with anger, • Requires less energy than chest or upper lung breathing • Oxygen/Carbon dioxide exchange is greater during this type of breathing; <i>(Ref: Yoga Education for Children, Bihar School of Yoga; page 265, vol 1)</i>
Alternate Nostril Breathing	<ul style="list-style-type: none"> • Balances the sympathetic and parasympathetic tone ; • Flow of prana in ida and pingala nadis is equalized • Regulating breathing helps in calming down the mind. Mind stabilises when breath is steady; <i>(Ref: Hata Yoga Pradeepika 2-2)</i>
Brahmari	<ul style="list-style-type: none"> • Activates the higher limbic activities – anger is generated at lower limbic but coping is done at higher limbic region • Harmonises the hypothalamic functions by which entire mind-body complex gets benefits; <i>(Ref: Power of Pranayama, Dr. Reno Mahtani)</i>
Meditation	<p>Modified version of MEMT (Mastering Emotion Technique) developed by S-VYASA for emotional stability. The technique includes</p> <ul style="list-style-type: none"> • Identify the anger thoughts /emotion / feeling • Experience the anger emotion / feeling • Neutralisation of anger (slowing down the thoughts /delay response) • Switching over to opposite emotions (pratipaksha bhavanam) <i>(ref: PYS)</i> • Experiencing calmness and making positive affirmations
Physiology & Psychology of Anger	<ul style="list-style-type: none"> • Definition of anger ; Stimulus and Response theory ;Sympathetic and Para Sympathetic Nervous Systems role in anger and its management; What happens when you are angry; Manifestations of anger (this was explained in a simple way as a part of knowledge point)
Yogic Concepts included as knowledge points	<p><u>Ahimsa – Nonviolence</u> (Kayika -behavioural, Vachika -Verbal, Manasika-Mental)</p> <ul style="list-style-type: none"> • Do not cause physical or mental suffering to anyone • Do not hurt others for whatsoever reason • Do not blame anything and hate anybody • Be gentle in your speech - speak good and pleasant things • Be polite in your behaviour • Be kind to everyone

	<p><u>Brahmacharya :</u></p> <ul style="list-style-type: none"> • Do not do anything in excess – watching TV, sleeping, playing, eating etc • Do not get addicted to electronic gadgets • Do not get into bad habits – smoking, alcohol, drugs etc • Judge what is good for you and do only that • Know your limits • Live in moderation <p><u>Santosha – Contentment :</u></p> <ul style="list-style-type: none"> • Be satisfied with what you have • Love yourself • Enjoy doing things without focusing too much on the results • Do not feel bad for what you don't have • Don't feel jealous • Do not get attracted towards crafty advertisements <p><u>Swadhyaya – Self Awareness :</u></p> <ul style="list-style-type: none"> • Know your strengths and weaknesses • Be self-motivated • Have an inclination to understand the mind, our existence and the creation • Do not get fooled by false information / wrong knowledge • Do not learn anything that brings down your personality <p><u>Iswara Pranidana – Giving up the Ego</u></p> <ul style="list-style-type: none"> • Develop humility • Treat everyone as equal • Learn to surrender • Do good and forget it • Do not argue • Don't have rigid thoughts • Do not boast
	<p><u>Pratyahara</u></p> <ul style="list-style-type: none"> • Controlling the sensory inputs • Focus on what you are doing • Do not get disturbed /distracted by other things <p><i>(Ref : Book – SURYA by Dr. SN Omkar,)</i></p>
<p>Food and Anger</p>	<ul style="list-style-type: none"> • Food types (rajasic, tamasic and satvic) ; Yogic concepts - What, when, how, how much, where to eat and in what state of mind • MINDFUL EATING

Stories on Anger	3 short stories on anger were identified and narrated to students to make them understand the consequences of anger
Home Work	<p>Asana Practice : Daily practice of Surya Namaskara – 12 rounds</p> <p>Dairy writing – Children will be asked to maintain a log book of the following :</p> <ol style="list-style-type: none"> 1) wake up time & going to bed time; 2) No. of times got angry, brief about the situation, with whom; 3) Screen time (TV watching time) 4) foods eaten details 5) Good thing of the day & Bad thing of the day 6) No. of Surya Namaskara done on that day

Format – Daily Activity Log Book

Diary - Daily Activities							
Name :				Roll No: Sec			
<p>Dear Student, Request you to please provide the following information. Please be honest and fill up the details everyday. There is no write or wrong answers. You should get the signature of your parent and return this form to us on 9th March 2016. For any clarification contact Alaka @ 98453-24000.</p>							
Date	What time you woke up today	What time you went to bed today	Any physical activity / yoga done today	How many times you got angry today	With whom you got angry (friend/parents / teacher / others etc)	How long you watched TV today	Did you eat Non-veg today
23rd Jan							
24th Jan							
25th Jan							
26th Jan							
27th Jan							
28th Jan							
29th Jan							
30th Jan							
Parent's comments, if any:							
Parent's Signature :				Date :			
Name of the Parent :							



Jyothy Kendriya Vidyalaya

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Yelachenahalli, Kanakapura Road, Bangalore - 560 078

(Affiliated to Central Board of Secondary Education, New Delhi)

e-mail: jyothyvidyalaya@gmail.com

Ref : JKV/GEN/2016 – 17

Date : 31.03.2017

TO WHOM SO EVER IT MAY CONCERN

This is to certify that a Research Project titled 'Anger Assessment and Yogic management of anger in High School Children' was carried out in our school by Ms. Alaka Mani T.L, Research Scholar at SVYASA YOGA UNIVERSITY

Yoga sessions were conducted for duration of four months with two sessions per week. She also administered various questionnaires to assess anger. Students of 8th standard (both boys and girls) (four sections) of our school participated in the study. The said study was carried during the academic year 2016 - 2017.

This certificate is issued at the request of Research scholar.

for Jyothy Kendriya Vidyalaya

PRINCIPAL
Principal

Jyothy Kendriya Vidyalaya

Kanakapura Road,

BANGALORE-560 078.




TO WHOM SO EVER IT MAY CONCERN

This is to certify that a Research Project titled 'Anger Assessment and Yogic management of anger in High School Children' was carried out in our esteemed school by Ms. Alaka Mani TL, Research Student, SVYASA YOGA UNIVERSITY.

Yoga sessions were conducted for duration of four months with two sessions per week for our students of 8th Standard. They also administered various questionnaires to assess anger. The said study was carried out with our high school children during the academic year 2015-2016. Students of two sections (both boys and girls) of our school participated in the study.

This certificate is issued at the request of Research Team.

For Auden School,


(PRINCIPAL)

Place : Bengaluru
Date : 13.04.2017

STAXI-2 C/A (State Trait Anger Expression Inventory - 2 for Children and Adolescents)

Name	Date :
Age :	Gender : Boy / Girl
Standard	Section

Part 1 Directions : The sentences below talk about feelings people sometimes have. Read each sentence below and then tick mark the response that indicates how you feel **right now**. There are no right or wrong answers. Be honest. DO not spend too much time on any sentence.

		Not at all	Some what	Very much
1	I feel annoyed			
2	I feel angry			
3	I feel irritatted			
4	I feel like shouting out loud			
5	I feel like hitting someone			
6	I feel like yelling			
7	I feel like kicking somebody			
8	I feel grumpy (cranky / complaining everything)			
9	I feel like throwing something			
10	I am mad (very angry)			

Part 2 Directions : The sentences below talk about feelings people sometimes have. Read each sentence below and then tick mark the response that indicates **how often you usually feel that way**. There are no right or wrong answers. Be honest. Do not spend too much time on any sentence.

		Never	Some times	Most of the times
11	I feel angry			
12	I get mad			
13	I get angry quickly			
14	I feel annoyed when I do a good job and no one notices me			
15	I get mad when I am punished unfairly			
16	I feel grouchy (bad mood)			
17	I get angry when I do well and am told I did something wrong			
18	I feel angry when I am blamed for something I did not do			
19	I am hotheaded (I get angry easily)			
20	I feel like yelling when I do something good and someone says I did bad			

Part 3 Directions : Everyone feels angry from time to time, but people differ in what they do when they are angry. The sentences below talk about **how often you may feel or act when you are angry**. There are no right or wrong answers. Be honest. Do not spend too much time on any sentence

		Never	Some times	Most of the times
21	I show my anger			
22	If I do not like someone, I keep it a secret			
23	I keep my cool (I remain calm)			
24	I say mean things (hurtful)			
25	I hide my anger			
26	I try to relax			
27	I lose my temper			
28	I keep my anger in			
29	I try to calm down			
30	I try to calm my angry feelings			
31	I get into arguments			
32	I do something to relax and calm down			
33	I am afraid to show my anger			
34	I do things like slam doors (forcefully and loudly close the doors)			
35	I get mad (become very angry) inside, but do not show it			

INFORMATION LEAFLET

Research study on yoga for anger management in high school children

Information leaflet:

This information leaflet is being sent to parents through the children for information. Both children and the parents are requested to go through the leaflet thoroughly. Any clarification or additional information needed may be sought by contacting the research scholar.

Who is conducting the study:

Institution	:	SVYASA YOGA UNIVERSITY Bangalore. www.svyasa.org tel : 080-22639961 / 26612669
Research Scholar	:	Ms. Alaka Mani T L, PhD Scholar, SVYASA Yoga University e-mail: alka.yoga@yahoo.com ; Tel : 98453-24000
Under the guidance of	:	Dr. H R Nagendra, Chancellor - SVYASA Yoga University e-mail : chancellor@svyasa.edu.in
Co-guidance of	:	Dr. S N Omkar, Chief Research Scientist, IISc, Bangalore e-mail : omkar@aero.iisc.ernet.in
		Dr. Manoj Kumar Sharma Additional Professor, NIMHANS, Bangalore e-mail : shutclinic@gmail.com

What is this research study :

A research study is a systematic, careful, accurate and detailed study of a particular topic using the scientific method. In this study, yoga education is given to children for a fixed duration to see its effect in controlling anger.

Who is participating in this study :

Children studying in 8th standard have an opportunity to participate in this study. Participation in this study is voluntary. Necessary permission will be obtained by the school authorities, parents and the children before commencement of the study. There are some inclusion and exclusion criteria to be part of this study. Based on that, participation is considered.

Nature and purpose of study :

This study is proposed to find out the effect of yoga for controlling anger in high school children. It includes conducting yoga classes for children and measuring their anger levels before and after yoga intervention. Data thus obtained will be analysed and report is generated.

Children will be divided into two group - intervention group and control group. During the study period, only children in the intervention group are taught yoga. For control group, yoga will be taught after the study period. However, filling up of questionnaires and information sheet is done by both the group.

Yoga module is specifically designed to address the anger issues in children. It comprises of simple asanas, basic pranayamas, meditation techniques and knowledge points. Yoga module is carefully developed, validated and approved by subject experts.

Yoga classes will be conducted during school hours. Children will be advised to practice a few yogic techniques at home every day and parents are requested to support the children.

Anger levels are measured using simple questionnaires. The questionnaires are developed methodically and tested for their reliability and validity. They contain a set of multiple choice questions where children need to tick mark the appropriate answer.

Along with this, general information about the children will be obtained by getting the application form (demographic information sheet) filled by them. Parents will also be requested to assess their child by filling up an assessment form.

Children will also be requested to maintain a diary during the study period and parents are requested to support the children in maintaining the diary.

Duration of the study :

This study will be conducted for a duration of four months with two sessions per week. The school authorities have agreed to allot two periods in a week for yoga classes during the study period.

Procedure followed for conducting the yoga classes and taking measurements:

Yoga classes will be conducted in a spacious, well lit and ventilated room. Yoga classes are conducted by trained instructors. Adequate time, instructions and explanation will be provided to fill up the forms and questionnaires and also during the yoga sessions.

Yoga practice is done in the uniform only (shoes will removed, belts are loosened). Girl students will be asked to wear appropriate clothes. Yoga mats or Jamkhana will be made available during asana practice. Yoga classes are conducted before the lunch period or after 2 hours of lunch.

Students having health issues that hinder them practice of yoga are asked to take rest during the sessions. Girl students during their menstrual cycle will be advised not to practice asanas. No student will be forced to do any practice during the sessions.

Foreseeable risks and discomforts:

Yoga module is carefully designed giving utmost priority to safety and comfort of children. Only such postures and breathing techniques that are safe for practice by children are taught. Instruction will be given to children in every class to inform the instructor in case of any discomfort or health condition at any point of time during the yoga session.

Yoga classes will be conducted by a trained and certified yoga instructor. Instructor will be closely monitoring the children during the practice. If more than 40 children in a session, two instructors will be deployed to ensure proper monitoring. Repeated instructions will be given about the right way of doing the yogic techniques and the procedure to be followed.

Benefits to the participant:

Yoga has proven benefits to children in terms of personality development, increased memory, concentration and performance in addition to treating various ailments and disorders.

Compensation:

All incidental expenses are borne by the research scholar. Children, school or the parents will not be requested to make any kind of expenditure towards the study.

Anticipated inconvenience or discomfort in attending the yoga classes is minimal, as yoga classes are conducted during the school hours and in the school premises. Hence, no compensation in cash or kind will be made to children or to the school for participating in the study.

Medical treatment in case of injuries or risk management:

First aid kit will be made available during every yoga session. Yoga instructors are trained for providing first aid services.

In the event of major injury caused during the yoga session, due to yoga practice or otherwise, the instructor will take the child to the nearest medical care facility available while informing the school authorities.

Confidentiality:

The data or information obtained concerning the student, institution etc. during the study will be used only for the study purpose. Study Team will also ensure proper security, confidentiality and safety of the data during and after the study. Further, no individual data/ information will be disclosed to anybody. Only consolidated data is published and a comprehensive report will be generated.

Consent :

It is mandatory to obtain parent's consent before involving the children in any research study. At the same time, consent of the children should also be obtained in writing before commencing the study.

Attached are the consent form from parents and also children. After going through this note, if both the parents and children are in agreement with all the information provided are requested to sign the respective consent forms and return to the research scholar.

Withdrawal clause :

School authorities, parents and the children have the option of withdrawal from the study at any point of the study, without assigning any reason thereof. Children will not be punished or penalized for their decision to participate or not in the study

Certification:

This research study is being undertaken by the undersigned, the research scholar, as a part of PhD program. This study will be conducted in accordance with the guidelines of the university and the ethical committee. The information provided in this leaflet is true and correct to the best of my knowledge.

This leaflet can be retained by the child or the parent. Only consent forms should be signed and returned to the research scholar.

T L Alaka Mani
Name of the research scholar

.....
Signature

Date and Place :, Bangalore

CONSENT FORM

Name of the student :

Gender : **Boy** / **Girl**

Roll number :

Standard & Section :

Date of birth :

I have read the information about the research study '**Yogic management of anger in high school children**' to be conducted in our school and have understood my role in this study. I have been told that the participation in this study is voluntary and I have the freedom of withdrawing from the study at any point of time.

I would like to be part of this study.

Date :

Place :

Signature of the student

=====

We have gone through the information provided about the research study '**Yogic management of anger in high school children**' being conducted in Auden High School where our child is studying. We have understood the participation as well as withdrawal clauses.

We hereby give consent for our child to participate in this study.

.....
Signature of the parent

.....
Name of the parent

Date :

Place :

Demographic Information

Name					
Roll No :		Date of birth	Gender		Boy / Girl
Height :		Weight	Mother Tongue :		
1	Handedness		Right handed / Left handed		
2	Food habits		Vegetarian / Non Vegetarian (if both, tick mark Non-vegetarian)		
3	Number of brothers and sisters you have (Put the numbers, not names)		Elder brother/s :		
			Elder sister/s :		
			Younger brother/s :		
			Younger sister/s :		
			Twin brother / sister :		
4	Total number of people staying in your house				
5	Do you have any health problem, disability, any surgery done in the last 6 months ?				
6	Father's Details		Name		
			Education		
			Profession		
7	Mother's Details		Name		
			Education		
			Profession		
8	Health condition of the family (Any cronic illness, disability in any member of the family)				
9	Residing in		Rented (leased) House / Own house / Flats		
10	Do you watch TV - if yes, how many hours a day?		during school days		during holidays
11	Do you read books other than your academic subjects? If yes, what type ? Fiction / suspense / novels / science / story books				
12	Number of close friends you have				
13	Do you have any hobby / interest in cultural activities / sports? If yes, specify				
14	Any major disappointments / failures in life?				
15	What you want to become in your life?				

