

**IMMEDIATE EFFECT OF PRACTICE OF ADVANCED SET OF ASANAS AND
BASIC SET OF ASANAS ON SUBTLE ENERGY HOMEOSTASIS AND STRESS
RELIEF---- A SELF AS CONTROL STUDY**

SUBMITTED BY

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UNDER THE GUIDANCE OF

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CERTIFICATE

This is to certify that Shu Chang who has been given Msc Yoga Therapy registration with effect from August 01, 2017 by swami Vivekananda Yoga Anusandanadhana Samsthana, Deemed to be University, has successfully completed the required training in acquiring the relevant background knowledge in yoga therapy and has completed the Msc course of two years to submit this research project entitled **“IMMEDIATE EFFECT OF PRACTICE OF ADVANCED SET OF ASANAS AND BASIC SET OF ASANAS ON SUBTLE ENERGY HOMEOSTASIS AND STRESS RELIEF----- A SELF AS CONTROL STUDY”** as per the regulation of the university.

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DECLARATION

I, hereby declare that this study was conducted by me at Swami Vivekananda Yoga Anusandhana Samsthana (S-VYASA), Bangalore, under the guidance of Ms. Padmasri gudapati s-vyasa University Bangalore.

I also declare that the subject matter of my dissertation entitled **“IMMEDIATE EFFECT OF PRACTICE OF ADVANCED SET OF ASANAS AND BASIC SET OF ASANAS ON SUBTLE ENERGY HOMEOSTASIS AND STRESS RELIEF----- A SELF AS CONTROL STUDY”** has not previously formed the basis of the award of any degree, diploma, associate-ship, fellowship or similar titles.

DATE: 08JUN2019

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PLACE: Bangalore

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

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

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ABSTRACT

The aim of this study was to measure the changes of subtle energy re-distribution and balance in different organs/systems, in entropy coefficient (disorderliness), in left/right symmetry (subtle energy homeostasis level) and in stress relief (mental level) through practice of advanced set of asanas and basic set of asanas.

Both advanced asana set and basic asana set were selected from < Asana Pranayama Mudra Bandha > (Saraswati Satyananda, 1996), (Basic asana set was selected from beginning group and middle group of asanas; Advanced asana set was selected from advanced group of asanas).

Thirty Yoga volunteers who have more than 1 year regular Yoga practice (male 15 and female 15), age (mean \pm sd :23.37 \pm 2.55) were assessed after 1 month of regular practice of both advanced and basic set of asanas. The experiment was conducted and the assessment was done by utilizing the EPI(Electro photonic imaging) and Acugraph technique. Pre-post assessments were taken to see the immediate effect of each one of the set of asanas namely the advanced set and the basic set. Also comparisons were made to ascertain whether subtle energy homeostasis diverges based on gender. The parameters considered for analysis were Personal Integrated Energy (PIE), Left/Right Symmetry (LRS) Entropy Coefficient(EC), Organ Balance (OB), Stress Level(ST), Energy Stability (ES), Energy Reservation (ER). Through practice of both advanced asana set and basic asana set, the results revealed a highly significant reduction in stress, a highly significant decrease in energy disorderliness, and a highly significant improvement in energy re-distribution in different organs/systems. Whereas, through practicing advanced asana set, indicates more stress reduction and more energy re-distribution in different organs/systems than practicing basic asana set. The subgroup analysis of practice of advanced asana set in different gender, demonstrated more significant increase in left and right symmetry in females than practice of basic asana set, which indicates the equilibrium between left and right parts of the brain, Measures of harmony. Similarly, more significant reduction in stress was found in males through practicing advanced asana set than practice of basic asana set. The baseline comparisons between males and females showed significant difference in both Personal Integrated Energy and Energy Stability indices.

In conclusion, advanced asana practice reduces more stress level of an organism, meanwhile, brings more energy re-distribution in different organs/systems as well. It regulates and improves the equilibrium and harmony between left and right parts of the brain (significant improvement in female), and it reduces more stress (especiallly significant in male). Therefore, it helps in preserves health both in subtle energy homeostasis and mental aspect. Further, the present study found that the energy pattern differs with gender. Hence, it is suggested that studies with male and female participants may be conducted separately.

KEY WORDS: advanced asana, Electro Photonic Imaging Technique EPI, Gas Discharge Visualization GDV, subtle energy homeostasis, organ balance, stress.

1.0 Introduction

The Yoga Sutras of Sage Patanjali defines asana as *sthirasukhamaasanam*, a physical posture in which one can remain steady and comfortable (Gheranda Smhita A.B.K., 2010). Asana practice has some subtle effects on the body. It is a change in the breathing process, which helps the practitioner to achieve mental and emotional balance. asanas make the joints flexible and improve the health of the muscles, they also bring about coordination in the function of the nervous system and increase the efficiency of the internal organs due to their light massaging effect. Thus, with regular practice of asanas the body gradually become healthier (A.B.K., 2010); Therefore it brought a great yoga boom to the Chinese to learn asanas.

Among Chinese yoga practitioners, healthy young people tend to challenge advanced asanas, while those who use yoga as healing purposes tend to practice basic asanas. For those who have a basic foundation, the pursuit of advanced asana is limited to the higher requirements of strengthening their body muscles or improving their body flexibility. However, many people simply fail to understand the real meaning of yoga and its postures while pursuing advanced style. Hence, unscientific practice caused different degrees of physical injury(("2018 年中国瑜伽行业研究报告," n.d.)(2018 China Yoga Industry Research Report)). The intermittent and unstable practice make many yoga enthusiasts unable to move forward to advanced Asanas, or otherwise, the misunderstandings of advanced asana practice, leads to no longer regular practicing due to inability to see the benefits of advanced asanas for physical and mental aspects. Either long-term stagnation in basic asanas' practicing, or unable to maintain a certain time even after entering an advanced posture, leads to greatly decreased practice effect.

However, asana, as a limb of yoga, is not only a physical discipline, but should be known as integration, which Patanjali describes in the third chapter of the Yoga Sutras, and which involves integration of the body(*sarira-samyama*), integration of the breath(*prana-samyama*), integration of the senses(*indriya-samyama*), integration of the mind(*manah-samyama*), integration of the intelligence or of knowledge(*buddhi-samyama* or *jnana-samyama*)(B K S IYENGAR, 2017).

Yoga, through all its components which include Kriya (cleansing techniques), Asana (yogic postures), Pranayama (breathing practices), Dhyana (meditation) and diet, has been scientifically proven and shown to improve physical, mental, and emotional wellbeing (Buffart et al., 2012). Yoga postulates that

vital energy (prana) flows through channels called nadis (Sivananada Swami, 1994) forming the human vital energy system. Restoring personal well-being is achieved by improving prana through Yoga postures (Asanas), breathing techniques (Pranayama), and meditation (Dhyana)(Brennan, 1988). These techniques correct energy imbalances and restores energy homeostasis in humans (Lynton, Kligler, & Shiflett, 2007). This energy which is subtle known as Prana (Srinivasan, 2014). However, Prana and shakti denoted by the Vedic system of ancient India as energy of “male” and “female” respectively(Patwardhan, Warude, Pushpangadan, & Bhatt, 2005), It is considered to be the energy that regulates all cellular processes and keeps a person healthy. Such studies have established that participation in integrated Yoga programs of various lengths ranging from a weekend to many months systematically increases subtle energy (Ghosh, Hankey, & Srinivasan, 2017).

Many studies have been performed on yoga practitioners’ subtle energy levels(E-ls) by using instruments such as Electro Photonic Imaging, or the Electro-acupuncture Instrument Acugraph ,which measures conducts at Jing-well points of acupuncture meridians(Ghosh et al., 2017).We conceptually tried to relate the fundamental fabric of subtle energy(Prana), with the fundamental aspect of matter(electrons), and expect that both may converge closely. Through this, we tried to derive our operational definitions of various abstract constructs. The conceptual relationship between Prana and electrons seems to be quite evident, however, more empirical evidence is needed to support this concept (Kushwah K K,Nagendra R H, 2015).

2.0 Literature Review

2.1 Review of ancient literature

2.1.1 Yoga Asanas according to ancient literature

Asanas are described in many scriptures, mainly in Hatha Yoga Pradipika, Gheranda Samhita, Hathrathnavali and Yoga Makaranda, for the integrated explanation, benefits (in physical, mental, spiritual aspects), and contra-indication.

(Muktibodhananda, 1998b)

Prior to everything, asana is spoken of as the first part of hatha yoga. Having done asana one gets steadiness (firmness) of body and mind; diseaselessness and lightness (flexibility) of the limbs

(Muktibodhananda, 1998b).

Asana is the first part of hatha yoga. In raja yoga, asana refers to the sitting position, but in hatha yoga it means something else. Asana is a specific position which opens the energy channels and psychic centers. Hatha yoga is a process through which purification and control of the body takes place by restructuring the pranic flows. Hatha yogis also found that by developing control of the body through asana, the mind is also controlled. Therefore, asana practice is foremost in hatha yoga. When you practice asana, steadiness develops. Prana moves freely, and there is less chance of disease occurring. Just as stagnant water is the breeding ground for all sorts of creatures, when prana stagnates anywhere in the body, conditions are perfect for bacteria to flourish; prana should move like swift flowing water. When prana flows freely, the body also becomes supple. Stiffness of the body is due to blockages and an accumulation of toxins. When prana begins to flow the toxins are removed from the system and you will be able to bend and stretch in a relaxed manner without having to do vigorous warming up exercises. When the store of prana is increased to a greater degree, the body will move by itself. You may find yourself spontaneously performing asanas and various bodily postures, mudras or even pranayama. You

may find yourself performing postures you could never have done before. This is due to a relaxed state and to a greater vibrational rate of the prana.

(Niranjanananda Saraswati Swami, 2012)

The number of asanas is the same as the number of animal species in the world. Lord Shiva described eighty-four lakh asanas first of all, out of which eight-four are best, Out of these eighty-four asanas, thirty-two asanas should be considered as especially auspicious in this mortal world.(Niranjanananda Saraswati Swami, 2012)

2.1.2 Benefits of Practicing Asanas

hQSy àwma<gTvadasn< dZyRte mya.

tTk...yaRdasn< SwEyRmaraeGy< .5.

haöhasva prathamäïgatvädäsanaà darçyate mayä ||

tatkuryädäsanaà sthairyamärogyaà cäïgapäövam ||5|| (SRINIVASA, 2002)

Asana, being the first part of hatha-yoga curriculum, is being narrated here by me. Practice of asanas alleviates diseases and contributes to stability, health and efficient body(SRINIVASA, 2002).

cturzlit]e;u @kEk< jlvjNtu;u.

%~ Ty zMÉuna àae´az! cturzlit pliQka>. 7.

caturaçétilakñeñu ekaikaà jévajantuñu ||
udghâtya çambhunâ proktâç caturaçéti péöhikâaù || 7 || (SRINIVASA, 2002)

cturzlitpIQe;u ke;aiÂ']< äuve.

Aaidnawaeidta> pIQa> deharæGysuoàda>.8.

caturaçétipéöheñu keñäïcillakñaëaà bruve ||
ädinâthoditâaù péöhâaù dehârogyasukhapradâaù || 8 || (SRINIVASA, 2002)

Sambhu has culled only eighty-four asanas representing one from each lac of the eighty-four lacs of species. From among eighty-four pithas, I give the characteristics of a few. These pithas are recommended by ädinâtha, and contribute to the sense of wellbeing (SRINIVASA, 2002).

srinivâsa has attributed asana therapeutical effects to the various yogic practices which are mentioned as:
Contributes to stability, health and efficient body. Contributes to a sense of well-being.

Note: srinivâsa has used pitha as a synonym for âsana.

2.1.3 Basic asanas

Adhomukhasvanasana (Krishnamacharya T, 2006)

The entire body should be pushed back into a curve. In this sthiti, the head should be properly bent inwards, the chin should be pressed firmly against the chest. After pulling the abdomen in and pushing it out, exhale the breath out. Holding the breath out firmly pull in the abdomen. As a result of the strength of practice, one learns to hold this posture for fifteen minutes.

Benefit: Bloating of stomach, bad belching, ajeerna vayu, all such diseases will go away. Because of the strength of recaka, you will receive best results by practising this asana in recaka. ^{[5](Yoga Makaranda.4.7)}

Ushtrasana

AXyaSy zete pdyuGmVySt< p&óe inxayaip x&t< kra_yam!,
Aak...ÁCy sMyGXyudraSygaF< %ò< c plQ< ytyae vdiNt.2-41.

adhyäsya çete padayugmavyastaà pãñöhe nidhäyäpi dhâtaà karäbhyäm |
äkuicya samyagdhyudaräsyagäðham uñöaà ca péöhaà yatayo vadanti ||2-
41 || (Niranjanananda Saraswati Swami, 2012)

Lie prone (face downwards). Bend both the legs and cross them behind the back. Hold the feet with the hands and squeeze the mouth and abdomen firmly. this is called ushtrasana (Niranjanananda Saraswati Swami, 2012).

Ushtrasana as described by sage Gheranda has the feet held by the hands behind the back in the prone position.

Breathing: Breathe normally in the final position. Do not try to breath deeply because the chest is already stretched

Duration:. hold the final position for up to 1 minute as a static pose.