16	How do you think your father express anger generally	Behaviour (Kayena)	Speech (Vacha)	Silence (Manasa)
17	How do you think your mother express anger generally	Behaviour (Kayena)	Speech (Vacha)	Silence (Manasa)
18	How do you express anger generally	Behaviour (Kayena)	Speech (Vacha)	Silence (Manasa)
19	Who do you think in your family most angry person			
20	Have you got severely angry in the last 4 months? If yes, describe the situation, with whom, what did you do?			
21	Do you experience this	1	Always wants more and more	
		2	Always wants to do something big (highly ambitious)	
		3	Keep doing something (cannot sit quiet)	
		4	Never happy or satisfied with anything	
22	Have you attended any Yoga or Personality Development program			
23	Do you believe in God?			
24	Do you pray everyday?			
25	Which of these attributes describe yourself	1	Introvert (quiet, shy, hesitate to express)	
		2	Emotional (too or very sensitive)	
		3	Compassionate (helping, caring others)	
		4	Calm and Relaxed (not getting disturbed for small issues)	
		5	Outspoken (straight forward, bold, tough minded)	
		6	Confident (Feel good about yourself)	
		7	Aggressive (always angry, in fighting mood, demanding)	
		8	Absent minded (forget very soon, don't remember)	
		9	Depressed (worrying, blaming, thinking negative)	
		10	Accommodative (foregiveness, adjusting nature, positive thinking)	
		11	Disciplined (neat and clean, time conscious, well planned, systematic, organised)	

Questionnaire on Food Habits

Name :	Date :
Roll No :	Sex : Boy / Girl

- 1) Vegetarian / non vegetarian / egg eating Vegetarian
- 2) If you are not a vegetarian, how often do you consume animal products like meat, fish, egg, etc, times / week
- 3) How many meals / snacks do you have in a day? meals snacks
- 4) Do you consume your meals daily at approximately same times? Yes / No
- 5) Do you skip any meals regularly? Yes / No ; How often ?
- 6) How many cups of coffee & tea do you consume in a day? Cups
- 7) Do you drink milk every day? Yes / No ; If yes, how many cups? cups
- 8) Do you consume chocolates regularly? Yes/No; If yes how often ? weekly times
- 9) Is your food spicy? Yes / No
- 10) Do you see lots of oil in your food? Yes / No
- 11) Do you eat deep fried foods regularly? Yes/No; If yes how often ? weekly times
- 12) How often do you consume sweets /soft drinks / canned juices?
Everyday / 2 or 3 times per week / more than 3 times per week / rarely / don't eat
- 13) How often do you consume bakery foods like cakes / puffs / bread / rusk / buns etc?
Everyday / 2 or 3 times per week/ more than 3 times per week / rarely /don't eat
- 14) How often do you consume packet foods like chips / biscuits / kurkure / namkeen etc?
Everyday / 2 or 3 times per week / more than 3 times per week / rarely / don't eat
- 15) Do you consume vegetables regularly? in 1) breakfast 2) lunch 3) dinner
- 16) Do you eat fruits daily? Yes / No ; If not how often do you eat? times a week
- 17) How many glasses of water do you drink in a day? 1-6 glasses/ 6-8 glasses / more

Diary - Daily Activities

Name : Roll No: Sec

Dear Student, Request you to please provide the following information. Please be honest and fill up the details everyday. There is no write or wrong answers. You should get the signature of your parent and return this form to us on 9th March 2016. For any clarification contact Alaka @ 98453-24000.

Date	What time you woke up today	What time you went to bed today	Any physical activity / yoga done today	How many times you got angry today	With whom you got angry (friend/ parents / teacher / others etc)	How long you watched TV today	Did you eat Non-veg today
23rd Jan							
24th Jan							
25th Jan							
26th Jan							
27th Jan							
28th Jan							
29th Jan							
30th Jan							
31st Jan							
1st Feb							
2nd Feb							
3rd Feb							
4th Feb							
5th Feb							

Parent's comments, if any:

.....

Parent's Signature : Date :

Name of the Parent :

Parent Assessment Form

Dear Parent,

Thank you very much for allowing your child to participate in this research study on anger. We would like to invite you also to be part of this study and provide additional information about your child which enables us to look at the anger issues holistically.

Anger in adolescent children has become a social menace. Unaddressed anger is the root cause for many social menaces such as aggression, violence, self harm, road accidents, substance abuse, drug addictions and unhealthy sexual behaviours.

We are assessing the anger using questionnaires to be filled up by children. In order to make the assessment more comprehensive, we are seeking parent's support.

Please respond to below statements or question which will help us to understand the anger issues of adolescents. If you wish, you may put it in a cover, seal and send it to us. The information provided will be highly kept confidential and will not be disclosed to anyone.

Following are the few questions related to assessment of anger in your child. We request you to please answer below questions honestly. Tick mark the appropriate option. You may tick mark as many options that best describes the statement

Student's Name :

Standard & Section :

Roll No

1) Do you face problems in managing the your child's anger?

a) **Not at all** b) **Sometimes** c) **Most of the times**

2) How do you rate intensity of anger in your child in day-to-day activities?

a) **Mild** b) **Moderate** c) **severe**

a) **Mild** : Becomes irritated, but not stubborn;

b) **Moderate**: Becomes stubborn, does not listen, verbal aggression, argumentative;

c) **Severe**: Behavioural, takes out anger on self or things/people around, difficult to manage

3) How does your child exhibits his or her anger predominantly?

a) Behaviour b) Speech c) Thinking

- a) **Behavioural (kayena)** - strong bodily gestures, indulging in angry behaviours, physical abuse or harming self or others
- b) **Speech (vacha)** - shouting, yelling, using abusive language, arguing
- c) **Thinking (manasa)** - hides hanger, becomes silent, abstaining from daily activities, eating, studying etc

4) Does your child threaten others when he or she is angry?

a) Never b) Sometimes c) Most of the times

5) Does your child cause harm to others of self when angry?

a) Never b) Sometimes c) Most of the times

6) How do you generally manage your child when he or she is angry? (If more than one option describe the statement, please tick mark those options too)

- | | |
|------------------------------|--------------------------------------|
| a) Shouting at them | f) Diverting their attention |
| b) Threatening | g) Motivating them to something else |
| c) Ordering | h) Offering incentives |
| d) Convincing | i) Educating them |
| e) Yielding to their demands | j) Any other (pl specify) |

7) Have you sought any psychological help for management of your child's anger?

Yes / No

8) Any other information you wish to provide about your child's anger?

.....
.....

Signature of Parent

.....
Name of the Parent

Date :

Place

AHS	Yoga	Tanv	Girl	2	3	2	3	2	3	2	3	2	2	1	2	1	1	1	2	2	1	3	2	1	2	1	2	3	2	3	1	3	3	2	3	2	3	1	3	3	3	2	2	3	2	2	2	3										
AHS	CG	Jeev	Boy	2	3	3	2	3	1	3	3	3	3	3	1	2	2	1	3	3	3	3	1	3	2	2	1	3	2	3	3	1	3	2	3	3	1	3	3	2	1	2	3	2	2	1	2											
JKV	CG	Saty	Boy	2	1	1	2	3	1	3	2	2	2	2	2	3	1	2	2	2	3	1	2	2	2	3	1	1	2	3	3	1	3	3	3	1	2	1	1	1	1	3	2	1	1	3	2	1										
AHS	Yoga	Dhar	Girl	1	2	2	2	3	2	1	1	1	1	1	3	1	1	1	2	1	2	3	2	2	1	1	1	1	1	2	1	1	3	1	1	1	1	1	2	1	2	1	2	1	1	1												
AHS	Yoga	Mihi	Boy	2	2	3	1	2	1	3	2	3	2	2	2	3	3	2	2	2	3	1	3	2	2	2	2	2	2	2	1	1	3	2	2	2	2	2	3	2	2	1	2	2	3	1	2	2										
JKV	CG	Gaur	Girl	3	2	3	2	2	3	2	3	2	2	2	1	2	1	2	1	2	3	1	2	3	1	2	3	1	2	2	3	1	2	2	2	2	2	2	2	2	2	2	2	1	3	2	1	3	2									
JKV	Yoga	Kava	Girl	3	3	2	3	3	1	2	2	3	2	2	1	2	2	1	2	2	3	1	3	2	2	3	1	2	2	2	1	3	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1	3	1	2	1	1						
JKV	Yoga	Praty	Girl	2	2	2	1	2	2	1	2	2	1	2	1	1	2	1	2	2	2	2	1	2	2	1	2	1	2	3	2	2	1	3	2	2	2	2	2	2	2	2	2	2	2	2	3	2	3	2	2	2						
JKV	Yoga	Gaur	Girl	2	2	2	1	2	1	3	1	3	3	1	2	1	2	2	2	2	3	2	2	2	1	2	2	1	2	2	2	1	1	2	3	1	3	1	1	1	1	1	2	1	3	1	2	2	1	2	2							
AHS	Yoga	Anis	Boy	2	2	2	1	3	2	3	2	3	1	1	1	1	1	2	2	3	1	3	2	1	1	1	2	2	1	2	3	1	1	3	1	1	3	1	1	3	1	2	1	1	2	2	3	1	1	1	1							
JKV	Yoga	Yash	Girl	2	3	1	1	3	1	3	3	3	3	3	3	3	2	1	2	1	3	2	1	3	2	2	3	3	1	1	1	3	2	3	1	3	1	2	1	2	1	3	1	3	2	2	2	2	2									
AHS	Yoga	Kavy	Girl	2	2	2	1	2	1	3	1	3	2	1	2	2	2	2	1	2	3	2	3	2	1	2	1	2	2	2	1	3	1	3	1	2	2	1	2	1	2	1	2	2	3	1	1	2	1	2	1							
AHS	Yoga	Ksha	Boy	2	2	1	3	1	2	2	3	2	2	1	2	2	2	2	3	2	3	2	3	2	3	1	2	2	2	1	3	1	3	1	2	2	1	2	2	1	2	1	2	2	2	2	1	2	1	2	1	2	1					
JKV	Yoga	Vars	Girl	2	2	2	1	1	3	1	1	1	3	1	2	1	1	1	3	2	2	3	2	3	1	1	2	2	2	3	1	1	1	2	2	1	2	1	2	1	2	1	2	2	2	2	1	2	1	1	1	1						
AHS	Yoga	Taru	Boy	2	3	2	3	2	1	3	1	2	3	2	3	2	1	2	1	2	1	2	1	2	2	1	2	2	2	2	2	1	2	2	2	1	2	2	1	2	2	1	2	1	1	1	2	1	2	2	2	1						
JKV	Yoga	Raks	Girl	2	2	2	1	2	1	2	1	2	1	1	2	2	1	3	1	2	2	2	1	1	2	1	2	2	3	3	2	1	1	2	2	2	2	2	2	2	2	2	2	2	1	2	1	2	1	3	2	1	2	1				
AHS	CG	Hars	Girl	2	3	1	2	3	1	3	1	3	2	1	3	1	2	1	2	2	1	2	1	2	1	1	3	2	2	2	3	1	2	1	3	1	1	3	2	1	1	3	2	1	1	2	2	3	1	2	3	1	2	3	1			
AHS	Yoga	Sriia	Girl	2	3	3	2	2	3	2	1	1	2	2	2	2	2	2	2	3	1	2	2	3	1	2	2	3	2	3	1	1	1	1	3	1	2	2	2	3	1	2	1	2	1	2	1	1	2	3	3	3						
JKV	Yoga	Poor	Girl	3	2	3	3	3	1	2	2	3	3	3	2	2	2	2	2	3	2	3	2	2	2	3	2	2	2	2	3	1	2	2	2	3	1	2	2	3	3	2	2	2	2	2	2	1	2	1	3	2	1	3	2	1		
JKV	Yoga	Shre	Girl	3	3	2	1	3	2	1	3	2	2	2	2	1	2	1	1	3	2	1	1	3	2	1	1	2	2	3	3	2	1	3	1	1	2	2	2	2	1	2	1	2	2	2	1	2	1	3	3	2	1	1	1			
JKV	Yoga	Divy	Girl	2	2	2	1	1	2	2	2	2	1	2	2	2	1	2	2	2	1	1	1	1	1	1	1	1	2	2	2	1	2	1	2	2	1	1	2	1	2	1	2	1	2	2	2	1	2	1	2	1	2					
AHS	CG	Sukr	Girl	2	1	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	2	2	2	1	2	1	2	1	2	1	2	3	1	2	2	1	2	1	2	1	2	2	2	1	1	1	1					
AHS	CG	Prag	Girl	2	2	2	1	3	1	2	1	3	2	1	3	2	2	3	2	3	2	3	2	3	2	1	2	1	2	3	2	3	3	1	2	1	3	3	1	2	2	2	3	2	3	2	3	2	2	2	2	2	2	2	2			
AHS	Yoga	Ashr	Girl	2	1	2	3	3	1	1	1	2	1	1	3	1	1	2	1	1	1	1	1	2	1	1	2	3	1	3	1	1	2	2	1	1	1	3	1	2	2	1	1	1	3	1	1	1	2	1	1	1	1	1	1			
JKV	Yoga	Vish	Boy	2	2	3	1	3	1	3	2	3	2	3	2	1	2	1	2	3	2	3	2	1	1	1	2	1	2	2	1	2	1	2	1	2	1	2	1	2	1	1	1	1	1	1	2	2	1	1	3	2	1	1	3	2		
JKV	Yoga	Mad	Boy	2	3	1	1	2	1	3	2	1	2	1	2	2	1	1	2	1	3	2	1	1	2	2	2	2	1	2	1	2	1	1	1	2	3	1	3	1	2	2	3	3	2	3	1	1	1	1	1	1	1	1	1	1		
JKV	CG	Gane	Boy	2	2	2	1	3	3	3	2	3	3	1	3	2	1	1	1	3	1	2	1	1	1	1	2	2	1	3	3	1	2	1	3	3	2	3	1	1	1	1	3	1	3	2	3	3	1	1	1	3	2	3	3	1		
JKV	Yoga	Amr	Girl	2	2	2	2	2	1	2	1	2	1	1	2	3	1	1	2	2	1	3	2	2	2	2	2	2	2	2	2	2	1	2	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2	2	2	2	2			
AHS	Yoga	Vais	Girl	2	2	3	3	3	3	3	2	3	2	2	3	3	1	2	1	3	3	2	1	3	2	1	3	2	1	2	1	1	2	2	1	1	3	3	2	3	2	2	1	2	1	2	1	2	1	1	1	1	1	1	1	1		
JKV	Yoga	Myth	Girl	2	2	1	2	1	2	1	1	3	1	2	1	1	3	2	2	3	1	3	2	2	2	1	2	2	2	2	1	1	1	2	2	2	3	2	2	2	2	2	2	2	2	3	1	2	2	2	2	2	2					
JKV	Yoga	Pratt	Boy	2	2	3	1	3	1	3	1	3	3	1	3	3	1	1	1	3	2	1	1	3	3	3	1	2	3	2	1	1	1	2	1	1	3	2	1	1	2	1	1	2	1	1	2	1	1	2	1	2	3	1	2	3	1	
JKV	CG	Kart	Boy	1	3	3	1	1	1	3	1	2	2	1	2	1	1	1	2	3	2	3	1	2	1	1	2	2	3	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	2	3	2	3	1	2	1	2	1	2				
AHS	CG	Esha	Girl	1	2	2	1	2	3	2	2	1	2	3	3	2	1	1	1	2	3	3	1	2	1	1	2	3	1	3	3	3	1	3	1	3	2	2	1	2	1	2	2	3	3	1	2	2	1	2	2	1	2	2	1			
JKV	Yoga	Shwa	Girl	2	2	2	1	2	1	2	1	2	2	1	2	2	2	1	3	1	1	2	1	2	1	2	2	2	2	2	1	2	1	2	2	1	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	1	2	1	
JKV	Yoga	Hith	Boy	2	2	3	3	3	1	3	2	1	3	3	2	3	2	3	2	3	2	3	3	2	2	1	3	1	1	1	3	1	1	2	2	2	2	1	3	2	1	1	2	1	1	3	1	1	2	1	2	2	1	2	2			
AHS	Yoga	Vikr	Boy	1	2	1	3	2	1	1	1	2	1	1	3	1	2	1	2	1	2	3	3	1	2	1	1	1	1	1	2	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
AHS	CG	Prad	Boy	3	3	3	3	2	3	1	3	3	2	3	2	3	1	3	3	2	3	1	3	3	2	1	1	2	3	2	2	3	1	3	3	3	2	3	2	3	2	3	2	2	1	1	2	1	1	3	3	2	2	2	1	1	2	1
JKV	Yoga	Tush	Boy	3	2	3	1	3	2	3	2	2	2	2	2</																																											

RAW DATA of FIELD STUDY OF SCALE DEVELOPMENT PROCESS

Name	Adolescent Anger Assessment Scale										STAXI 2 CA Scale									
	S	a	a	a	a	a	a	a	a	a	S	S	S	S	S	S	S	S	S	S
Chita	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Akasi	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Harsi	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Utsa	M	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Adhit	M	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Bhuv	M	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Kalva	M	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Bruni	M	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Nagsi	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Anuri	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Sreeji	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Sandhi	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Souia	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Deep	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Suha:	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Darsi	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Kavvi	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Gitan	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Priva	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Neeh	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Nami	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Harsi	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Anish	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Harsi	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Malle	M	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Pram	M	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Sheni	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Prera	M	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Chan	M	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Sumi	M	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Shani	M	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Gaga	M	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Priva	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Siri K	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Magi	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Rohit	M	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Mervi	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Saha:	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Cheti	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Sarvil	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Snehi	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Sania	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Kisho	M	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Bhoo	M	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Mansi	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Abhis	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Jothi	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Raniji	M	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Pooji	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Maar	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Nisar	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Rushi	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Chan	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Varsi	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Pallavi	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Mohi	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Megh	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Mohi	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Shrey	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Deep	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Geor	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Vardi	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Prain	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Bhuv	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Smriti	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Adha	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Anan	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Aruni	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Aniar	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Nandi	M	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Vishr	M	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Prajai	M	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Yashu	M	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Saha:	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Kasi	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Lavin	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Prishi	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Aravi	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Sama	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Bhoo	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
Moni	F	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
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Paviti	M	1	1	1	1	1	1	1	1	1	S	1	1	1	1	1	1	1	1	
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Harst 1
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Lavar 1
Dhru: 1
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Sude: 1
Suha: 1
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Haris F 1 1
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Covering Letter – Requesting to review the scale

Dear Sir,

Warm greetings from Alaka!

As a part of my PhD program, i am in the process of developing a psychometric checklist (scale) to measure anger in high school children. I intend to measure anger at Kaya (behavioural), Vacha (expression) and Manasa (cognition) domains.

After review of literature, interaction with stakeholders and discussion with my guides a list of 58 items (questions) are being generated. Now these questions have to be reviewed by experts and I solicit your support in this regard.

Attaching herewith the list of items and request you to critically review and comment. It needs to be reviewed at 4 areas as detailed below:

- 1) Whether the question is relevant? (rate on a 1 to 5 scale with 1 referring to least relevant and 5 being most relevant)
- 2) Classify the question whether it refers to Kaya or Vacha or Manasa domain (tick mark on the appropriate column)
- 3) Language and formation of the question – whether any improvement/modification could be made? Reworded? Etc
- 4) Suggesting a new question – you may propose a new question which you think is relevant

I request you to go through the attached list and send me your expert opinion/comments.

I have another humble request. I intend to complete the entire scale development process in a month's time and start my yoga intervention in the coming academic year itself. Hence I request you to please send your comments as early as possible. I personally solicit your support and cooperation in this regard.

Thanking you in advance,

Warm regards
Alaka
98453-24000

Adolescent Anger Checklist

I am working on developing checklist to assess anger among adolescents. I request you to please review the given items and provide your expert comments. I also request you to classify the questions based on the three domains (1) **Behavioural** level (2) **Verbal** level and (3) **Mental** level. In other words, we plan to assess anger at Kaya, Vacha and Manasa domains in children. Relevance may be rated between 1 to 5 (1 being least relevant and 5 most relevant)

SI No	Description	Relevance (1 to 5)	Domains			Comments/any modification or new items you suggest
			Behaviour	Verbal	Mental	
1	When I am angry, I throw objects, cause damage or destroy things					
2	When I am angry, I use strong gestures like kicking, punching, raising arms, take out the hand, grinding my teeth, frowning eye brows, making fists etc					
3	When I am angry, I simply sit making my face very grim without doing anything					
4	When I am angry, I engage myself in listening to music, reading story books or do something that makes me happy					
5	When I am angry, I do some work that requires more physical activity so that I forget my anger					
6	When I am angry, I prefer to move away from that place and relax in a peaceful area					
7	I become restless when I am angry					
8	I have taken out my anger on people who don't deserve it					
9	When I am angry, I intentionally drive fast / cycle fast / run fast					
10	When I am angry I feel like not following the advises.					

11	When things does not work my way, I get angry/ disturbed / irritated					
12	I show my anger by yelling, screaming, raising my voice, changing my tone etc					
13	I answer very rudely or negatively to all the questions / others, when I am angry.					
14	When I am angry, I avoid expression of my anger					
15	When I am angry, I remain silent but not quiet / calm					
16	When I am angry, I express other emotions (pretend happy, sad or scared etc)					
17	I try to explain my disagreement / displeasure in a calm way					
18	When I am angry, I become stubborn					
19	I would prefer to talk to someone close to me when I experience anger or frustration					
20	When I am angry, I experience disturbance in attention and concentration or I find it difficult to have attention / concentration					
21	I don't show my anger as I am scared to bear the consequences.					
22	I don't speak or do not discuss my anger as I know others won't appreciate it					
23	When I am angry, I hate myself and others in the mind					
24	I don't show off my anger as I know it can put me into more trouble					
25	When I am angry, I try to make the other person understand the situation					
26	I talk to myself to control my anger					

27	When I am angry, I remember similar situations of the past where others mistreated me					
28	I get angry by the people around me or situations that are happening around me					
29	When I am angry, I feel less confident to do anything					
30	I find it easy to express anger on unknown / unfamiliar people					
31	I first express my anger first and then think					
32	I regret about the way I express my anger					
33	I think that it is not good to be angry					
34	I get angry when people physically bully me (kicking, punching, slapping etc)					
35	I get angry when my privacy is violated					
36	When others (teachers/parents) scold me unnecessarily I get angry					
37	I get angry when I am unable to access any facility due to some problem / malfunction (when Internet does not work, power goes, when play ground is not available to play etc)					
38	I get angry when my parents don't get me / give me whatever I want, when asked					
39	I get angry, when teachers take away our favourite classes / take extra classes / sp classes (PE period is taken to complete the portion)					
40	I get angry when my things are confiscated / taken away					
41	I get angry when I am not allowed to think creatively / use my mind, even to do good work (when the freedom is not given)					
42	I get angry when I am not believed or trusted					

43	I get angry, when I fail to do a job					
44	I get angry, when I fail in my exams or get less marks than expected					
45	I get angry when I am not selected for a sports / games / activity / drama etc					
46	When I am sad, I get angry quickly					
47	I get angry when I am asked to keep the place clean, neat and tidy					
48	I get angry when people do age discrimination (if I am told I am too small /young or old)					
49	I get angry when I am not given equal opportunity / When I am treated unfairly					
50	When I am angry, I do things that I should not do					
51	When I am not allowed to watch TV when I want to, I get angry					
52	I get angry when anybody ask me repeatedly to reduce the volume of TV / drive slow / talk in a particular way					
53	When I am angry, I complain about other things					
54	I experience anger when people criticise me					
55	I have many quarrels with members of my family, friends					
56	I show my anger immediately / quickly					
57	I usually do not get angry					
58	People around me are concerned about my anger					

MODULE VALIDATION

Of

Yoga Module for Anger Management in Adolescents

developed by

Ms. Alaka Mani T L, PhD Scholar, SVYASA Yoga University

Under the guidance of

Dr. H R Nagendra, Chancellor - SVYASA Yoga University

Co-guidance of

Dr. S N Omkar,
Chief Research Officer
Dept of Aerospace Engg,
IISc, Bangalore

Dr. Manoj Kumar Sharma
Additional Professor
Dept of Clinical Psychology
NIMHANS, Bangalore



Swami Vivekananda Yoga Anusandhana Samsthana (S-VYASA)

(A University, established under Section 3 of the UGC Act, 1956 vide
Notification No. F.9-45/2001-U.3 dated 08-05-2001 of the Government of India)

Yoga Module - Validation

As a part of the PhD project, I, Ms. Alaka Vishwanth, have developed a **yoga module for anger management in adolescents**, under the guidance of Dr. H R Nagendra, the Chancellor of the University; co-guidance of Dr. S N Omkar, Chief Research Scientists, IISc and Dr. Manoj Kumar Sharma, Addl. Professor, Clinical Psychology, NIMHANS. Additional expert advice is sought from Dr. Ramachandra, senior faculty of SVYASA Yoga University.

Anger is defined as an innate emotion which is harmful to the self as well as others. Anger manifests at three domains namely Kaya (behaviour), Vacha (speech) and at Manasa (thought). This yoga module is aimed at overcoming anger rather than controlling anger at all these three domains.

The module is intended to be taught in schools for 8th and 9th standard children, during the academic periods for a period of 4 months with weekly two sessions of 40 minutes each. Home assignments and daily home practice are also part of the module. Since the module is being used in schools, utmost care is taken to minimise the religious facets of yoga and only essential practices are included.

The module comprises of 4 broad components 1) Asanas, 2) Pranayamas, 3) Meditation and 4) Jnana Yoga. Asanas that promotes concentration, attention and balance; pranayamas that promotes calmness and tranquillity; meditation that promote emotional mastery are included in the module. Under the premise of Jnana yoga a few aspects of Yama, Niyama and Pratyahara which are relevant to Anger and also physiology and psychology of anger are considered. Jnana yoga topics are taught using Power Point Presentations, Short films, Stories and games.

I now request you to please go through the module carefully, diligently and provide your comments. Rating instructions are provided at the beginning of the module. I also request you to provide your personal informed as detailed in the reviewer's page.

REVIEWER'S PAGE

Name of the Reviewer :

Profession :

Organisation belonged to :

Contact Details : e-mail id : Tel (Optional)

Number of years of experience :

Number of publications :.....

Overall comments on the Module :

.....
.....
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Signature :

Date : **Place**

Module Structure and framework

The yoga module is taught to children in 30 sessions. Each session begins with a prayer and also concludes with a prayer. The sessions are structured incorporating asanas, pranayamas, meditation and jnana yoga aspects earmarking sufficient time for each of these practices. Below is a brief framework of each session. Time earmarked for practice of each component is mentioned in the framework. However minor adjustment in time, if needed, will be made in the class. Detailed module will follow in subsequent pages.

- 1) **Opening Prayer (3 minutes per session) :** Taken from Bhagavadgita (Chapter 2, verse 62 and 63).

ध्यायतो विषयान् पुंसः संगस्तेषूपजायते । संगत्सञ्जायते कामः कामात्क्रोधोऽभिजायते ॥

Meaning : Looking at something, an interest develops, which leads to attachment then the desire to have it. From the desire, anger arises.

क्रोधाद् भवति सम्मोहः सम्मोहात्स्मृतिविभ्रमः । स्मृतिभ्रंशाद् बुद्धिनाशो बुद्धिनाशात्प्रणश्यति ॥

Meaning: Anger leads to mesmerisation which leads to loss of memory which leads to loss of decision making ability. With that one ruins.

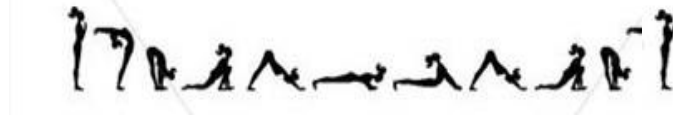
Om Shanti Shanti Shanti

- 2) **Asanas (10 Minutes per Session) :** Following Asanas will be taught.

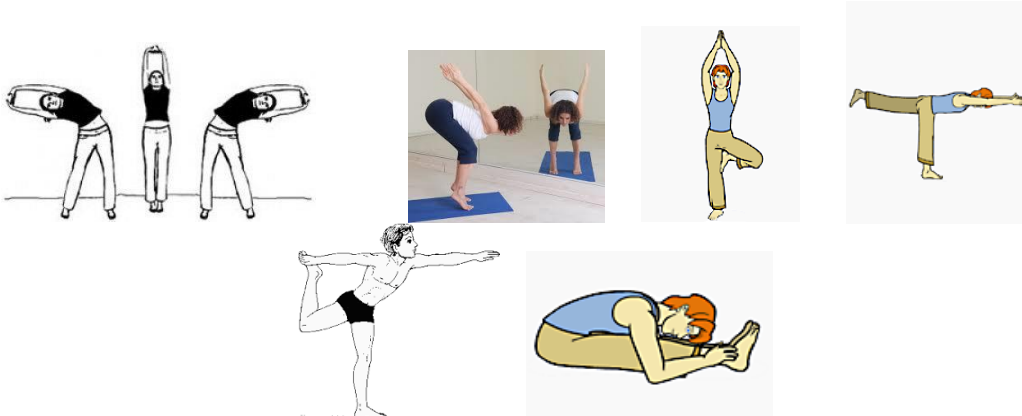
- a) **Dynamic series** – Shashankasana, bhujangasana, adhomukha swanasana



- b) **Practice of Surya Namaskara – 10 steps type**



- c) **Balancing and Forward Bending postures** – Tiryaka Tadasana, Ostrich Pose, Standing Vrikshasana, Veerabhadrasana 3, Natarajasana, Paschimottanasana



- 3) Pranayama (5 minutes per session):** Simple breathing practices such as Conscious breathing, Abdominal breathing, Alternate nostril breathing and Brahmari pranayama are taught.
- 4) Meditation (15 minutes per session) :** Modified version of MEMT(Mastering Emotion Technique) developed by SVYASA will be practiced. The concept note on this meditation is attached.
- 5) Jnana Yoga (5 minutes per session) :** Following topics will be covered in this section
- Physiology & Psychology of Anger – PPT
 - Screening of Short films on anger
 - Yogic concepts – Ahimsa, brahmacharya, santosha, swadhyaya, Iswara Pranidana, pratyahara
 - Food & Anger – PPT
 - Moral Stories on Anger ;
 - Games – anger related
- 6) Closing Prayer (2 minutes per session) :** Taken from Bhagavadgita (Chapter 3, verse 38)

काम एष क्रोध एष रजोगुणसमुद्भवः । महाशनो महापाप्मा विद्ध्येनमिह वैरिणम् ॥ :

Meaning : Desire and Anger are same. It arises from the Rajasic nature. Anger is most sinful and heinous character. It is said to be biggest enemy of man. Om Shanti Shanti Shanti

Concept note on Meditation Technique for Management of Anger in Adolescents

This is one of the yogic technique used to get mastery over one's own emotions – Manomaya Kosha, developed by SVYASA. It helps one to become aware of their emotions, identify and acknowledge the emotion, be with the emotion, feel and experience the emotion and then to deal with the emotion.

This meditation technique is specifically designed to understand the anger emotion and then to diffuse it in adolescents. It involves seven steps which are explained below. Regular practice of this technique helps the students to manage their anger. It also helps in thinning down negative emotions and culturing positive emotions. The practice is done sitting comfortably with spine erect on a mat spread on floor.

Step 1 : Preparation (2 minutes)

Sit comfortably with your spine erect. Gently close your eyes. Interlock the fingers and rest the palms on the thighs.

Watch your thoughts, the thoughts that are coming one after the other and going. Do not follow the thoughts. Just observe them. Let them come and go. Try to identify each thought. Feel the body parts that are in contact with the ground. Feel the nature around you, the breeze, the noise etc

Focus your attention on your breathing. Observe the natural effortless breathing. Watch the movement of your abdomen attuned to the breathing.

Step 2 : Thinking and Feeling (Recognise, experience anger) – **(5 minutes)**

Recall an incident when you felt intense angry or you saw someone close to you becoming very angry. Recall the entire incident. Identify the angry emotions and feelings. Observe the changes in the body. Observe your breath, heart rate, feel the muscles, Recognise the increase in speed of various processes happening in the body and mind. Stay with that experience. Anger emotion is felt throughout the body.

Step 3 : Art of sublimation (Neutralising the anger emotion) **(5 minutes)**

Emotions when arisen are generally dealt with either by suppression or by inappropriate expression. Both are harmful. Sublimation is slowing down, a positive way of handling emotions. It neutralises the anger emotion. It diffuses the angry feelings.

Give an auto suggestion / command to yourself to slow down the speed of thoughts. Reduce the speed. Slow down your thinking process consciously. With the slowing down of thinking process, recognise the bodily process also getting slowed down. Observe the heart beat, breath, observe the surface of your skin. Think of the infinite sky. Feel the vastness. Feel the positive energy flowing into the body. Anger feelings are fully diffused by now.

Step 4 : Pairs of opposites (mastery over shifting emotions) **(5 minutes)**

Thinking and experiencing pairs of opposites. Imagining one extreme feeling / experience, reliving with that experience then drop it. Shift to the opposite experience, relive and drop. Like this different pairs of opposites could be felt.