Awareness: Physical awareness should be directed to the abdomen, throat, spine or natural breathing. For spiritual purpose, concentrate on swadhisthana or vishuddhi chakra

Yogamudrasana (Krishnamacharya T, 2006)

Under Baddha Padmasana while exhaling, bend trunk forward, till the head touches the ground. Take deep breaths as many as is possible without undue strain. While inhaling raise trunk. Yoga Mudra should be done immediately after Baddha Padmasana. The above describes the final complete pose and may not be attainable at the beginning but only after considerable practice. In the beginning the trunk should be lowered to the extent that is conveniently possible without undue strain and the final position will become possible in course of time. The counterpose of both Baddha Padmasana and Yoga Mudra is supta vajrasana (Krishnamacharya T, 2006)

Matsyasana

mu'pÒasn< k«Tva %Äanzyn< cret!,
k^apRra_ ya< izrae veò(< maTSymasnm!.2-22.

muktapadmāsanaà kâtvä uttānaçayanaà caret |
kürparäbhyäà çiro veñöyaà mätsyamāsanam ||2-22|| (Niranjanananda Saraswati Swami, 2012)

In the position of ukta padmasana bring the elbows of both hands around the head and lie flat on the floor. This destroyer of diseases is called matsyasana (Niranjanananda Saraswati Swami, 2012)

Breathing: In the final position the breathing is slow and deep. Experience the breath in the abdomen. Practicing sheetkari pranayama in the final position makes the voice sweet and steady.

Duration: the final position can be held for up to 1 minute.

Awareness: Physically, on the abdomen, chest, neck, head and breath, for spiritual purposes, the point of concentration is vishuddhi chakra, where the mind is fixed for meditation.

Practice Note: it is important that the body is slowly lowered into and raised from the final position by using the elbows as a support, the movement should be performed with control and care as the spine is easily injured by sudden, jerking movements.

Bhujangasana

A'œ guónaiÉpyRNtmxaeÉUmaE c ivNyset!,
xra< krtla_ ya< x&TvaeXvRzl; i) [lv ih. 2-42.
dehai¶vR~Rte inTy< svRraegivnaznm!,
jagitR Éuj'œ gldevl Éuj'œ gasnsaxnat!. 2-43.

aî guñöhanäbhiparyantamadhobhümau ca vinyaset |
dharää karataläbhyää dhâtvordhvaçérñäâ phaëéva hi || 2-42 ||
dehâgnirvardghate nityaâ sarvarogavinâçanam |
jägarti bhujai gédevé bhujai gâsanasädhanät || 2-43 || (Niranjanananda Saraswati
Swami, 2012)

Keep the body from the toes to the navel on the floor and placing the palms of the hands also firmly on the floor, raise the head like a snake. This is called bhujangasana, the fire of the body increases, all diseases are destroyed and kundalini shakti is awakened by the practice of bhujangasana (Niranjanananda Saraswati Swami, 2012).

Technique: Lie flat on the stomach with the legs straight, feet together and soles of the feet uppermost and relaxed, place the palms of the hands flat on the floor, below and slightly to the side of the shoulders, with the fingers together and pointing forward. The arms should be positioned so that the elbows point backward and are close to the sides of the body. Rest the forehead on the floor and close the eyes.

Slowly raise the upper trunk of the body, keeping the navel region on the floor. The lower portion of the body from the toes to the navel remains in a relaxed state. The head is slowly raised like the hood of a snake. Be aware of using the neck muscles first while starting to raise the head, and then the back muscles to raise the trunk. Then use the arm muscles to raise the trunk further and arch the back. Gently tilt the head backward so that the chin points forward and the back of the neck is compressed. In the final position, the pubic bone remains in contact with the floor and the navel touches the floor or is raised a maximum of 3 cm. If the navel is raised too high, the bend tends to be in the knee and not in the back. The arms may or may not be straight; this will depend on the flexibility of the back. Hold the final position for as long as is comfortable. To return to the starting position, slowly release the upper back by bending the arms, and lower the navel, chest, shoulders and finally the forehead to the floor. Relax the lower back muscles. This is one round.

Breathing: Inhale while raising the torso. Breathe normally in the final position or retain the breath if the pose is held for a short time, exhale while lowering the torso.

Sarvarogavinaashanam, all types of diseases are eradicated by practicing this asana. Research has shown that bhujangasana strengthens the nervous system. All the nerves from the brain to the toes are energized,

and coordination and balance are established inside the body. On a pranic level, bhujangasana has a strong effect on all the organs related to swadhisthana, manipura, anahata and vishuddhi chakras. Bhujangini Devi, or kundalini shakti, the evolutionary energy within, is also awakened by this practice.

Shalabasana

AXyaSy zete kryuGmv] AalMBy ÉUim< kryaeStla_yam!,
padaE c zUNye c ivtiSt caeXy; vdiNt plQ< zIÉ< munINÔa>.2-39.

adhyäsya çete karayugmavakña älambya bhümià karayostaläbhyäm |
pädau ca çünye ca vitasti cordhyaà vadanti péöhaà çalabhaà munéndrääu
|| 2-39 || (Niranjanananda Saraswati Swami, 2012)

Lie flat with the face towards the ground, Both arms are placed by the sides of the chest, The palms should be placed by the sides of the chest. The palms should be placed firmly on the ground, the legs are raised in this position. Munis have called it shalabhasana (Niranjanananda Saraswati Swami, 2012).

Since the body assumes the shape of a shalabh, a locust, while doing the practice, it is called shalabhasana, the locust pose.

Technique: Lie flat on the stomach with the legs and feet together and the soles of the feet uppermost. In the initial stage the hands may be placed under the thighs, palms facing downward, and can be used as a support to raise the legs, but gradually, with mastery over the practice, the arms are placed by the sides of the body. Stretch the chin slightly forward and rest it on the floor throughout the practice. Close the eyes and relax the whole body. This is the starting position. Slowly raise the legs as high as possible without straining, keeping them straight and together. The elevation of the legs is produced by applying pressure with the arms against the floor and contracting the lower back muscles. Hold the final position as long as is comfortable without strain. Slowly lower the legs to the floor. This is one round. Return to the starting position and relax the bod with the head turned to one side. Allow the respiration and heartbeat to return to normal.

Breathing: inhale deeply in the starting position. Retain the breath inside while raising the legs and holding the final position. Exhale while lowering the legs. Beginners may find it helpful to inhale while raising the legs. Advanced practitioners may exhale after returning to the starting position.

Awareness: Focus the mind on swadhisthana or vishuddhi chakra.

Setubandasana (Krishnamacharya T, 2006)

The same asana is called UTTANA MAYURASANA in Yoga Kurantam.