Heat – Cold ; Stretch – Relax ; Sukha- Dukha ; Apamana- Mana ; Punya (Dharmic)- Apunya (Adharmic)

Step 5 : Action towards different emotional situations (Regulate the external stimulants of intense emotions there by develop immunity to anger) **(3 minutes)**

Emotional stability could be obtained by developing specific attitudes towards different kinds of people. Sage Patanjali says cultivate

- a) friendship with people who are happier
- b) Compassion towards people who are suffering
- c) Appreciate (delight) the people who are doing good work / virtuous
- d) Ignore people who are doing bad work or who are wicked

Step 6 : Silence (stabilising the balanced state of mind) **(2 minutes)**

Relax your mind, let go your thoughts, feel the tranquillity or calmness. Enjoy the silence. Remain not doing anything, not thinking anything. Total silence.

Step 7 : Resolve (touch the subconscious state) **(3 minutes)**

From the depth of silence, bring in a wave of a positive emotion 'forgiveness'. With full faith repeat in the mind for 9 times. **"I stay away from anger. I am happy always"**

YOGA MODULE – ANGER MANAGEMENT

Please find below yoga practices and their details. Against each practices, time allotted for practice is mentioned. Subsequent columns need to be filled by you.

Rating Instructions : You may rate your response with respect to each of the below aspects in a likert scale of 0 - 4 with zero being the least score and 4 being the highest score. **Relevance** means whether the technique significantly works for Anger; **Specificity** means whether the technique is precise for Anger; **Sensitivity** means whether the technique is sensitive to practice by children (both girls and boys) in school setting; and its **Evidence base** whether the reference or justification provided is adequate?.

Yogic Technique	Details and Justification	Relevance (0 to 4)	Specificity (0 to 4)	Sensitivity (0 to 4)	Evidence (0 to 4)	Overall comment
Dynamic practice of these asanas in sequence Shashankasana , Bhujangasana , Adhomukha swanasana ,	<ul style="list-style-type: none"> Provides gentle movement, flexion and extension to all major joints - head to toe Enhanced blood flow throughout the body Induces cycle of relaxation and activation Bhujangasana – has balancing effect on some hormones, keep the spine supple Shashankasana – regulates the functioning of adrenal glands and good for anger Strengthens the nerves and muscles of arms and legs. <p><i>(ref : book 'Yoga Education for children' by Bihar School of Yoga)</i></p>					
Triyak Tadasana	<ul style="list-style-type: none"> Lateral bending and lateral balancing posture. Simple movement in coronal plane as opposed to sagittal plane movements in the previous step <p><i>(ref : book 'Yoga Education for children' by Bihar School of Yoga)</i></p>					
Ostrich Pose	Develops balance, attention and concentration					
Vrikshasana , veerabhadrasana-3 , Natarajasana	balancing postures <ul style="list-style-type: none"> Enhance focusing, strengthen the lower extremities, Awareness of sensory input perception Balancing enhances concentration / attention. (anger is associated with restlessness or lack of attention and concentration) 					

Paschimottana sana	Good for strengthening lower extremities, Thymus gland activation					
Suryanamaskara	<p>Mind-body-breath coordination;</p> <ul style="list-style-type: none"> 80% of the musculoskeletal system gets activation, sub maximum pressure on joints <i>(Ref: SNO paper)</i> Enhances executive function and Academic achievement <i>(Ref: O'Malley G. 2011)</i> Positive outlook; improved memory, concentration and attention; induces peace and calmness; promotes well-being; enhances depth of perception <i>(Ref: Book - Dynamic Suryanamaskara-Krzysztof Stec)</i> 					
Conscious Breathing	<ul style="list-style-type: none"> Awareness of breathing Helps to calm down. Easy and simple way to practice – be in the present 					
Abdominal breathing	<ul style="list-style-type: none"> Upper Chest breathing is observed with anger abdominal breathing is the natural breathing pattern Requires less energy than chest or upper lunch breathing Oxygen/Carbon dioxide exchange is greater during this type of breathing <i>(Ref: Yoga Education for Children, Bihar School of Yoga; page 265, vol 1)</i> 					
Alternate Nostril Breathing	<ul style="list-style-type: none"> Balances the sympathetic and parasympathetic tone ; Flow of prana in ida and pingala nadis is equalized Regulating breathing helps in calming down the mind. Mind stabilises when breath is steady <i>(Ref: Hata Yoga Pradeepika 2-2)</i> 					
Brahmari	<p>Activates the higher limbic activities – anger is generated at lower limbic but coping is done at higher limbic region</p> <p>Harmonises the hypothalamic functions by which entire mind-body complex gets benefits <i>(Ref: book Power of Pranayama, Dr. RENU Mahtani)</i></p>					
Meditation	Modified version of MEMT (Mastering Emotion Technique) developed by SVASA for emotional stability. The technique includes					

	<ul style="list-style-type: none"> • Identify the anger thoughts /emotion / feeling • Experience the anger emotion / feeling • Neutralisation of anger (slowing down the thoughts /delay response) • Switching over to opposite emotions (pratipaksha bhavanam) (ref: PYS) • Cultivation of positive attitude (enhancing decision-making abilities) – (Ref PYS) • Experiencing calmness and making positive affirmations 					
Physiology & Psychology of Anger	<ul style="list-style-type: none"> • Definition of anger • Stimulus and Response theory • SNS and PSNS • What happens when you are angry • Manifestations 					
Screening of Movies	<ul style="list-style-type: none"> • Anger consequences • Anger Management • Philosophers who emphasised Non-violence (Krishna, Gandhi, Vivekananda etc) • Health consequences of Anger 					
Yogic Concepts	<p><u>Ahimsa – Nonviolence</u> (Kaya, Vacha, Manasa)</p> <ul style="list-style-type: none"> • Do not cause physical or mental suffering to anyone • Do not hurt others for whatsoever reason • Do not blame anything and hate anybody • Be gentle in your speech - speak good and pleasant things • Be polite in your behaviour • Be kind to everyone <p><u>Brahmacharya :</u></p> <ul style="list-style-type: none"> • Do not do anything in excess – watching TV, sleeping, playing, eating etc • Do not get addicted to electronic gadgets • Do not get into bad habits – smoking, alcohol, drugs etc • Judge what is good for you and do only that • Know your limits • Live in moderation 					

	<p><u>Santosha – Contentment :</u></p> <p>Be satisfied with what you have Love yourself Enjoy doing things without focusing too much on the results Do not feel bad for what you don't have Don't feel jealous Do not get attracted towards crafty advertisements</p> <p><u>Swadhyaya – Self Awareness :</u></p> <p>Know your strengths and weaknesses Be self motivated Have an inclination to understand the mind, consciousness, our existence and the whole creation Do not get fooled by false information / wrong knowledge Do not learn anything that brings down your personality</p> <p><u>Iswara Pranidana – Giving up the Ego</u></p> <p>Develop humility Treat everyone as equal Learn to surrender Do good and forget it Do not argue Don't have rigid thoughts Do not boast</p>					
	<p><u>Pratyahara</u></p> <p>Controlling the sensory inputs Focus on what you are doing Do not get disturbed /distracted by other things <i>(Ref : Book – SURYA by Dr. SN Omkar,)</i></p>					
<p>Food and Anger</p>	<ul style="list-style-type: none"> • Food types (rajasic, tamasic and satvic) • What, when, how, howmuch, where to eat • MINDFUL EATING 					
<p>Stories on Anger</p>	<p><u>Story 1:</u>There lived a short tempered (angry) boy in a village. He used to pick-up fights, argue & tease everyone. Because of this nature he was not liked by his friends, classmates and others. One day his father called him and gave him some nails and a hammer. The boy was told to hit a nail on the tree which is in the back-yard on the days he gets angry. The boy was obedient and started hitting the nails on the days he gets angry. This went on for about two months. By then the boy was almost not getting angry and came and told his father the same.</p> <p>The father now told the son to remove a nail from the tree on the days he don't get angry.</p>					

In a few weeks all the nails were removed from the tree. Then father took the son to the back-yard, shown the tree trunk and said. You have changed a lot. See whenever you got angry, you hit a nail and whenever you did not get angry, you removed a nail. But the scar remains. Similarly, our actions, our words cause permanent damage.

Moral of the story : Anger ruins life

Story 2 : There lived a father and son. Father was very poor. Son when he was around 18 years, demanded a motor bike for his birthday. On the birthday, the son came in from college and father handed over a bhagavadgita book to him.

The son got angry and left the house then and there and never returned. After many many years, when he had well settled in his life, realised his mistake and went to see his father. The house was locked. On enquiring with the neighbours, he realised his father become ill and died worrying about him. He took the key and went inside the house to see the same bhagavadgita book on the table with a note in it. He opened the note and it was the bill for purchasing the bike dated on the day he left. Tearful son turned to corridor to see the brand new bike parked there.

Moral : A minute of fury took his father's life

Story 3 : When Swami Vivekananda was studying law at the University College in London, a white professor whose lost name was Peters disliked him intensely.

One day Mr. Peters was having lunch at the dining room when Vivekananda came along with his tray and sat next to the professor. The professor said 'Mr. Vivekananda, you do not understand. A pig and a bird do not sit together to eat'. Vivekananda looked at him and calmly replied 'You do not worry professor. I will fly away' and went and sat at another table. Mr Peters, reddened with rage, decided to take revenge. The next day in Class he posed the following question 'Mr. Vivekananda, if you were walking down the street and found a package and within was a bag of wisdom and another bag with money, which one would you take?' Without hesitating Vivekananda responded 'The one with the money of course'. Mr. Peters, smiling sarcastically said 'I, in your place, would have taken the wisdom'. Swami Vivekananda shrugged and responded 'Each one take what he does not have' Mr. Peters, by this time was fit to be tied. So great was his anger that he

	wrote on Swami Vivekananda's exam sheet the word 'idiot' and gave it to Vivekananda. Swami Vivekananda got up went to the professor and told him in a dignified polite tone "Mr. Peters, you signed the sheet, but you did not give me the grade. Moral : When you are not angry, you can handle the situations better					
Krida Yoga	A computer game on anger management will be developed and used if time permits.					
Home Work	Asana Practice : Daily practice of Surya Namaskara – 12 rounds Story writing : Children will be asked to write or bring a story on anger and related aspects Dairy writing – Children will be asked to maintain a log book of the following : 1) wake up time & going to bed time; 2) No. of times got angry, brief about the situation, with whom; 3) Screen time (TV watching time) 4) foods eaten details 5) Good thing of the day & Bad thing of the day 6) Karma Yoga – any karma yoga done? If so details					

References :

Books / Scriptures :

- 1) Yoga Education for children – Vol 1; bihar school of yoga publication
- 2) Yoga Education for children – Vol 2; bihar school of yoga publication
- 3) kannada – Makkaligagi Yoga from SVYASA publication
- 4) Yoga Shastra for children – Ramamani Iyengar Inst publication (4 volumes)
- 5) Light on Pranayama by Dr. B K S Iyengar
- 6) Power of Pranayama by Dr. Renu Mathani
- 7) PE syllabus Text books of 8th, 9th and 10th Standard
- 8) Dynamic Surya Namaskara by Krzysztof Stec; SVYASA publication
- 9) Bhagavadgita
- 10) Hata Yoga Pradeepika
- 11) Patanjali Yoga Sutras

Published Scientific Papers :

- 1) Parag Javadekar and Manjunath N. K (2012), Effect of Surya Namaskar on Sustained Attention in School Children, Journal of Yoga and Physical Therapy
- 2) D.B. Chavhan (2013), EFFECT OF SURYA NAMASKAR ON SCHOOL CHILDREN, Vidyabharati International Interdisciplinary Research Journal 2(1)
- 3) S.N. Omkar, Meenakshi Mour, Debarun Das (2009); A mathematical model of effects on specific joints during practice of the Sun Salutation-A sequence of yoga postures, Journal of Body work and movement therapies
- 4) Kristin A. Gansle (2005); The effectiveness of school-based anger interventions and programs: A meta-analysis; Journal of School Psychology



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RES/IEC-SVYASA/65/2015

January 10, 2017

To,
Dr. H R Nagendra
Chancellor,
S-VYASA Yoga University,
Bangalore.

Reference:

"Yogic Assessment and Management of Anger in High School Children: A Pre-Post Controlled Study". - Committee Approval of the above mentioned study.

Dear Dr. H R Nagendra,

We have received from you the following study related documents vide your letter dated September 16, 2015

1	Project Proposal
2	Informed consent form

Ethics committee meeting was held on October 17, 2015 at 2:00 PM to 5:00 PM at Eknath Bhavan, Bangalore. Above documents were examined and discussed in the meeting. After due consideration, the committee has decided to approve conducting the aforementioned study.

APPROVED

Subramanyal

INSTITUTIONAL ETHICS COMMITTEE

SVYASA BANGALORE



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This is to confirm that neither Dr. H R Nagendranor any staff participating in this study were involved in the voting procedures and decision making.

The Institutional Review Board / Independent Ethics Committee (IEC) are expected to be informed about the progress of the study / any changes in the protocol and patient information / informed consent. The investigators are also expected to submit a copy of the final report to IEC for records.

This approval is valid up to the completion of the study at the site.

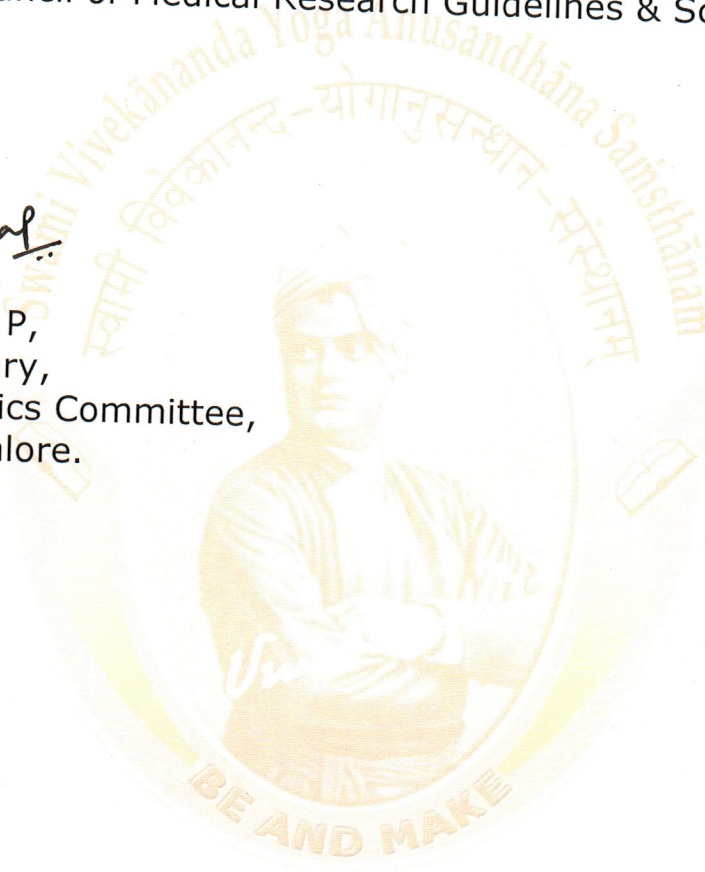
Please submit to the IEC, the status report of the study as per the SOPs.

The IEC is organized & operates according to the requirements of ICH-GCP, Indian Council of Medical Research Guidelines & Schedule Y.

Best Wishes,

Subramanya P.

Dr. Subramanya P,
Member Secretary,
Institutional Ethics Committee,
S-VYASA, Bangalore.





ANGER ASSESSMENT AMONG HIGH SCHOOL CHILDREN

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ABSTRACT

Background: Adolescent anger, aggression and violence in school and college campuses are on rise across globe. Anger typically associated with hostile thoughts, physiological arousal and maladaptive behaviours inspires powerful often aggressive feelings and behaviours that affects all aspects of life. Negative outcomes of anger, its long term consequences, its negative impact on academic success and emotional well-being makes it a social menace.

Materials & Methods: 1220 high school children (652 girls and 568 boys) in the age group of 12 to 16 years participated in a survey using self-reporting anger scale STAXI-2 CA. Data was analysed to study the prevalence of state and trait nature of anger and anger expression styles.

Results: Multivariate General Linear Model and Pearson product-moment correlation coefficients were used to analyse the data. 45% of the children experienced elevated and high state anger and 23% experienced elevated & high trait anger. Higher scores of state and trait anger were observed in girls than boys. Significant positive correlation was observed between anger expression out with both state and trait anger. Higher levels of anger experience and lower levels of anger control are observed in girls than boys.

Conclusions: High school children exhibited higher levels of anger experience and expression and moderate levels of anger control. The study has implications for thorough assessment of anger with more physiological parameters and developing culture specific, yoga based anger management programs and assessment tools.

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INTRODUCTION

Anger which enables a 'fight' response has been linked to hostility, aggression and violence especially in adolescents. The terms 'anger' 'aggression' 'violence' lack clarity in their definitions, demarcation and homeostatic levels that are healthy. The relation between these terms is mediated by moral disengagement (Ramírez JM 2009). Consideration of interplay of these constructs is essential in order to take forward the research work on these constructs. (Hubbard, 2006).