Technique: Lie flat on the back, the legs stretched and close together, and the arms stretched and by the side of the body, the palms open and touching the ground. Take the hands back, so that the palms rest on either side of the head, the heel of the palms near the ears, tip of fingers near the shoulders. While inhaling, press hard the on the ground by the palms, and lift the back by arching it. Arch back the neck also till the top of the head rests on the ground. At this stage, the top of the head rests on the ground and the back is arched and lifted up, but the legs and hips still lie on the ground. The palms are also supporting the body. Now bring the hands back to their original position as in the first step Press on the ground hard by the palms, and lift the hips also. The thigh and calf muscles are kept stretched. The heels and knees are kept together, but the feet are spread apart so that the small toes of each leg rests on the ground. The hands are now crossed over the chest. In this final position, take not more than six deep breaths. This asana considerably benefits those suffering from piles.

Savasana

(Muktibodhananda, 1998a)

Lying flat on the ground with the face upwards, in the manner of a dead body, is shavasana. It removes tiredness and enables the mind (and whole body) to relax (Muktibodhananda, 1998a).

Shavasana is the corpse pose. Shav means ‘corpse.’ This asana has been adapted from the tantric practice of shavasana in which the sadhaka sits on the corpse and practices his mantra. Shavasana is also known as the pose of relaxation and it is essential to practice this in between other asanas or after a hectic day.

Technique: Lie flat on the back. Separate the feet slightly, place the hands by the sides of the body, about one foot away, with the palms facing upwards. The legs, back and head should be in alignment, not crooked. Relax the whole body, keep the eyes and mouth closed. Breathe naturally through the nose. Concentrate on the natural breath and feel the body becoming looser and lighter with each exhalation. Keep the awareness on the breath and the physical body. Shavasana is a very simple practice but most people find it almost impossible to completely relax the body. There is a tendency to hold tension in some part. The whole body must relax, then the breathing will simultaneously slow down. Try to ignore the mental chatter and concentrate only on the breath and body. This practice is useful for developing body awareness and pratyahara. When the body is completely relaxed, awareness of the mind develops. Its effects influence the physical as well as the psychological structure. It is very useful in yogic management of high blood pressure, peptic ulcer, anxiety, hysteria, cancer and all psychosomatic diseases and neuroses. In fact, shavasana is beneficial no matter what the condition is, even in perfect health, because it brings up the latent impressions buried within the subconscious mind, and the mind which operates during waking consciousness relaxes and subsides. It is, therefore, necessary to practice shavasana for developing dharana and dhyana. Even though it is a static pose it revitalizes the entire system.

àsayR hStpadaE c ivîaNTya zyn< twa.

svaRsnîmhr< zaiyt< tu zvasnm!.76.

prasârya hastapâdau ca viçnântya çayanaà tathâ ||

sarvâsanaçnamaharaà çâyitaà tu çavâsanam ||76|| (SRINIVASA, 2002)

Savāsana—

Spread out the hands and legs, while lying relaxed. savāsana, which is practised in lying position, relieves fatigue caused due to practice of (all the) asanas (SRINIVASA, 2002).

ॐ नमो भगवते वासुदेवाय
ॐ नमो भगवते वासुदेवाय
ॐ नमो भगवते वासुदेवाय

uttānaà çavavat bhūmau çayanaà tu çavāsanam |
çavāsanaà çnamaharaà cittaviçñāntikāraëam | |2-20| | (Niranjanananda Saraswati Swami, 2012)

Relax the whole body on the floor like a dead person. Shavasana removes fatigue and relaxes the mind (Niranjanananda Saraswati Swami, 2012).

The more common name for mritasana is shavasana, the corpse pose. It is a very simple and deeply relaxing practice for most people and a meditation asana in its own right, if the practitioner remains awake.

Technique: Lie flat on the back. The body must be correctly positioned, as merely lying down is not shavasana. Normally, people lie down without being aware of the position of their feet or hands. The distance between the feet should be equal to the width of the waist. If the waist is 30cm wide, the distance between the feet should also be 30cm. the arms should be about 15cm away from the body. The palms should be open and facing upward, allowing the fingers to curl slightly.

Having the palms facing upward may feel awkward at first, or there may be some discomfort due to twisting of the wrists, but gradually with practice this asana becomes very comfortable, one reason it is so relaxing is that very little sensation is felt in the backs of the hands as there are very few sensory nerve fibres in that part of the body. In contrast, the palms of the hands are very sensitive as many sensory nerve endings are located there and transmit sensory stimuli to the brain, when the palms face up, sensory stimuli is reduced. For this reason, it is recommended that the palms are kept open and facing upward.

The mouth should remain closed, with the lower jaw relaxed. All tension should be released from the face. A thin pillow or folded blanket can be placed under the head and, if necessary, underneath the

shoulders to help relax both the shoulders and the throat muscles. The head and spine remain in one straight line. The head should not be tilted to the right or the left. All physical movements should cease after establishing the position, and the body is relaxed.

Become aware of the normal breath, letting it become rhythmic and relaxed. Become aware of the parts of the body which are in contact with the floor. If thoughts come during the practice, do not try to suppress them,

Awareness: there should be no physical movement in shavasana. Once the body is settled, awareness of the asana should be maintained, otherwise the desire for sleep will take over and harmony between body and mind will be lost. Awareness and stability are the main components of shavasana. Even a small movement means contracting the muscles, which disturbs the stillness of shavasana. This awareness requires a little mental effort, but it should be without tension. Sleeping in shavasana will reduce many of its benefits, as during sleep the mind is again filled with worries. To obtain maximum physical and mental relaxation, shavasana should be practiced with full awareness. There are various methods to become one-pointed, focused and to go deeply into shavasana. Initially simply be aware of the body or focus the mind on the breathing. Another technique is to count the breath, or to do a short practice of yoga nidra in shavasana. All methods of focusing oneself are valid, but the final state or culmination of shavasana is yoga nidra .

Duration: practices according to the amount of time available. In general, the longer the better; however, 30sec is sufficient between asana practices. At the end of all asanas 7min shavasana.

2.1.4 Advanced asanas

Poora Dhanurasana

(Muktibodhananda, 1998a)

Holding the toes with the hands, pull them up to the ears as if drawing a bow. This is called dhanurasana. Just as there are different stages of drawing a bow, there is a progression for the various techniques of dhanurasana (Muktibodhananda, 1998a).

Technique: Poorna Dhanurasana (full bow pose) Hold the toes of one foot only and twist the elbow outwards and upwards. Do the same with the other foot. Hold the final position for as long as possible, breathing normally. Slowly release the posture while exhaling. The final position of each stage can be held either with normal breathing or internal breath retention. The body can also be gently rocked forward and backward. Concentration should be on vishuddhi chakra in the back of the neck, or on manipura in the abdominal region, or on the midpoint where the back is bending.