The concept of anger stated by Spielberger which is regarded as more fundamental is considered as the basis for this study. According to him, anger is an emotional state or condition that consists of feelings which vary in intensity from mild irritation or annoyance to intense fury and rage, accompanied by activation and arousal of the autonomic nervous system (Spielberger, 1988; Brunner 2009).

Problems associated with inappropriate expressions of anger remain the most serious concerns of parents, educators, and the mental health community. Childhood aggressive behaviour is considered as a risk factor for adulthood violence and criminal behaviour (Rowell, 2002). Uncontrolled anger is a contributing factor of adolescent deaths due to homicide, suicide and injuries (CDC, 2015). Anger is a strong emotional predictor of violence which has a strong correlation with cognitive distortion (Simona VC, 2012). Anger contributes positively to physical and verbal aggression (Rubio GF, 2016; Cornell, 1999). Intense, uncontrolled feelings of anger are often associated with externalizing behavior problems, particularly aggression (John EL, 2005). Adolescent anger leading to violence is hence identified as a health disparity (CDC, 2012).

Schools and colleges across the globe are witnessing a massive rise in anger related behaviours and conduct disorders. According to indicators of school safety and crime 2015, USA, about 58% of public schools recorded incidents of physical attack or fight without a weapon. Higher percentages of

females (15%) than of males (13%) reported bullied. Higher percentage of males (7%) than of females (5%) reported being pushed, shoved, tripped, or spit on (NCES 2016-079).

Amongst 94777 Japanese adolescents, 8.7% have experienced intense anger (Itani O, 2016). Study further reports higher levels of intense anger among students who had history of smoking, alcohol use, skipping breakfast and using mobile phones for longer duration. Out of 1662 Malaysian adolescents, when angry, 7.1% have hit others, 25.1% have hit objects, 27.8% have become aggressive verbally (Rohany N, 2014). High attitude to aggression was also found in 81% of 426 Malaysian adolescents (Chidiebere, 2015). Turkish adolescents, 24% of the 2409, recorded very high rates of aggression scores (Dilek A, 2016). Positive correlation between anger and suicide ideation is reported in 18.5% of 14537 Chinese adolescents (Ping Z, 2012).

Angry behaviours, bullying, aggression are also on rise among the Indian adolescents. Study of 1500 Indian adolescents reports 23% of victims and 13% perpetrators of violence (Munni, 2006). About 18% of 5476 youths from different cities of India reported high aggression scores. Higher anger-aggression scores were observed in males than females and also in the age group of 16-19 years (Sharma MK, 2015). Parental anger styles tend to have strong impact on anger expression in Indian adolescent females (Kavitha D, 2014). Aggression has shown negative correlation with interpersonal and romantic relationships among Indian youth (Sharma MK, 2013). Indian alcohol-dependent youths reported low levels of anger control, high level of trait anger and poor quality of life (Sharma MK, 2012).

Adolescents with high trait anger have shown negative health, social, and academic consequences related to anger (Colleen, 2014). Adolescents exposed to violence had poorer school performance and adjustment scores (Munni, 2006). Dispositional anger leads to higher risk-taking behaviour in adolescents (Jungmeen KS, 2015). Self-esteem in adolescents reported positive correlation with anger control and negative relationship with trait anger (Coskun A, 2009). Significant correlation is observed between trait anger and proneness to shame in youth (Jennie H, 2011).

Studies on adolescent population have documented significant association between anger and depression, stress (Pullen 2015; Zimmer GMJ 2015; Deffenbacher, 1996); suicidal attempts, conduct disorders, hyper tension, heart diseases, psychosomatic ailments (Dale JT 2009; Stephanie SD, 2009; Ahmad G, 2007; Grunbaum, 1997). Anger has significant positive correlations with negative life events, anxiety and drug use in adolescents (Kathryn Puskar, 2008). Studies on premenstrual syndrome in adolescent girls reported high prevalence (59%) of anger/ irritability as a most common symptom (Raval CM, 2015; Doerte UJ, 2014).

Though adolescent anger is a strong predictor of aggression, violence, crime and homicide and a major risk factor for many health problems, it has received relatively less attention of researchers. Most of the studies have included anger as secondary variable or a comparative construct. Research on studying correlates of maladaptive nature of anger in adolescents has lagged behind than adults (Matthew AK, 2008). Understanding the developmental trajectory of high anger levels in adolescents is important, considering its role as

a precursor to negative adult physical, psychological and social health outcomes (Catherine PB, 2010).

India is going to be the youngest nation by 2020 with 64% of its population comprises of adolescents and youths. India is also witnessing increased anger related issues in schools and colleges and also early onset of psychosomatic ailments. Hence study of adolescent anger is an essential component of public health promotion in India. On contrary, no studies are cited studying prevalence of anger and its effective management amongst Indian adolescents. There is also dearth for culturally suited measurement tools to assess adolescent anger. This study is therefore focussed to understand the prevalence of anger, its types and intensity in high school children using available self-reporting STAXI-2-CA scale.

MATERIALS AND METHODS

Design: It is school based survey conducted in high schools with one time data collection in groups. Anger is the only parameter measured in this study. The study was approved by the institutional ethical committee. Consent to participate in the survey was obtained in writing by the children and approval obtained from school authorities. Authorised tools and software were used for measurements and assessment.

Sample: The participants of the study included 1220 healthy adolescents studying in 8th, 9th and 10th standard in English medium private co-education high schools in south Bangalore. Sample size had a good baseline match of gender but not of age. Inclusion criteria was ability to read, write and communicate in English while adolescents unwilling to participate were excluded.

Tool: State-Trait Anger Expression Inventory-Child and Adolescents (STAXI 2 CA scale), a 35 item self-report scale that measures anger experience, expression and control in adolescents. STAXI-2 C/A has five subscales - State anger (10 items), Trait Anger (10 items), Anger Expression-Out (5 items), Anger Expression-In (5 items) and Anger-Control (5 items). The tool divides the adolescent age range into three groups 9-11 years, 12-14 years and 15-18 years.

Having 3 point Likert scale, STAXI-2 CA has high reliability and validity scores with internal consistency (α) 0.87 for state anger, 0.80 for trait anger, 0.70 for anger expression out, 0.71 for anger expression in and 0.79 for anger control in normative samples. Spanish adaptation of this scale found the structure of this scale robust and acceptable internal consistency and test-retest reliability scores (Victoria DB, 2003).

STAXI-2-CA professional manual acts as a tool for data processing as it provides data of normative samples as well as conversion tables of percentile scores and t-scores, gender wise and age group wise. Statistical software SPSS version 10 was used to analyse the data.

Procedure: As a pilot work, the scale was first administered to 30 children to assess the feasibility, content understanding, etc. A psychologist was present while administering the scale. Some of the terms like 'grumpy' 'grouchy' were difficult to understand by the children in the Indian cultural context. The meaning of such terms was explained to the group and also incorporated within brackets in the scale.

Then the scale was administered in 8 schools during academic hours around 10 to 11 am. About 14 high schools were approached out of which only 8 schools consented to

participate in the study. The scale was administered in groups (section wise). Children were briefed about the study and then asked to fill up the questionnaire. Children were instructed to answer all the questions and they took around 5-10 minutes for filling up the questionnaire.

Data processing: Totally 1236 children participated in the survey, out of which 16 questionnaire were incomplete with more than 50% unanswered questions. The sample size mentioned above (1220) is after excluding these 16 cases.

Raw scores of each subscale corresponding to each participant were converted into percentile scores and t-scores with the help of conversion tables provided in the professional manual.

Percentile scores were used to calculate intensity of anger, gender difference and significance through multivariate analysis using General Linear Model; T scores were used to calculate correlation using bivariate Pearson product-moment correlation coefficients.

ANALYSIS AND RESULTS

Data of 1200 participants (652 girls and 568 boys) was considered for analysis. The age wise distribution of participants included 72 children aged 12 years (42 girls and 30 boys), 629 children aged 13 years (325 girls and 304 boys), 282 children aged 14 years (163 girls and 119 boys), 191 children aged 15 years (103 girls and 88 boys) and 46 children aged 16 years (19 girls and 27 boys).

The mean and standard deviation of raw scores for all subscales was calculated using t test.

Table 1 Mean and Standard Deviation of Raw scores

	SA	TA	AO	AI	AC
Scoring Range	10-30	10-30	5-15	5-15	5-15
Girls (n=652)	14.9 (±3.7)	19.5 (±3.6)	9.1 (±2.0)	9.2 (±2.2)	11.6 (±2.3)
Boys (n=568)	15.4 (±3.8)	18.9 (±3.3)	9.2 (±2.1)	9.2 (±2.1)	11.1 (±2.4)
Total (n=1220)	15.1 (±3.8)	19.2 (±3.5)	9.1 (±2.0)	9.2 (±2.2)	11.4 (±2.4)

SA-State Anger, TA-Trait Anger, AO-Anger Expression Out, AI-Anger Expression In, AC-Anger Control

Table 1 shows overall higher levels of trait anger (19.2%) indicating higher levels of anger proneness and regular experience of intense anger without specific provocation. Moderate level of anger control (11.4) is also observed denoting the tendency to control expression of anger. Marginal difference is seen between genders in all subscale except anger expression-in. Clarity on these will be obtained analysing the percentile and t scores in the subsequent tables.

Table 2 Intensity of anger among boys and girls

Intensity → Subscale ↓		Low Anger (< 25)	Average Anger (26- 75)	Elevated Anger (76-89)	High Anger (> 90)
State Anger	Girls	0 (0%)	287 (44%)	313 (48%)	52 (8%)
	Boys	40 (7%)	346 (61%)	143 (25%)	39 (7%)
Trait Anger	Girls	131 (20%)	336 (52%)	122 (19%)	63 (10%)
	Boys	110 (19%)	366 (64%)	64 (11%)	28 (5%)
Anger Expression Out	Girls	242 (37%)	263 (40%)	103 (16%)	44 (7%)
	Boys	100 (18%)	375 (66%)	66 (12%)	0 (0%)
Anger Expression In	Girls	35 (5%)	332 (51%)	186 (29%)	99 (15%)
	Boys	27 (5%)	292 (51%)	168 (30%)	81 (14%)
Anger Control	Girls	129 (20%)	262 (40%)	132 (20%)	129 (20%)
	Boys	59 (10%)	283 (50%)	82 (15%)	144 (25%)

Table 2 reports 37% of children experiencing elevated state anger and 7% of children experiencing very high state anger indicating children experiencing relatively intense anger at the time of scale administration. More number of girls (56%) than boys (32%) have shown higher levels of state anger.

Trait anger scores also show more in girls (19% and 10%) than boys (11% and 5%) in elevated and very high trait anger zone respectively. Prevalence of 23% of children experiencing higher levels of trait anger indicate very high proneness to anger and are alarming.

Relatively low anger expression-out scores (17.5%) indicate children having hostile attitude and exhibit aggressive tendencies with a lesser frequency. More girls (16% and 7%) than boys (12% and 0%) have shown elevated and very high anger expression out. Surprisingly no boys fell in the very high anger expression-out zone.

High anger-expression-in scores (44%) indicate adolescents hold-in or suppress anger when they are angry or furious. Significant gender difference is not observed in terms of anger expression in scores.

In all 15%, 45%, 15%, 25% of children reported low, average, elevated and very high extent of anger control respectively. This shows 60% of the children are in low and average anger control zone where they tend to control angry feelings less frequently, modulating their anger expression or hiding their feelings. 40% of children have shown elevated and very high anger control abilities. This indicates children are tolerant, understanding and or patient with others. They control their anger by relaxing, calming down and reducing the feelings.

Mixed pattern is seen in gender wise distribution across intensity levels of anger control. Low anger control (girls 20%, boys 10%), average control (girls 40%, boys 50%), elevated anger control (girls 20%, boys 15%) and very high anger control (girls 20%, boys 25%). Further analysis is needed to substantiate gender difference.

Table 3 chi-square data & significance level for gender difference in subscales

	SA	TA	AO	AI	AC
Chi Square value	105.45	29.01	85.84	5.31	33.76
Significance level	<.001	<.001	<.001	0.912	<.001

SA-State Anger, TA-Trait Anger, AO-Anger Expression Out, AI-Anger Expression In, AC-Anger Control

Table 3 indicate significant gender difference is reported in all subscales except anger expression-in.

Table 4 Pearson Correlation of Anger Experience, expression and control

Gender		TA	AO	AI	AC
Girls (n=652)	SA	.411**	.356**	-.076	-.110**
	TA		.542**	.013	-.061
Boys (n=568)	SA	.469**	.477**	.053	-.075
	TA		.566**	.189**	-.007
Total (n=1220)	SA	.439**	.395**	-.017	-.098**
	TA		.535**	.085**	-.045

SA-State Anger, TA Trait Anger, AO-Anger Expression Out, AI-Anger Expression In, AC-Anger Control

Table 4 provide gender-wise correlation coefficient values for all subscales. High positive correlation between State and Trait Anger (0.439) with 0.01 level of significance is observed. Similarly high positive correlation is seen between Anger

expression out and State anger (0.395) as well as Trait anger (0.535). However, Anger expression-in and Anger control have not shown any strong correlation with either state or trait anger.

Frequency of answering various options for Q 21 (I show my anger) and Q 25 (I hide my anger) were analyzed to check the authenticity of response for two contradictory questions. Both questions were answered 'never' by 85 (6.98%) children and 'often' by 35 (2.87%) children which indicates high reliability of responses.

DISCUSSION

The study indicates higher levels of state (45%) and trait (23%) anger experience and moderate levels of anger control (40%) among high school children. Gender difference was also observed. Girls showed higher levels of anger and lower levels of anger control (table 2).

60% of children having average and low anger control scores indicating children having poor abilities to address their anger issues. They tend to modulate the amount of anger they express in an inappropriate manner which is a cause of concern (table 2). 15% of children having very low anger control and very high anger expression in and /or anger expression out scores indicated presence of lack of well-developed internal anger control mechanisms (table 2). Positive correlation has been seen between trait and state anger. Higher correlation is observed with respect to anger-expression-out with both state and trait anger. Higher levels of both state and trait anger and low levels of anger control may be a high risk factor for many behavioural and conduct disorders (table 4). Results of anger expression scores are characterized by children having hostile attitude and aggressive tendencies and are generally reacting to anger provoking situations by suppressing or holding in their angry feelings (table 2). The findings are also corroborated with available literature in this area.

Gender difference was significantly observed in anger expression in adults in a study conducted in India using STAXI-2 Hindi version with males having higher anger expression and control than females, which implies the need for developing gender specific anger management program (Mamta, 2013). Females were found to be predominantly victims in the study on prevalence of violence among Indian adolescents and males were an important predictive factor for witnessing and perpetrating violence (Munni, 2006). Whereas in other studies, like African American adolescence reported no gender difference in anger expression scores measured using two scales STAXI and FAS (Cheryl A, 2002). A Meta analytic review on gender difference in emotion expression in children reports significant but very small difference of negative emotion expression in boys than girls. It also reported change in emotion expression as the age advances and found the shift in emotion expression in adolescent girls from less during childhood to high expression in adolescents (Tara MC, 2013). Another intervention based pilot study indicated girls having higher levels of anger expression and lower levels of anger control than boys. However, their response to anger management program was better than boys as they showed greater improvement in both anger expression and anger control scores (Isaac B, 2015)

Presence of high level of anger suppression is also linked to children having a) an aggressive family background, b) shy away expressing anger, c) have been sexually abused and have

learnt to suppress their anger for fear of reprisal and d) having emotionally internalizing disorders (Brunner, 2009). Studies also have reported significant gender difference between anger covariants and systolic and/or diastolic blood pressure readings in relation to anger (Roxanne PH, 1998; Albayrak, 2012).

A number of studies are cited documenting cultural influence on anger experience and expression even though physiological effects are universal (Seung HY, 2010). Significant difference in anger experience and expression is reported in Asian American and European American women (Iris BM, 2010). Subjective feedback from the participants of the current study also supports these findings. Children had difficulty in differentiating the meanings for words such as 'angry' 'irritated' 'annoyed' 'mad'. Also difficulty in understanding the sentences like, 'I say mean things', 'I do things like slam doors'.

Figurative language (anger is hot) is often ambiguous and should be used with caution on psychological tests unless there is evidence the language is understood cross-culturally (Barchard KA, 2016). The subjective feedback by the children during the administration of scale corroborated this view. Children had difficulty in understanding 'I keep my cool' 'Hot headed' etc. Analysis of question wise frequency of response to questions revealed that questions like 'I am mad', 'I get Mad', 'I am hot headed', 'I do things like slam doors' have received higher percentages (74%, 57%, 44% and 50%) of 'never' answers. It indicates children are not able to relate them with these questions. This aspect may have had its bearings on the results obtained. Future studies are recommended using physiological biomarkers of anger in addition to culturally appropriate self-reporting scales.