Dhanurasana is very important for stimulating the solar plexus. It regulates the digestive, eliminatory and reproductive organs. It massages the liver and pancreas and is thus very useful for yogic management of diabetes. The kidneys are stimulated and the whole alimentary canal is toned. By lying on the diaphragm with the arms stretched back, the heart is given a gentle massage and, because the chest is fully expanded in this posture, dhanurasana is useful in the treatment of various chest ailments. It stimulates and regulates the endocrine glands, particularly the thyroid and adrenal glands, and it induces production of cortisone. The backward bend of the spine adjusts the vertebral column, straightening a hunched back and drooping shoulders. It is also recommended for treating certain types of rheumatism. Dhanurasana helps to regulate the menstrual cycle and also to correct female infertility, if the cause is not due to deformity of the reproductive organs themselves.

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xnurak;R[< k«Tva xnurasnmucyte.51.

pädäîguñöhau tu päëibhyää gâhétvâ çnavaeävadhî |
dhanurâkarñaeäâ kâtvâ dhanurâsanamucyate ||51|| (SRINIVASA, 2002)

The big toes are held with the hands and are pulled upto the ears (alternately). Thus, one assumes the shape of a stretched bow. This is dhanurāsana (SRINIVASA, 2002).

Parivritti Janu Sirshasana (Krishnamacharya T, 2006)

Technique: This form follows the hatha yoga principles. Another form follows the raja yoga method. The practitioner should learn the difference. First, take either leg and extend it straight out in front. Keep the heel pressed firmly on the floor with the toes pointing upward. That is, the leg should not lean to either side. The base (back) of the knee should be pressed against the ground. Fold the other leg and place the heel against the genitals, with the area above the knee (the thigh) laced straight against the hip. That is, arrange the straight leg which has been extended in front and the folded leg so that together they form an “L”. Up to his point, there is no difference between the practice of the hatha yogi and the raja yogi. For the hatha yoga practitioner, the heel of the bent leg should be pressed firmly between the rectum and the scrotum. Tightly clasp the extended foot with both hands, raise the head and do puraka kumbhaka. Remain in this position for some time and then, doing recaka, lower the head and place the face onto the knee of the outstretched leg. While doing this, do not pull the breath in. It may be exhaled. After this, raise the head and do puraka. Repeat this on the other side following the rules mentioned above.

Poora Matsyendrasana



(Muktibodhananda, 1998a)

Place the right foot at the base of the left thigh, the left foot at the side of the right knee. Take hold of the left foot with the right hand, pass the left arm behind the waist and remain with the body turned. This asana is described by Sri Matsyendranath (Muktibodhananda, 1998a).

Matsyendranath supposedly practiced this asana and thus it is named after him. In English it is called the spinal twist. There are variations in the placement of the arms and hands and the degree of twisting in the spine.

Mayurasana

(Muktibodhananda, 1998a)

Lie on the stomach, placing both hands on the ground (under the body) and the elbows at the sides of the navel. Raise the body high, keeping it like a stick. This is called the peacock pose by the exponents of yoga (Muktibodhananda, 1998a).

xramvò_y krÖyen tTk^apre SwiptnaiÉpazvR>.

%½asnae d{fvÊiTwt> oe myUrmetTàvdiNt plQm!.42.

dharāmavañöabhya karadvayena tatküpare sthapitanäbhipäçarvaù ||
uccäsano daëðavadutthitaù khe mayürametatpravadanti péöham ||42|
(SRINIVASA, 2002)

The two palms are placed on the ground. Elbows are placed on the respective sides of the navel and the body is lifted in the air like a horizontal stick. This is known as mayüra-pltha (SRINIVASA, 2002).

Ekapada sirasana

@kpadmwae k{Qe %TwaPyEk< c d{fvt!.

kraE sMpuiqtaE k«Tva @kpad< tÊCyte.64.

ekapädamatho kaëöhe utthäpyaikaà ca daëðavat ||

karau sampuöitau kätvä ekapädaà taducyate ||64|| (SRINIVASA, 2002)

Having placed one leg over the neck, the other leg is raised up like a stick. The hands are folded on the chest. This is called ekapäda (SRINIVASA, 2002)

Ekapada Sirsasana (Krishnamacharya T, 2006)

Two forms: dakshina ekapada sirsasana and vama ekapada sirsasana. Both these forms together have 18 vinyasas. The first picture depicts dakshina ekapada sirsasana and the second picture vama ekapada sirsasana. The 7th and 12th vinyasas are the asana sthitis of these different forms. For this asana, you need to do sama svasauchvasam (same ratio breathing). In the 7th vinyasa, the left leg, and in the 12th vinyasa the right leg, should be extended and kept straight from the thigh to the heel. No part should be bent. Keep the hands as shown in the picture. In this sthiti one needs to do equal ratio breathing. When the hands are joined together in ekapada sirsasana paristhiti, one must do puraka kumbhaka. One must never do recaka. While doing the 7th and the 12th vinyasas, the head must be raised and the gaze must be fixed at the midbrow. In the 7th vinyasa, the right leg, and in the 12th vinyasa, the left leg, must be placed on top of the back of the neck. Study the picture carefully. The other vinyasas are like those for ardhabaddhapadma pascimottanasana.

Benefit: This will arrest bleeding due to piles and give strength to the body It removes vayu disturbances in the neck region and gives the neck extraordinary strength to carry excess weight. It is extremely helpful for the awakening of kundalini. Pregnant women should not do this posture.

2.2 Review of scientific literature

AUTHOR/ YEAR	TITLE	INTERVENTION	SAMPLE SIZE	RESULT	CONCLUSIONS
Kuntal Ghosh Alex Hankey TM Srinivasa n 2017 Aug	Effect of lotus posture on acupunct ure meridian energies: A controlle d trial	articipants were alternately assigned into two groups, sitting in Lotus Posture and sitting in a chair. Each was measured on 3 successive days, before and after sitting as instructed for 10 min on the 1st day, 20 min on the 2nd day, and 30 min on the 3rd day.	52 male Yoga practitioner s	The two groups yielded completely different results: those sitting in Lotus Posture for 30 min showed increases in subtle energy levels (E_Ls) in all acupuncture meridians; those sitting in chair produced universal decreases. Results for 10 and 20 min showed how these changes in energy values took time to build up with increasing time.	Sitting in Lotus Posture is held to strongly stimulate subtle E_Ls, so results agreed with the experimental hypothesis. Nevertheless, decreases in E_Ls of those sitting in a chair were surprising since the rest might be expected to have no effect.

<p>Agnieszka Golec-Zavala¹, Dorottya Lantos¹, Deborah Bowden</p> <p>2017 May</p>	<p>Yoga Poses Increase Subjective Energy and State Self-Esteem in Comparison to ‘Power Poses</p>	<p>Participants performed either two standing yoga poses with open front of the body ($n = 19$), two standing yoga poses with covered front of the body ($n = 22$), two expansive, high power poses ($n = 21$), or two constrictive, low power poses ($n = 20$) for 1-min each.</p>	<p>64 female</p>	<p>The results showed that yoga poses in comparison to ‘power poses’ increased self-esteem. This effect was mediated by an increased subjective sense of energy and was observed when baseline trait self-esteem was controlled for.</p>	<p>the effects of performing open, expansive body postures may be driven by processes other than the poses’ association with interpersonal power and dominance. This study demonstrates that positive effects of yoga practice can occur after performing yoga poses for only 2 min.</p>
<p>Sherman SA, Rogers RJ, Davis KK, Minter RL, Creasy SA, Mullerkey NC, O’Deil</p>	<p>Energy Expenditure in Vinyasa Yoga Versus Walking</p>	<p>Participants performed 60-minute sessions of vinyasa yoga (YOGA), treadmill walking at a self-selected brisk pace (SELF), and treadmill walking at a pace that matched the heart rate of the YOGA</p>	<p>38 (20 male, 18 female)</p>	<p>Energy expenditure was significantly lower in YOGA compared with HR-Match (difference = 79.5 ± 44.3 kcal; $P < .001$) and SELF (difference = 51.7 ± 62.6 kcal; $P < .001$), but not in SELF compared with</p>	<p>YOGA meets the criteria for moderate-intensity physical activity. Thus, YOGA may be a viable form of physical activity to achieve public health guidelines and to elicit health benefits.</p>

<p>M, Donahue P, Jakicic JM. May 2016</p>		<p>session (HR-Match). Energy expenditure was assessed via indirect calorimetry.</p>		<p>HR-Match (difference = 27.8 ± 72.6 kcal; <i>P</i> = .054). A similar pattern was observed for metabolic equivalents (HR-Match = 4.7 ± 0.8, SELF = 4.4 ± 0.7, YOGA = 3.6 ± 0.6; <i>P</i> < .001). Analyses using only the initial 45 minutes from each of the sessions, which excluded the restorative component of YOGA, showed energy expenditure was significantly lower in YOGA compared with HR-Match (difference = 68.0 ± 40.1 kcal; <i>P</i> < .001) but not compared with SELF (difference = 15.1 ± 48.7 kcal; <i>P</i> = .189).</p>	
<p>Potiaump</p>	<p>Differences in energy</p>	<p>Sun-Salutation B was performed, for eight minutes, at a</p>	<p>Twenty-two adults (16</p>	<p>Significant differences were observed in</p>	<p>High-speed yoga results in a significantly greater caloric expenditure than</p>

<p>ai MMartins MC, Rodr iguez R, Moone y K, Signori le JF. October 2016</p>	<p>expendit ure during high- speed versus standard- speed yoga: A randomiz ed sequence crossove r trial.</p>	<p>high speed versus and a standard- speed separately while oxygen consumption was recorded. Caloric expenditure was calculated using volume of oxygen consumption and carbon dioxide production.</p>	<p>Women, 29.9 ± 5.85 years, 6 Men, 33.17 ± 16.30 years</p>	<p>energy expenditure between yoga speeds with high-speed yoga producing significantly higher energy expenditure than standard-speed yoga (MD = 18.55, SE = 1.86, p < 0.01). Significant differences were also seen between high- speed and standard-speed yoga for volume of oxygen consumed and carbon dioxide produced.</p>	<p>standard-speed yoga. High- speed yoga may be an effective alternative program for those targeting cardiometabolic markers.</p>
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3.0 Aim & objective

3.1 Aim of the study

The aim of this study was to measure the changes of subtle energy re-distribution and balance in different organs/systems, in entropy coefficient (disorderliness), in left/right symmetry (subtle energy homeostasis level) and in stress relief (mental level) through practice of advanced set of asanas and basic set of asanas.

Both advanced asana set and basic asana set were selected from < Asana Pranayama Mudra Bandha > (Saraswati Satyananda, 1996), (Basic asana set was selected from beginning group and middle group of asanas; Advanced asana set was selected from advanced group of asanas).

3.2 Objective of the study

To find the change (immediate effect) in Energy re-distribution and balance in internal organs/systems, in Entropy Coefficient, Energy L/R symmetry and Stress relief with using Electrol Photonic Imaging Technique along with Electro-acupuncture Instrument to analysis energy homeostasis and stress comparing before and after practicing advanced set of asanas and basic set of asanas. These practitioners regularly practiced both basic set and advanced set for one month regularly. They are Yoga practitioners who had more than 1 year regular Yoga practice. Their age range is 21-35Yrs.

3.3 Research Question

Will there be any change in Energy balance redistribution and balance in internal organs, in Entropy Coefficient, Energy L/R symmetry and Stress relief because of practice of advanced set of asanas or set of basic asanas when immediate effect is considered.

3.4 Hypothesis

The practice of Advance set of asanas may bring more subtle energy homeostasis and stress relief than the practice of basic set of asanas.

3.5 Null-Hypothesis

The practice of Advance set of asanas may not bring more subtle energy homeostasis and stress relief than the practice of basic set of asanas.