The strength of this study is assessing anger in the school setting with a large sample size of 1220 children. The study aimed at closer observation of types of anger experience and anger expressions and also analysed correlation among the subscales. Very few or no studies are reported assessing and analyzing intensities of anger and also anger as a sole construct. This study measured anger using self-reporting scale to assess children's knowledge about anger which may not be easily observed by adults. Observational feedback of the scale administrator is that the children lacked introspective ability and had response bias. Social desirability response set might have also influenced under/over report of their degree of anger.

Future studies are recommended to consider socio-economic, anthropometric and demographical data of participants as these aspects strongly influence experience and expression of anger in adolescents. The study was conducted only in private high schools. It is also recommended to extend the study to corporation/ govt schools as well as residential schools. The replication of this study in other settings (urban, rural, clinical, minority subjects) may strengthen the findings of this study. Since adolescent period (10 to 19 years) is a transitional stage heralded by tremendous growth and changes, age-wise assessment of anger is recommended. In addition to self-reporting assessment, there is a need to get the assessment done by the teachers and parents.

The present study has implication for developing anger management programs/assessment tools based on yoga – medication (spirituality), as yoga based programs have found effective in addressing issues of cognitive and executive

functions in adolescents in addition to promoting fitness and physiological health in adolescents.

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Original Research Article

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Validation of Adolescent Anger Scale

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ABSTRACT

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Anger is the most frequently and most commonly occurring phenomenon. Anger issues during adolescence lead to many developmental issues and have lifelong impact. Assessing anger at this stage is hence critical and important. Studies report anger experience and expression vary with respect to age, gender and culture. A newly developed adolescent anger scale by the author has been validated in this study. The newly developed scale along with State Trait Anger Expression Inventory for Children and Adolescent was administered to 323 Children in a survey study conducted in schools. The newly developed adolescent anger is robust enough to assess anger expression and anger experience in high school children. Results also suggest STAXI-2-CA can be used in Indian Context with slight modification. Self reporting adolescent scale is in par with the STAXI-2-CA in assessing anger experience and expression.

Introduction

Anger related issues are on rise in schools and colleges across the globe. Anger is precursor for aggression, violence and many behavioural and conduct disorders (Hubbard JA, 2006; Lucia H, 2015; Pullen LM, 2015). Aggressive behaviour during adolescence is considered as a risk factor for adulthood violence and criminal behaviour (Rowell, 2002).

Uncontrolled adolescent anger is a contributing factor for deaths due to homicide, suicide and injuries (CDC, 2015). Anger is associated with violence, cognitive distortion (Simona VC, 2012) and physical and verbal aggression.(Rubio GF, 2016; Cornell,1999).Intense, uncontrolled feelings of anger are often associated with externalizing behavior problems, particularly

aggression (John EL, 2005). Centre of Adolescent anger leading to violence is identified as a health disparity (CDC, 2012). Studies have documented significant association between anger and depression, stress (Pullen 2015; Zimmer GMJ 2015; Deffenbacher, 1996) in adolescents; Association is also seen with suicidal attempts, conduct disorders, hyper tension, heart diseases, psychosomatic ailments (Dale JT 2009; Stephanie SD, 2009; Ahmad G, 2007; Grunbaum, 1997). Negative life events, anxiety and drug have shown significant positive correlations with anger in adolescents (Kathryn Puskar, 2008).Studies on premenstrual syndrome in adolescent girls reported high prevalence (59%) of anger/irritability as a most common symptom (Raval CM, 2015; Doerte UJ, 2014).

High trait anger in adolescence have shown negative relationship with health, social, and academic consequences (Colleen, 2014). Adolescents exposed to violence had poorer school performance and adjustment scores (Munni, 2006). Trait anger also has negative relationship with Self-esteem in adolescents and anger control has shown positive correlation with self-esteem. (Coskun, 2009). Significant correlation is observed between trait anger and proneness to shame in youth (Jennie, 2011).

Studies on Indian adolescent population indicate a rise in anger related issues such as angry behaviours, bullying, aggression and violence. Study on adolescent violence reports 23% of victims and 13% perpetrators of violence (Munni, 2006) among 1500 Indian adolescents. In a survey conducted in many cities of India, reports 18% of 5476 youths shown high aggression scores. Higher anger-aggression scores were observed in males than females and also in the age group of 16-19 years (Sharma MK, 2015). Parental anger styles tend to have strong impact on anger expression in Indian adolescent females (Kavitha D, 2014). Aggression has shown negative correlation with interpersonal and romantic relationships among Indian youth (Sharma MK, 2013). Indian alcohol-dependent youths reported low levels of anger control, high level of trait anger and poor quality of life (Sharma MK, 2012).

Though the physiological activities during anger arousal is universal in its characteristics and behaviour, there exists variation in terms of its conceptualisation, perception and expression pattern (Potegal, 2011). Studies also indicate variation intra and intercultural context in addition to age and gender (Tara MC, 2015). This has led to emergence of several theories of anger and adolescent anger inventories (Kovacs, 2010). Most popular theory of anger is Spielberger's State-Trait

anger taxonomy which is considered fundamental and widely adopted theory. Based on this theory an array of Anger Inventories has been developed for children, adolescents and adult population (Spielberger 1988; Brunner 2009). The scale has been adapted to many languages and many cultures.

Further available adolescent anger inventories appear to have the limitation of culture specificity and sensitivity as the words used to describe anger have variety of meaning in different cultures (e.g. word 'mad') (Alaka Mani, 2016). A review study reports these scales differ from another as they measure different aspects of anger (Burney DM, 2001). Further a review study on adolescent school anger states that the available psychometric adolescent anger scales do not represent the construct adequately or comprehensively (Mathew AK, 2008, Smith DC, 2006). Another study reports self-reporting questionnaires for anger must be adapted for cross-cultural usage and should not be back-translated (Moscoso MN 2011)

Indian classical text provides enormous resource on the concepts on anger. According to the scriptures, anger is born out of Rajasic nature and is an internal enemy of man. Anger manifests at behavioural, verbal and mental level. Based on this principle the author of this paper has developed an adolescent anger scale which has shown significant reliability and validity scores. This study is to validate the newly developed scale with reference to well-structured STAXI-2-CA (State Trait Anger Expression Inventory for Children and Adolescents).

Methods and Materials

Design: It is school based survey conducted in high schools with one time data collection in groups. Consent to participate in the

survey was obtained in writing by the children and approval obtained from school authorities. Authorised tools and software were used for measurements and assessment.

Sample: The participants include 323 healthy adolescents (171 girls & 152 boys) studying in 8th, 9th and 10th standard in English medium private co-education high schools in south Bangalore. Inclusion criteria were ability to read, write and communicate in English while adolescents unwilling to participate were excluded.

Tool: Two self-reporting anger scales for adolescents were used. They are

- 1) Author developed Anger Scale: A 23 items, measuring anger at *Kayena* (behavioural), *Vacha* (speech) and *Manasa* (Mental) domains.
- 2) State-Trait Anger Expression Inventory-Child and Adolescents (STAXI 2 CA scale): A 35 item self-report scale that measures anger experience, expression and control in adolescents.

In the STAXI -2-CA Scale, some of the terms like ‘grumpy’ ‘grouchy’ were difficult to understand by the children in the Indian cultural context. The meaning of such terms was explained to the group and also incorporated within brackets in the scale.

Both scales were administered in 3 schools. Children were briefed about the study and then asked to fill up the questionnaire. Children were instructed to answer all the questions and they took around 5-10 minutes for filling up the questionnaire.

Analysis

The scores of both the scales were tested for correlation. Pearson Correlation co-efficient value of $r=0.934$ indicate that the scales do not show significant different pattern while assessing anger in adolescents.

Mean and standard deviation was calculated for the scores of both the scales and tabulated in table 1 below:

Table.1

	Boys		Girls		Total Scores	
	Mean	SD	Mean	SD	Mean	SD
Scale 1	39.95	5.76	40.66	5.43	40.33	5.59
Scale 2	63.87	8.71	64.82	7.83	64.38	8.26

Scale 1: Newly developed scale & Scale 2: is STAXI 2 CA Scale

Independent t test was done to compare the mean scores of both the scales which showed a significant difference.

Results and Discussion

The newly developed scale established a good correlation coefficient value ($r=0.934$) with respect to widely used STAXI-2-CA scale. However, independent t test failed to validate

this correlation. The scoring range for each scale was different and they are grounded on different theory of conceptualisation of anger. This could be the reason for getting the significant p value. Comparison of Means and Standard Deviation showed a similar pattern of anger experience and expression in both the genders.

A prevalence study conducted by the author

using STAXI 2 CA with Indian Adolescents observed that the children had difficulty in understanding a few items and words as they have a different meaning in the Indian social context (Alaka Mani TL, 2016). In both the studies, authors have found feasibility of STAXI-2-CA scale for administration in Indian adolescent population and strongly recommend adaptation of this well-structured scale to Indian context.

In conclusion, the newly developed adolescent anger scale showed good correlation with STAXI 2 CA Scale.

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Yogic Management of Anger in High School Children

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A B S T R A C T

Adolescent anger which is a strong predictor of violence, homicide, road accidents etc. also has negative impact on academic success and emotional welling-being. There is a growing consensus among researchers to develop effective anger management programs for school children. Yoga in schools which is found to be effective for physical and mental health is assessed in this study for its efficacy in anger management. Yoga intervention based pre-post control study (n=187, 88 boys and 99 girls) was carried out in two high schools for 4 months with 2 sessions per week. Yoga sessions were conducted during academic hours. Anger was assessed using self-reportingscales and feedback from parents. Authorized tools and software were used to measure and analyse the data. Significant reduction of angeris observed in yoga group in both girls and boys with mean score of pre intervention being 46.20 and post intervention 42.41 achieved at 99% confidence. Marginal increase in anger is observed in control group girls. Yoga education in schools is very effective in addressing the issues of anger among high school children. Future studies are recommended to use physiological parameters of anger in addition to self-reporting scales.

Introduction

Adolescents of today are confronted with a variety of life stressors both at home and school (Kessler RC, 2007). They establish patterns of behaviour and make lifestyle choices which are likely to influence rest of their life (Catherine PB 2010, Kessler RC, 2010). Adolescent anger which is considered

as a health disparity also has life-long impact on individual's physical, psychological and social health and wellbeing (CDD, 2009).

Escalated adolescent anger related issues in schools and colleges across the globe are the

most serious concerns of parents, educators and the mental health community. Anger is a strong precursor for aggression (Cornell DG, 1999), violence and many other negative conduct and behavioural issues in adolescents (Simona VC, 2012). Adolescent anger has been associated with devastating social events, adolescent mortality (CDC, 2015) and has rippling effect on major institutions of society. Childhood anger is also a risk factor for adulthood violence and criminal behaviour (Huesmann, 2002).

Adolescent anger has strong relationship with school performance (Munni, 2006), high risk-taking behaviours (Jungmeen KS, 2015), violent behaviours (Dale JT 2009), adjustment scores and negative life events (Colleen, 2014), drug use (Kathryn Puskar, 2008), shame and negative relationships (Coskun A, 2009; Jennie H, 2011). Significant association is also seen with many mental health disorders such as depression (Pullen 2015), stress & coping (Zimmer GMJ 2015), suicidal attempts (Stephanie SD, 2009) self-harm (Beata, 2016). There is a growing consensus among researchers to develop effective anger management programs for school children (Furlong MJ 2012).

Yoga education in secondary schools is considered feasible, acceptable (Khalsa, 2011; Bethany B, 2015) and can be an appropriate scientific approach to maintain mental health among children (Telles S, 2012, Hagen I, 2014). Studies indicate positive impact of yoga on adolescent cognitive abilities (Chaya MS, 2012), stress alleviation (White LS, 2012; Miron Ehud, 2010; Vernon AB, 2003), personality development (Das M, 2016), self-awareness, self-regulation (Donna W, 2016), behavioral and emotional maturity (White LS, 2009).

Further, concept of anger is dealt exhaustively and precisely in the Vedic and Vedantic texts. In particular Bhagavad-gita (BG) and Patanjali Yoga Sutras (PYS) throw enormous light on anger, its consequences and management. Traditional Scriptures consider anger as an evil virtue which destroys one's personality (BG 2-62, 63). Yoga is all about gaining mastery over mind (PYS 1-2) and advocates chitta prasadnam / emotional intelligence (PYS 1-33). Anger management is promoted in yoga sutras by endorsing ahimsa /non-violence (PYS 2-30, 35), abhyasa / practice & vairagya / dispassion (PYS 1-12), pratipaksha bhavana /distraction (PYS 2-33), asanas /postures(PYS 2-47, 48), pranayama / breathing techniques(PYS 2-52) and dhyana/meditation (PYS 2-53). Traditional scriptures explain human existence through panchakosha concept and all experiences and expressions are manifested in three domains – kaya /karma (behaviour / action) Scriptures, Vak (speech) and Manas (Mind) .

Anger which originates in manomaya kosha (emotional body), percolates either direction and affects all koshas (gross body, energy body, intellectual body and bliss body). Anger manifestations occur as bodily expressions (behaviours, aggression, violence), speech expressions (verbal aggression, yelling, shouting etc) and passive expressions (hostility, suppression, resentful, withdrawal, revengeful etc).

Among the available handful of school based yoga studies on adolescent mental health, anger is studied only in a few studies that too as a subscale component. Improvement in anger scores was observed yoga group as against control group in all these studies (Vernon AB, 2003, Khalsa, 2011; Lisa AC, 2013; Joshua CF, 2015). Review studies on yoga education in schools

calls for greater standardization and appropriateness of yoga intervention (Ferreira C, 2015).

There is a lack of clarity among researchers on anger construct in terms of its definition, demarcation between hostility and aggression. Anger is a complex construct to assess considering non availability of specific bio-markers and also homeostatic levels of anger that are considered healthy. Research on practices derived from contemplative traditions, particularly Yoga has shown promising benefits on mental health, academic performance (AmitKauts, 2009) and well-being (Simeon PS, 2003).

From the available literature it is evident that anger has received less importance as an independent variable and need for using appropriate yoga module and measurements for anger management in the school setting. Further rising Indian adolescent population and also the maladaptive behaviours of anger in schools and colleges (Alaka Mani 2016) provides strong rationale for this proposed study.

Methods & Materials

Design

Pre-post control group study conducted in two English medium co-education high schools by administering yoga sessions as a part of curriculum. Yoga group received yoga intervention for a period of 4 months with 2 yoga sessions per week. Free periods were allotted to yoga group and hence waitlisted control group just attended the routine class and did not do any yoga during the study period. Both the schools had yoga group and control group. Anger is studied as a single parameter in this study. Assent, consent and approvals from children, parents and school authorities respectively were

obtained in writing and the study was approved by the institutional ethical committee. Authorised tools and software were used for measurements and assessment.

Sample

In all, 187 children participated in the study with 114 children in yoga group and 73 in control group. Both girls and boys studying in 8th standard with mean age of 13.3 participated in the study.

Eleven schools in south Bangalore were approached out of which three schools agreed to be part of the study. Majority of children in one school had difficulty in understanding English and filling up the questionnaires as their primary and middle school level education was in the local language medium. Only two schools Jyoti Kendriya Vidyalaya and Auden High School participated in the study.

Only high schools which had two or more sections of 8th standard were considered for study. One school had only two sections and another school had four sections of 8th standard. Using lottery method sections were allotted as yoga / control group. Students studying in 8th standard and willing to participate in the study were included in the study while students who have severe physical impairment or medical conditions that interfere in administration of tools or the yoga intervention are excluded from the study.

Yoga Module for Anger Management

Integrated Approach Yoga Therapy (IAYT) based yoga module for anger management was used for the study. The module comprised of asanas, breathing techniques, meditation and knowledge points. The

module was carefully developed to suit high school children, minimizing the religious aspects. The overall framework of the 30 minutes module is given below

Opening Prayer : 2 verses related to anger from Bhagavad Gita (2-61 & 2-62)

Asanas: Dynamic practice of Surya Namasakara, Ardhakati Chakrasana, Trikonasana, Parshwakonasana, Veerabhadrasana

Pranayama : Breathing awareness & deep abdominal breathing

Meditation : Guided meditations for anger management. Anger management mechanisms were driven in the meditation. They include 1) Thinking and Feeling (awareness), 2) Art of sublimation (manaprasamana), 3) Pair of opposites (pratipaksha bhavana).

Knowledge points: Themes that drive concept of anger in Yama, Niyama (ahimsa, shoucha, aparigrahaetc) were driven throughout the sessions during gaps.

Tools: Anger was measured using two self reporting psychometric scales for anger.

- 1) Anger scale developed by the authors (KVM Anger Scale), with 23 items, measuring anger at *Kayena* (behavioural), *Vacha*(speech) and *Manasa* (Mental) domains.
- 2) State-Trait Anger Expression Inventory-Child and Adolescents (STAXI 2 CA scale), a 35 item self-report scale that measures anger experience, expression and control in adolescents..

Written subjective feedback from the children and parents after completion of the

intervention also served as a tool for assessment.

Statistical tool SPSS version 10 was used to conduct statistical analysis.

Procedure: Yoga classes were conducted as group sessions with medium of instruction as English by trained and certified yoga instructors during allotted academic hour. Children practiced yoga in their uniforms with waist belts loosened. Girls during menstrual cycle were refrained from practicing yogic postures but were present in the session. Children whose health condition did not permit practicing yoga postures on any particular session were asked to remain seated in the session. Attendance of intervention group was maintained.

Assent forms and consent forms from the parents were obtained for each participant. Institutional approval to conduct the study was also obtained.

Questionnaires were administered in the class rooms before commencement and after completion of the yoga intervention program. Children were briefed about the study and then asked to fill up the questionnaire were also instructed to answer all the questions.

Data processing: Raw scores of each subscale corresponding to each participant were converted into percentile scores and t-scores with the help of conversion tables provided in the professional manual.

Percentile scores were used to calculate intensity of anger, gender difference and significance through multivariate analysis using General Linear Model; t scores were used to calculate correlation using bivariate

Pearson product-moment correlation coefficients.

distribution of pre data in both yoga and control groups.

Analysis

Total of 187 subject's data was considered for analysis which comprised of 114 children (55 boys and 59 girls) in yoga group and 73 children (33 boys and 40 girls) in control group. Further in all, there were 88 boys and 99 girls in the study. The age group of children was 13-14 years. The data was analysed using SPSS 10 software.

Mean and Standard Deviation was calculated for yoga and control group both for pre data and post data. Significant reduction in mean scores in yoga group and a slight increase in the mean scores in the control group was observed as in Table 2. Paired t-test results of pre-post data of yoga group and control group is shown in Table 3.

Anger assessment is done using two psychometric scales i.e. KVM Anger Scale and STAXI-2-CA scale. As the scales differ in subscales and domains of measurement data obtained from two scales were analysed separately.

From the table 3 it is observed that the yoga group showed significant change in the pre-post scores confirming the effect of yoga intervention whereas there was no significant change observed in the control group. Table 2 shows significant reduction in anger scores in yoga group.

Analysis of data from KVM Anger Scale

STAXI 2 CA Scale

Reliability scores (Cronbach's Alpha coefficient) for the anger scale was observed at 0.812. Normality test confirmed normal

The raw scores of five subscales were analyzed separately for yoga and control group. The mean and standard deviations are provided in table 4:

Table.1 Test of Normality for pre-data

Group	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
CG	.092	73	.200*	.988	73	.713
Yoga	.072	114	.200*	.986	114	.306

Table.2 Mean &SD, group wise

	Pre-data		Post data	
	Mean	SD	Mean	SD
Yoga Group	46.20	6.92	42.41	7.31
Control Group	46.36	8.15	46.73	7.00

Table.3 Paired Samples Test

Group	Pair	Sample Size	Paired Differences					t	df	Sig. (2-tailed)
			Mean	SD	Std. Error Mean	95% Confidence Interval of the Difference				
						Lower	Upper			
Yoga Group	Pre - post	114	3.789	6.992	.655	2.49	5.09	5.79	113	.000
Control Group	Pre - post	73	-.110	6.590	.771	-1.65	1.43	-.142	72	.887

Table.4 Mean & SD of pre and post data of both groups

	Pre Data		Post Data		Pre-Post Diff		Sig
	Mean	SD	Mean	SD	Mean	SD	
State Anger - Yoga	15.39	4.56	14.39	4.29	1	0.26	0.03
State Anger - Control group	16.04	4.21	17.73	4.78	-1.68	-0.57	0.00
Trait Anger - yoga group	19.73	4.12	18.46	4.33	1.26	-0.21	0.00
Trait Anger - Control group	20.00	4.48	20.96	4.32	-0.96	0.16	0.07
Anger Out - Yoga group	9.23	2.38	8.95	2.3	0.28	0.09	0.25
Anger Out - Control group	9.88	2.4	9.84	2.32	0.04	0.08	0.89
Anger In - Yoga group	8.98	2.33	9.13	2.33	-0.15	0	0.47
Anger In - Control group	9.36	2.52	9.4	2.31	-0.04	0.2	0.9
Anger Control - Yoga group	11.02	2.56	11.25	3.06	-0.24	-0.5	0.4
Anger Control - control group	11.26	2.64	11.37	2.57	-0.11	0.06	0.7

There is a significant reduction in state and trait anger scores in yoga group while a significant increase in mean state anger scores were observed in control group. There is no significant change observed in anger out, anger in and anger control scores of yoga and control group.

Conclusion

Yoga is a holistic anger management program for children. Yoga education in high schools has great potential to improve mental health. The present work showed a statistically significant reduction of anger scores in yoga group which highlights the benefits of yoga education in schools for

establishing the mental health. The results also report statistically significant increase in state anger scores in control group, which is a cause of concern.

The work also underscores the holistic approach of yoga emphasizing yama, niyama in addition to popular asanas and pranayams. The meditation developed received very encouraging subjective feedback.

Adolescence is the right age to drive the moral education and imbibe positive behavioural and attitudinal components. The traditional *gurukul* system stress on the moral education and character building in

addition to imparting knowledge. The convocation address in ShikshaValli, Thaitiriya Upanishad is a classic example of this approach. Accordingly the present study focused on moral education focusing anger management techniques driven through meditations.

Anger management in adolescence using cognitive-behavioural therapy (Denis GS, 2004), social-skill training (Selahattin A, 2012, Herrmann, 2003) and psycho educational programs (Kristin AG 2005) are studied in various clinical and non-clinical settings. However, school-based programs are less in numbers and are multi-component in nature. Meta-analysis on school based anger management programs and review studies (Graham G, 2005) report low sample size, multiple measures and lack of clarity in methodology as limitations.

The present study was designed and focused on objective parameters. However, during implementation, a lot of subjective, attitudinal and behavioural changes were noticed by the investigator, teachers and parents. Future studies are recommended to observe, record and analyses the subjective feedback during yogic interventions.

Since the study was done during academic hours, school authorities insisted to consider section wise grouping of yoga and control group. Hence randomization was done only at selecting sections and not at subject level. Secondly, the control group was passive and was not assigned any activity. Future studies are recommended with randomization at subject level. Also future studies could be carried out with assessment of anger using physiological parameters.

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Dear Mrs. Vishwanath,

I am pleased to inform you that your paper has been accepted for publication. My own comments as well as any reviewer comments are appended to the end of this letter. Now that your manuscript has been accepted for publication it will proceed to copy-editing and production.

Thank you for submitting your work to Journal of Ayurveda and Integrative Medicine. We hope you consider us again for future submissions.

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Smt. Alaka Mani TL

7, 6th Cross, 6th Main, Papaiah Garden, BSK 3rd Stage, Bengaluru-560085.
e-mail : alka.yoga@yahoo.com ; Tel : **(0) 98453-24000**
Date of Birth : 20th July 1966

Alaka is a qualified and experienced Yoga and Management Professional. She is a yoga practitioner, therapist, researcher and a trainer. She is also an academic teaching (visiting) faculty at SVYASA Yoga University. She has practiced Yoga under many yoga gurus including late Sri. Sripathy, Sri. Marath, Smt. Lalitha and Dr. S N Omkar. She has done many courses of Art of Living and teacher training course at Yoga Mandir.

Hailing from an orthodox Brahmin family, she was inclined to spirituality from childhood. Parallally, she developed profound scientific temper and great passion towards behaviour science and in particular, empowerment of adolescents and youth.

She is a certified trainer of 'Life Skills', 'Anger Management' and 'Counselling' for adolescents. Alaka has been conducting workshops on personality development and yoga for improving the quality of life, promoting health and well-being in adolescents and youth.

Alaka is also a MBA (HR) graduate and a seasoned management professional. She has worked in the corporate sector for over 20 years in Administration, HR and Management domain. Her last assignment was in a 100 year old international NGO as 'Chief Administrative Officer'. She has attended a number of conferences and workshops on various fields. She has excellent networking and event management skills and had taken lead role in organising many national and international conferences.

Alaka is result oriented (go getter), aggressive, self-motivated individual, with a very strong analytical, managerial, coordinating, and resource management skills. She also enjoys excellent work ethics such as a sense of responsibility and accountability, commitment, honesty, willingness and zeal to 'go an extra mile', always. She is highly passionate about learning, meeting people and travelling.

Qualification:

B.Sc (Physics, Chemistry & Mathematics)- Mysore University

MBA (Human Resources) – IGNOU

M.Sc. in Yoga – Annamalai University

PhD in Yoga – SVYASA Yoga University

PG Diploma in Nutrition and Community Health Education - IGNOU

Sanskrit exams (Pravesha, Parichaya) - Samskrita Bharati

Certificate Course on 'Counselling children and teenagers' from Prerana Academy

Certificate Course on 'Life Skills' and 'Anger Management' from Banjara Academy

Currently pursuing MA (Psychology) – IGNOU

YOGA RATNA DR. S.N. OMKAR



Address: # 1357, 27th cross, 25th Main Road, Banashankari II stage, Bangalore – 560 070, Tel.: 26713478, e-mail: omkar@aero.iisc.ernet.in
URL: <http://www.yogaonweb.com>

Qualification: B.E(Mech.) MS(Engg.) Ph.D, FIE
Diploma in Nutrition and Applied Dietetics

Profession: Chief Research Scientist, Department of Aerospace Engineering, Indian Institute of Science, Bangalore – 560 012

Special Interest: Yoga and Bio-mechanics

Awards & Recognitions : Karnataka state Rajyothsava award; Kempe Gowda Award from Bangalore City Corporation; *Yoga Rishi* Award from Rotary Club, Sadashivanagar; *Vyasa Puraskara* from S-VYASA; *Yoga Ratna* Award from Nivarana Social Organisation; *Appoorva Yoganidhi* Award from Jayanagara kannada Sanga; *Jnana Ratna* Award from Bharatiya Samaja Seva Trust; *Nada Sanmitra* Award from Brain Center; *Yoga Bhaskara* Award from Winnova Organisation; *Patanjali* State Award from S.G.S. Organisation; *Sagar* Award from Rangasri Organisation; *Vishwa Yoga Nidhi* Award from Swamy Vivekananda Vishwa Prakruthi Yoga Foundation; Felicitated by The National Co-operative Bank Ltd; Invited for the 5th World Kannada Conference by AKKA (Association of Kannada Kootas of America), Chicago, USA; Attended Creativity World Forum, Ludwigsburg, Stuttgart, Germany (On invitation from Ministry of Economics, Baden-Wurttemberg);

Yoga teaching for cricket players: For the first time in the history, Yoga Camp for the Indian cricket team in 2001 which has been continued till 2012. Conducted many camps during this period.

Currently Yoga coach for the National Cricket Academy, Member (Yoga teacher) of the State Cricket team, which won the Ranji Trophy. Yoga Education for state cricket team for the past 10 years, Yoga Education for Indian Youth's cricket team for the past 9 years., For the past 12 years Yoga Education has been given to hundreds of youths in Brijesh Patel Cricket Clinic and Yoga education for many athlete and Archers in Indian sports field.

Some well known Students include Cricket players such as Sachin Tendulkar, Sourav Ganguli, anilkumblae, Jawagal Srinath, Venkatesh Prasad , Ragul Dravid, Sunil Joshi , V.V.S. Laksman, Brijesh's Patel, John Wright, Greg Chappell (Coach), Ekknath Solkar and others. National Archery palyers such as Ambara, Rajendar, Lal Renga, Poornima and others. Runner – P.T. Usha

Yoga Courses : Designed and Conducted Yoga Teacher's Training on Yoga Teacher Training Camp; Yoga Teacher Training Camp on Spinal Health; Yoga Teacher Training Camp on Knee Health; Workshop on Confronting Consciousness

MEDIA

Conducted Yoga programme around 2000 episodes in **udaya TV** channel, more than 100 episodes in **Z-Kannada Channel**, around 650 episodes in **E-TV Kannada** and more than 50 episodes in **DD Chandana channel**. Many interviews given to all leading channels and a member of panel discussion on various topics related to Yoga.

Lecture on yoga in All India Radio : More than 500 of lectures and Special Lectures on Yoga & Sports, Yoga and mental stress, Yoga suyoga, Uttama manasthithige yoga; Yoga and rural health; Special Interview on Youth & Yoga, Women Health and Yoga, National Rural Health Mission and Yoga

One hour Phone in live programs on yoga, yoga and stress,

Lectures under Radio Doctor Series (more than 100 lectures) on various topics such as Yoga and Health, Yoga and Orthopedic Problems, Yogasana, Yoga and Mental stress, Yoga and Women, Suryanamaskar Practice., Neck Pain or spinal Problem, Women's Problem, Yoga and space travelers, Yoga and feet problems, Yoga and High Blood pressure, Yoga and Shoulder Problems, Jetlag solution from Yoga, Yoga's role in old age, Yoga practice in curing the Anterior Cruciate Ligament injury, Yoga to cure obesity, Yoga and prevention of fall in elderly Solution for knee problem by Yoga, Yoga as a solution for sleeplessness, Aging and exercise, Yoga and mental stress – Part 1, Yoga and mental stress – Part 2, Yoga and ADHD (Attention Deficit and Hyper activity) syndrome in children, Humor and health, Food and health, Balanced diet – Part 1, Balanced diet – Part 2, Yoga and Ankylosing Spondylitis, Ill effects of Tobacco, Ill effects of Alcohol, Ill effects of Drug abuse, Habits in Children, Habits of the Mind, Habits for Scientific learning, Drug Abuse, Holistic health and yoga, Eight fold path and social discipline, Personal discipline, Posture and health, Menopause and yoga I, Menopause and yoga II, Menopause and yoga III, Menopause and yoga IV, Eating Disorders, Anorexia Nervosa, Bulimia, Binge Disorder, Importance of Amino acids, Vitamin B complex, Vitamin A,C,D,K, Minerals in food, Standing and balance Foot movements and yoga, Plantar fasciitis and yoga, Foot stability and yoga, Self Confidence in the Blind, Science of Chakras I, Science of Chakras II, Science of Chakras III, Diarrhea, Management of Diabetes, Heart health, Risk factors in heart attack, Basic types of breathing, Ill effects of drug abuse, Women and drug abuse, Peace of mind in the modern world, Uddiyana Bandha – Abdominal hollowing, Simple aphorism for health, Fear, depression and anxiety, Twist to remove toxins, COPD and Yoga, Nutrition and yoga to cure constipation, Yoga for healthy liver, Beat alcoholism through yoga, Pancha Pranas and their effect, Asanas and their effect on chakras, Pratyahara - Emotional Balance, Amazing Human Body, Society and Health, Stress and Children, Social Relationship, Internet Addiction Disorder, Gross and Subtle Body – Pranayama, Panchavayus, Respiratory System, Nasal Breathing

YOGA TRAINING FOR PUBLIC : Yoga teaching for the public since past 25 years which include Various free yoga camps on Suryanamaskar, Solutions for spinal problems, Diabetes, Stress Management etc.; Yoga for women's problems such as Menstrual disorders, Gynecological problems, Pre and Post Menopause problems, Safe and useful yoga for pregnant women; Spinal column problems, knee problems and many other orthopedic problems treated through yoga; High blood pressure which is well known as silent killer can be controlled through yoga; Through yoga many have found solutions for their heart problems, asthma, obesity, headache, digestive problems etc.; Through special yoga

practices, a fast and successful treatment has been given for the people affected with mental stress.; Free yoga class for mentally retarded children Suryanamaskar camp held every year

YOGA ABROAD : Conducted Yoga camp at westbloomfield, MI, USA; Lecture on Ashtanga Yoga at Farmington Hills, MI, USA; Yoga Education for cricket players at Michigan Cricket Club ; Yoga Camp at Singapore; Computer Associates; Yoga Education for cricket players at Singapore Cricket Club ; Karnataka Cultural Association of Southern California and Vivekananda Balvihar of Irvine, CA, 92604, USA ; Karnataka Cultural Association of Southern California and Sanatan Dharma Temple, Irvine, CA, USA; Karnataka Cultural Association of Southern California and Santan Dharma Temple, Mormalk, CA, 90560, USA; Karnataka Cultural Association of Southern California Hindu Temple Society, Northridge, CA, 91324, USA; Yoga camp at Nishi-kasai, Japan; Yoga workshop at Nagoya, Japan; Yoga classes and lectures, Ottawa, Canada; Yoga classes and lectures, AKKA World Kannada Conference, Chicago, USA; Yoga classes and lectures, Indianapolis, USA; Yoga classes and lectures, Tri-State Hindu Temple, New burgh, USA

PUBLICATIONS : a) Articles : Regular Column “Yoga Made Easy” on *The Week Magazine*; b) Written around 14 Books on yoga, c) Written Book Chapter in “Stability Training and Measurement System for Sportsperson (P84)”. The Engineering of Sport 7, Springer Paris, Pages435-442, Aug 2008, d) Released around 25 video CD/ DVD on yoga, e) Published about 12 Conference Papers, f) Published about 32 scientific papers on BIO-MECHANICS in reputed journals.