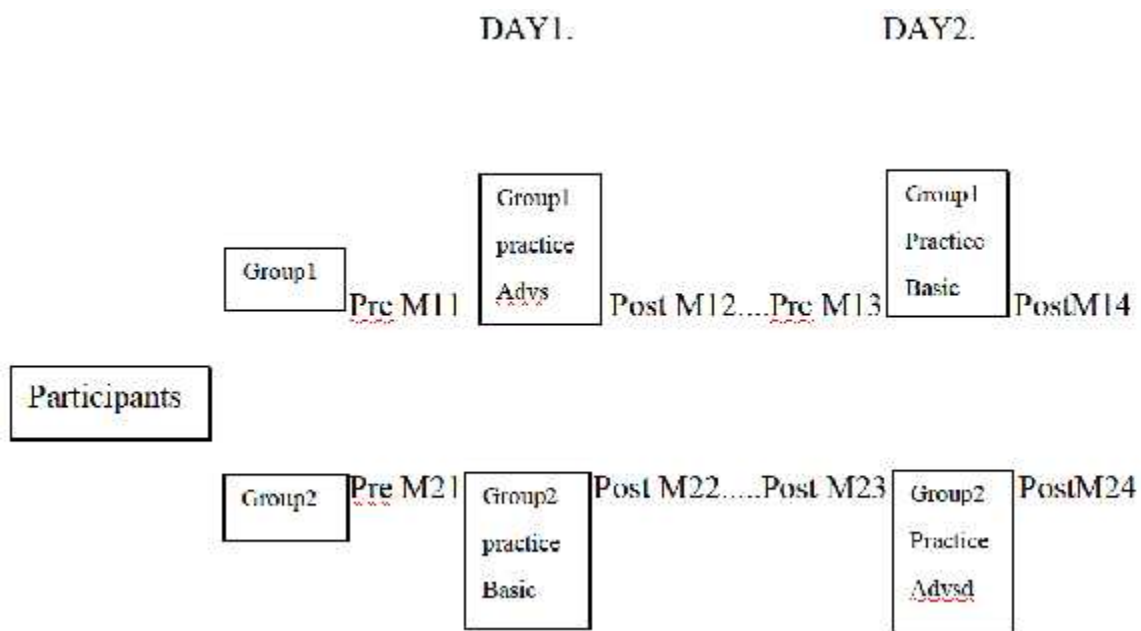
4.0 Methodology

4.1 Source of Subjects

A total of 32 volunteers from the students of Svyasa yoga university, who have more than 1 year regular Yoga practice and able to perform Advanced asana set and basic asana set.

4.2 Study design

A self as control pre-post design.



4.3 Inclusion criteria

Healthy volunteers, age ranging 21 to 35 years, both male and female, willing to participate in the study were included.

4.4 Exclusion criteria

Persons with physical disability, mental disturbance, or inability to perform advanced asanas set were excluded in the study. Women during menstruation and pregnancy are excluded.

4.5 Assessment

4.5.1 Dependent variables

Mental level: 1. Stress (ST).

Subtle energy homeostasis level: 1. Left/Right symmetry (LRS) , 2. Organ Balance (OB), 3. Entropy Coefficient (EC), 4. Energy Reservation (ER), 5. Personal Integrated Energy (PIE), 6. Energy Stability (ES)

4.5.2 Assessment tools

i) Electro Photonics Imaging Technique (Bio-Well):

The Electro Photonics Imaging Technique uses GDV (Gas Discharge Visualization), also known as the Kirlian effect, to measure and analyze electro-photonic emissions of the human fingers. When a scan is conducted, a weak electrical current is applied to the fingertips for less than a millisecond. The skin's response to this stimulus is the formation of a variation of an "electron cloud" composed of light energy photons. The electronic "glow" of this discharge, which is invisible to the human eye, is captured by the camera system and then transmitted and translated back in graphical representations to show energy, stress and vitality evaluations. Bio-Well illustrates the overall state of a person's energy field. The images created using the Bio-Well system are based on the ideas of Traditional Chinese Medicine, Ayurveda and other Eastern Philosophy's conceptions. The data from each test is converted to a unique "photonic profile", which is compared to the database of hundreds of thousands of data records using 55 distinct parametric discriminates, and charted and displayed for discussion and analysis (Korotkov Dr., n.d.).

This correlation of EPI image sectors with different organs of the body is mostly based on empirical findings and also supported by both acupuncture and meridian system of Sujok (Korotkov G Konstantin, 2002). Recently, meridian system has been scientifically supported by a newly found circulatory system called Bonghan system. It is a thread like structure found on the superficially inside blood or lymph vessels, on the surface of internal organs, and also in the brain ventricles (Soh, 2009). It provides a possible connection between the EPI sectors from finger tips' images and with the organs and systems within the body (Kushwah K K, Nagendra R H, 2015).

EPI Parameters

1. Stress (ST), 2. Left/Right symmetry (LRS), 3. Organ Balance(OB), 4. Entropy Coefficient(EC), 5. Energy Reservation (ER).

Stress (ST), ranges from 0–10 where 2–4 is an indication of normal quiescent state. Below 2 is a state of relaxed and calm people. This could be because of the two possible reasons, deep meditation or chronic depression. ST above 4 indicates excited state and towards higher levels of stress.

Left/Right symmetry (LRS), is equilibrium between left and right parts of the brain. Measure of harmony. where below 50 is very low balance of the left/right parts of the brain, 50-90 is low balance of the left/right parts of the brain, and above 90 is optimal balance of the left/right parts of the brain. One can cope with stress and problems by oneself.

Organ Balance(OB), reflects energy re-distribution for different organs and systems, below 40 is very low balancing level in organ, 40-70 is low balance, and above 70 is optimal level.

Entropy Coefficient(EC), is a determinant of disorderliness in the human energy system. lower the entropy, better it is as it represents degree of randomness.

Energy Reservation (ER), the energy reserve, which is designed for analysis of the functional state of the human body, by calculating the Energy parameter of the particular organ. Represents energy reserve of different cells of the body. Comparison with the Health Status demonstrates the level of energy kept in the cells comparing with energy being used at the moment. Energy Reserve < 20% is low level, Energy Reserve from 20% to 60% is optimal level, Energy Reserve > 60% is high level.

Further, the EPI provides a non-invasive, objective and painless method, which is used for quick evaluation of health abnormalities in the human energy system (Korotkov, Matravers, Orlov, & Williams, 2010). Therefore, it is gaining high significance in the field of medicine and energy dimensions. From the reliability point of view, EPI parameters have a variation of 4.1% on a daily average, whereas, on 10 minute average it varies only 6.6% shows high reliability of the technique (Korotkov Konstantin, 2014). In the present study, EPI Pro and EPI Compact devices, produced by Kirlionics Technologies International, Saint-Petersburg, Russia were used in the assessment processes (Korotkov Dr., n.d.).

ii) Electro-acupuncture Instrument (Acugraph):

An acugraph is an automated measurement system developed by Meridian Technology incorporated which applies the power of modern computer analysis to the acupuncture discipline of ryodoraku (good electrical pathway)(“What Does AcuGraph Do?,” n.d.; “Ryodoraku Acupuncture Research,” n.d.). Acugraph comprises of software, an electronic control unit and a probe set, electrically quantify voltaic skin conductance or resistance at acupuncture meridian points on the body, it functions on very low voltages and current. This voltage is far below the sensation for most of the people. According to previous research study, with the help of acupuncture points energy instability can be assessed using electro dermal screening, a method applying electrical skin conductance. The Acugraph utilises the skin’s electrical resistance and conductance to determine the meridians and it exhibit them in the graph pattern. The 12 paired Jing-well points are situated at the beginning or end of the meridians on the fingers and toes and are needed to preclude the incursion of negative energy into the meridians. The results are accounted as high or low chi, which points overweening or insufficient levels along the meridians. It can also quantify splits which show a lack of balance between the right and left sides of the body. The meridians located on the hands and feet are measured at Yuan source points on the wrists and ankles, and are the most energetically active points on the meridians. (Sharma, Hankey, Nagendra, & Meenakshy, 2014).