Student Upliftment & Rejuvenation through yoga (SURYA), A free service by Yoga Mandir Trust®. The program consists of Lecture on principles of yoga; Ethics to be followed; Principles and practice of Sun salutation; Distribution of books on sun salutation (free of cost). The book is available in Kannada, English, Telugu and Braille.

So far, 120,000 books have been distributed all over Karnataka

Currently Dr Omkar is working as a Chief research scientist at the Department of Aerospace Engineering at the Indian Institute of Science, Bangalore.

Dr. Omkar's research interest includes: Helicopter dynamics, Nature inspired computing, Satellite image processing, Yoga & Biomechanics, Uninhabited Air Vehicles (UAV), Composite design optimization, Structural health monitoring. He has more than 120 Journal publications. He is an reviewer and editorial board member for several journals and also a member of several Professional Societies.

Dr. Omkar is a very well established researcher and a teacher. He has several credits to his teaching profile. He teaches courses such as Flight vehicle design, Introduction to Neural Network and Engineering Applications, Biologically Inspired Computing and its Applications, Flight and Space Mechanics, Experimental Techniques, Numerical Programming. He has established three labs likely UAV, Yoga & Biomechanics and Computational intelligence. He has conducted several workshops and delivered a number of invited talks. He is a member of several academic committees. He has conducted a number of events for educating school and college students.

PROFILE : DR. MANOJ KUMAR SHARMA



Dr. Manoj Kumar Sharma , M.M. & S.P., Ph.D,
Associate Professor, Dept of Clinical Psychology,
NIMHANS, Bangalore

E mail: mks712000@yahoo.co.in (M)-9341664401

Area of Interest: Behavioral addiction, Tobacco cessation, Substance use & prevention, Emotional Dyscontrol among youth, Test Development Psychotherapy, e-survey & intervention, Yoga, Religiousity, Spirituality & Mental Health

- 1) Research Experience in Cognitive processing under Hypnosis-ERP study, M.Phil dissertation and prevention of HIV risk behavior amongst substance users through psychological intervention. Ph.D thesis
- 2) Guide for 12 M. Phil Dissertations in Psychology and Yoga:
- 3) Principal Investigator for 9 Research projects – grants received from various premier institutes and Govt Organisations
- 4) Co-investigator for 7 research projects
- 5) Published more than 30 papers on mental health, addiction, yoga and allied subjects in various journals and in conferences.
- 6) Took Leading role in more than 80 programs including organising community meetings, orientation programs, panel discussions etc
- 7) Organised more than 30 workshops at NIMHANS and various centers
- 8) Around 5 International collaboration with various universities and organisations including WHO Internet based_based Field Study for ICD-11 mental and behavioral Disorders:Schizophrenia and Other primary psychotic Disorders,3.7.14.
- 9) National collaboration with around 10 institutions / organisations including NIMHANS affiliated centres
- 10) Resource person for more than 20 Department Program

- 11) Acted as a member, external reviewer, for many committees and project works.
- 12) Member of Institutional Ethic committee of Advanced centre for ayurveda in Mental health and Neurosciences,(CCRAS),NIMHANS,Bangalore,16th June 14,20th Nov 15
- 13) Public lecture on issues and management of cyber use in adult and teenagers in reputed colleges and educational institutes.
- 14) Actively participating in print media : Written more than 100 articles in various dailys, news papers, magazines, news letters etc
- 15) Member of selection board of PGDG program (National Institute of Design),Off HMT Road,Tumkur Road,Bangalore from 26th to 29th2011. Advanced centre for Ayurveda, dor mental health & Neuro Sciences, NIMHANS,19.12.12
- 16) Member of Associations such as Indian association of Clinical Psychology,2012 and Karnataka Association of Clinical Psychologist.
- 17) Member of various selection committees, examinations and evaluations
- 18) Through SHUT clinic supported students of Psychology, Journalism and instrumentation to do community work on internet addiction and related topics.
- 19) Reviewer for many national and international journals.
- 20) Participated in Rajya Sabha Question adverse effect of smart phone, 27th July 2017
- 21) Published more than 60 scientific papers / articles, 4 review articles, 4 letters to editors, 6 case reports in reputed journals.
- 22) Written around 10 book Chapters and 5 chapters in manuals.
- 23) Involved in development of Public Health Material for NIMHANS centre of Well Being on Internet use and addiction, Cell phone use and addiction, Anger management, How to get good sleep?, Issues & management of television viewing, Gambling: Issues and Management, Myths about sexuality, Caregiver: issues and management

a journey
from **NASA**
to **VYASA**

*Combine the best of the East
with that of the West*



**Padma Shri
Dr. H R Nagendra**

Chancellor, S-VYASA

Dr. H R Nagendra BE, ME, Ph.D (Mech. Eng.)
Chancellor, S-VYASA

Born: January 1, 1943



**Swami Vivekananda
Yoga Anusandhana Samsthana**
(declared as Deemed-to-be University
under Section 3 of the UGC Act, 1956)

19, Eknath Bhavan, Gavipuram Circle,
Kempe Gowda Nagar, Bengaluru - 560 019, India

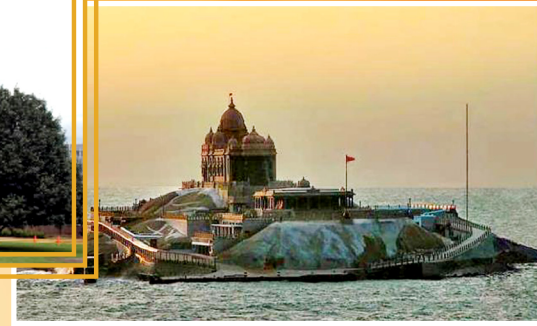
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Experience

- 1968-75** : Faculty Member, Department of Mechanical Engg, Indian Institute of Science, Bangalore
- 1970** : Post Doctoral Research Fellow, University of British Columbia, Canada
- 1970-71** : Post Doctoral Research Associate, NASA Marshall Space Flight center, USA
- 1971-72** : Consultant, Engineering Science Laboratory, Harvard University, USA
- 1972** : Visiting Staff, Imperial College of Science and Technology, London
- 1975** : Joined Vivekananda Kendra, a service mission, in 1975 as whole time worker. Director of Training Center, Vivekananda Kendra, Kanyakumari
- 1975-93** : All India Secretary, Yoga Shiksha Vibhag, Vivekananda Kendra
- 1979-86** : Secretary, Vivekananda Kendra Yoga Therapy & Research Committee (VK-YOGAS)
- 1986-99** : Secretary, Vivekananda Kendra Yoga Research Foundation, Bangalore and Director, Indian Yoga Institute, Prashanti Kutiram, Bangalore
- 1993-99** : All India Vice-President, Vivekananda Kendra, Kanyakumari
- 2000-02** : President, (S-VYASA) Swami Vivekananda Yoga Research Foundation, Bangalore
- 2002-2012** : Vice-Chancellor, S-VYASA University, Bangalore
- Since **2012** : Chancellor, S-VYASA University, Bengaluru
- 2015** : DSc (Hoonory Causa) from KIIT, Bhubaneswar, Odisha





Achievements and Contributions

Research Accomplishment

- o Ph.D Dissertations: Natural Convection in Vertical Annular Spaces, Department of Mechanical Engineering, IISc, Bangalore 1968
- o Research Papers (Engineering) published in National & International Engineering Journals: 30 Nos
- o Research Papers published in the field of Yoga in National & International journals: 135 Nos
- o Research Papers presented in National & International conferences in Engineering on Yoga: 300 Nos
- o Keynote Addresses in National & International conferences: 60 Nos
- o Yoga Research reports published: 32 Nos
- o Yoga books published: 28 Nos
- o Editor in Chief 'IJOY' (International Journal of Yoga), 'IJOYPPP' (International Journal of Yoga-Philosophy, Psychology and Parapsychology) Editor of monthly magazine 'Yoga Sudha' and on the editorial board of monthly Yuva Bharati, 'Yoga life'
- o Columnist - Business Economics (fortnightly published from Kolkata)

Guidance in Research

- o Acted as a Ph.D guide from 2002 for 32 students at S-VYASA University and 2 under Bangalore University
- o Acted as a Ph.D co-guide from 1973-75 for two persons in the department of Mechanical Engineering, IISc, Bangalore
- o Acted as an adviser for Dr. Horia Crisan for the dissertation submitted by him to the University of Heidelberg, Germany 1984
- o Guidance as co-guide for 250 dissertations on Yoga submitted in partial fulfillment of Yoga Therapy Instructors' Course, Post-Graduate Diploma in Yoga for doctors & Diploma in Yoga & Naturopathy.



Achievements and Contributions

Organisation of Conference, Symposia and Workshop

- o Twenty One International Conferences in Yoga Research and Applications in Prashanti Kuteeram campus and out of campus
- o Monthly Symposia to date: 58, other Conferences in collaboration with other Organizations: 9
- o Workshops organized and conducted for executives, called SMET from 1982 to date: 290-523
- o Acting as a guide for 2 Ph.D (Yoga & Allied Sciences) students, Faculty of Science, Bangalore University, Bangalore

Development of Curricula for the following

- i Engineering - 2 courses
- ii Training of life Workers of Vivekananda Kendra (6 months residential)
- iii Yoga courses for
General Public
Patients-Integrated approach of Yoga Therapy
Executives-SMET, FSMET, ASMET and HOLSYM
Education-Eyesight improvement, voice culture, Memory, IQ,
Creativity Development, PDC, STEP
Invoking dormant potentials: CM, PET, MSRT, MIRT, VISAK, ANAMS
Certificate, Diploma, Post Graduate Diploma for Doctors, MBYT, BNYS
and Ph.D (in Yoga and Allied Science Courses)





Achievements and Contributions

Development of Research Projects

- o Center of Excellence in Yoga - AYUSH grant-in-aid project (2009)
- o Stop Diabetes Movement - a Nationwide Movement in India (2008)
- o Center for Advance Research in Yoga and Neurophysiology (2007)
- o Diabetes and Yoga: Royal Free Hospital, London (1988-90)
- o Yoga for Rheumatoid Arthritis: Middlesbrough General Hospital (1987-89)
- o Yoga and Asthma: Yoga Bio-medical Trust, Cambridge, UK (1986-89)
- o Bronchial Asthma and Yoga: Chest Clinic, Fort Collins, Colorado (1987-present)
- o A Topic Bronchial Asthma: ICMR project (1990-93)
- o Yoga and Myopia: Eye Clinic, London (1990-present)
- o Yoga and Eating Disorders: Advanced Psychiatry Clinic, Los Angeles (1989 to present)
- o Headache and Yoga : Brain Clinic, Chicago (1986-88)
- o Cancer & Yoga
- o Cancer Center, New York (1992)
- o Kidwai Memorial Institute of Oncology, Bengaluru (1986-present)
- o Bangalore Cancer Hospital, Bangalore
- o Cancer Research Center, Kolkata
- o Cancer Hospital, Gwalior
- o Yoga and Sleep Studies
- o Yoga and Psychosis
- o Yoga and Aging
- o Miscellaneous Applications - MR, Blind, Prisoners, Remand Home Children, Defence Persons, Sportsman etc.
- o New Energy Research - Interaction of Hydrogen with Matter; Biological Transmutations



Awards

- o **Man of Excellence** award by the Badaganadu Sangha Association, Bangalore - 1994
- o **Yoga Shree** award by Padmashri Yogacharya BKS Iyengar, organized by Bangalore Yoga Association - 1995
- o Award by the Chief Minister, Govt of Delhi for contributions in the field of Yoga Therapy - 1995
- o Recipient of **Patanjali Award 1997** for the contributions in the field of Yoga by ISM&H, Ministry of Health and Family Welfare, Government of India through Director, ISM&H in Bangalore
- o Recipient of **Bhaskar** award for the contributions in the field of Yoga by organizers of Mystic India Exhibition, New Delhi from the hands of Sri Ramananda Sagar - 1997
- o Nominated by the American Biographical Association for the **Distinguished Leadership** award for his service to humanity
- o **National Citizen's Award** from the hands of Justice P N Bhagavati, Hon'ble Chairman, United Nations Human Rights Commission - 2001
- o Recipient of **Bharata Ratna Sir M Visvesvaraya Science Award** for the contributions in the field of Yoga Education and Yoga Therapy from Svadeshi Vijnana Andholan, Karnataka - 2010
- o **International Yoga Grand Master Award** from Portuguese Yoga Confederation - 2013
- o **Kannada Rajyotsava Award** (for Organization) - 2010
- o **Bharat Gaurav** award in British Parliament - 2015
- o **Global Peace Award** in UNO hall from Sri Swami Madhavananda, World Peace Council, Vienna - 2015
- o **Light of Yoga** award from Hindu Students Council, New Jersey, USA - 2015
- o **Padma Shri** award, Government of India - 2016



Distinctions

- o Member of the Governing Council of Central Institute of Yoga Research, New Delhi
- o Member of the Working Group of Experts for Planning Commission under the Ministry of Health (Indian Systems of Medicine)
- o Member of the Working Group of Experts for preparation and approval of Syllabus for Courses in Yoga and Naturopathy under the Ministry of Health (Indian Systems of Medicine)
- o Member of the Working Group of Experts for preparation and approval of Syllabus for Post Graduate Course in Yoga of Bangalore University
- o Member of the Selection Board for selecting candidates to be deputed abroad by the Indian Council of Cultural Relations, New Delhi
- o Member of the Selection Board for selecting Deputy Director (Yoga) for CCRYN under the department of ISM&H, Government of India
- o Member of the Governing Council and Finance Committee for National Institute of Naturopathy, Pune
- o Member of the Board of Studies for the subject of Science of Living, Jain Vishva Bharati Institute, Ladanu (Rajasthan)
- o Member of the Board of Studies in Yoga in Maharshi Dayananda Saraswathi University, Ajmir and also for Bangalore and Mangalore Universities
- o Member of the Expert Committee of Ayurveda in NIMHANS University
- o Chairman of a Documentation Committee set up by CCRYN, Ministry of Health & Food, Government of India
- o Consultation Yoga, Swinburn University, School of Integrative Medicine, Melbourne
- o Member, Governing Council of Institute of Speech and Hearing, Mysore
- o Vice- President, Indian Yoga Association
- o Working President, Vishwa Mangala Gou Grama Yathra
- o Chairmanship of IDY, Task Force, Padma Award Committee member, etc.

Development of campus Prashanti Kutiram

After completion of his Ph.D from IISc, **Dr. Hongasandra Rama Rao Nagendra** moved to NASA Marshall Space Flight Centre, USA as Post-Doctoral Research Associate in 1971. He returned to Vivekananda Kendra in 1975 to pursue human engineering as against mechanical engineering.

In search of reality, Dr. H R Nagendra found that the modern science has only touched the physical and creation has many subtle and causal dimensions which ancient Seers of India had fathomed, realized, documented and time tested for its usefulness. So he jumped into this wisdom contained in Upanishads of Yoga and spiritual lore. He was fascinated by the teachings of Swami Vivekananda who brought out this great wisdom in modern terminology and urged to combine the best of the West with the best of the East.

Later on, he was asked by the UGC to bring the wisdom of Yoga to University campuses and the VYASA had 9 campuses in which Yoga centers were established. With the success story growing further the UGC accorded a deemed-to-be University status in 2002 to S-VYASA for which he became the first Vice Chancellor. He has been the guiding force behind the VYASA movement.

He has been instrumental in co-ordinating the efforts of several people to bring up a 35 Acres campus of scenic beauty twenty miles from Bangalore and 5 kms from Bannerghatta-Jigni-Anekal National High way. The campus is the developing Head Quarters of S-VYASA with research as the main aim. Prashanti has developed into a 250 bedded indepth research center of yoga of international acclaim called Arogyadhama including Surabhi - a Naturopathy and Ayurveda facility to treat patients and promote positive health with. Prashanti also houses an intensive, holistic 30 beds Cancer Care Center.