AcuGraph Parameters

1. Personal Integrated Energy (PIE), 2. Energy Stability (ES)

Personal Integrated Energy (PIE), The PIE score is a statistical summary of overall energetic balance. It represents a synthesis of all the information gathered in the AcuGraph exam, expressed in a single number for easy comparison. It helps you understand how balanced your meridians are, and how they are changing under your care. It's the overall integration of the patient energetic system. (0-30 is very poor, 31-40 is poor, 41-50 is low, 51-70 is typical, 71-100 is very good)

Energy Stability (ES), indicating possible balance or imbalance level in personal autonomic nervous system. below 25% is very low, 26%-50% is low, 51%-75% is slightly low, 76%-100% is within normal limits.

4.6 Intervention

4.6.1 Independent variable

Advanced set of yoga asanas and basic set of yoga asanas.

4.6.2 Procedure

The experiments were carried out on thirty-two subjects in order to find out the reproducibility of GDV and Acugraph outcomes. All subjects were assessed after 1 month practicing both basic and advanced asana set. The basic asana set was selected from beginning group and middle group of asanas; the advanced asana set was selected from advanced group of asanas according to the book < Asana Pranayama Mudra Bandha > (Saraswati Satyananda, 1996).

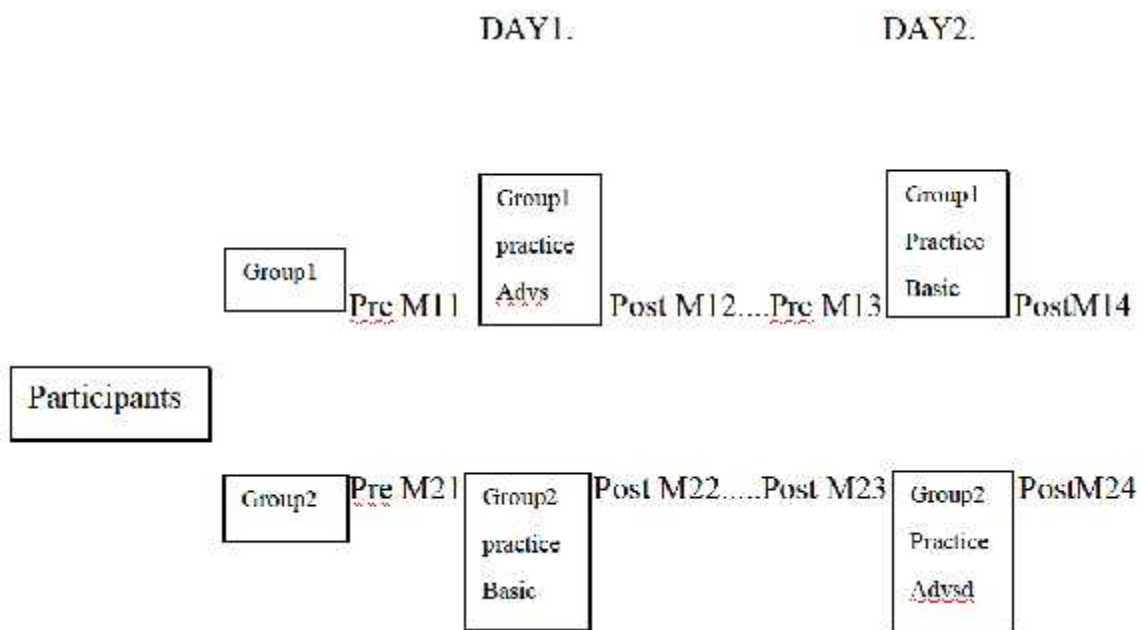
Each set consisting of asanas with standing, sitting, kneeling, prone and supine category postures including forward bending, back bending and twisting asanas for each category. Totally there are 15 asanas in each set. The subject chooses any nine asanas according to his/her choice to perform.

The subjects were randomly divided into 2 groups. Group 1 were practicing on day1 the advanced set of asanas. Pre & post readings were taken for them of EPI and Acugraph. Group 2 were practicing on that

day the basic set of asanas. Pre & post readings were measured. The second day, Group 1 were practicing basic set of asanas and their pre & post reading were taken. The second day Group 2 members were practicing advanced asanas and their pre & post readings were taken. Time setting of each set of asanas is 20mins separately. They practice with a standard-speed, with 1 min holding duration of each asana followed by half min of relaxation. After the practice each group were given shavasana for 7 min.

The readings were taken from all 10 fingers. It is ensured to have at least three hours gap from food intake to data measurement. The subjects were asked to remove all metallic items which they do not wear for 24 hours in a day. Further, they were also provided an electrically isolated surface to stand on during the measurements and were instructed to place the finger on the dielectric glass plate at 45° angle. A distance of 3 feet between the EPI camera and the computer system was maintained; the calibration of the instrument was performed routinely, and an alcoholic solution was used to clean the glass plate after the assessment of each individual.

Design Chart as below:



4.7 Data extraction and analysis

The GDV diagram program was used to extract the raw data from the EPI system into csv file. This program provides all parameters which were taken into consideration for analysis, namely Personal Integrated Energy, Stress Level, Left/Right symmetry, Organ Balance and Entropy Coefficient.

The Acugraph furnishes nine important types of graphs which include Yin vs Yang, energy cycle, baseline, elemental pairs, personal integrated energy etc. relevant information about different treatment approaches like Ryodoraku, auricular, spinal reflexes. Photographically represented treatment points aids in discerning of the disease and treatment.

Further, data analysis was carried out using 'R statistical package for data analyses', G-power for analyzing effect size as well as power for each variable, and Microsoft Excel program. Paired sample t-test was used for evaluating pre and post readings and independent sample t-test for cross sectional comparisons between male and female subgroups.

5.0 Results

Out of 32 volunteers, a total of 30 healthy subjects (male 15 and female 15), age (mean \pm sd: 23.37 \pm 2.55) were selected. Only their data was used for further analysis. The two drop outs were because of excessive sweating from their fingers obstructing proper subtle energy measurements.

Table 1 presents the participants' characteristics of subgroups as males and females and as a whole.

5.1 Table 1. Participants' Characteristics

Variable	Male(n=15)	Female(n=15)	Total(n=30)
Age(year)	23.27 \pm 2.37	23.47 \pm 2.80	23.37 \pm 2.55

The observations in the experiment showed a decreasing trend of Stress in mental level. And in subtle energy homeostasis level there is an increasing trend in Organ Balance and a decreasing trend in Entropy Coefficient. Table 2 indicated the decrease in Stress value turned highly significant (both $p < 0.001^{***}$) in both asana set, the mean values of Stress in advanced asana set decreased more than the basic asana set (ST, advanced asana set 3.10 \pm 0.59 to 2.71 \pm 0.52, $p = 0.00024^{***}$ and basic asana set 2.94 \pm 0.512 to 2.70 \pm 0.508, $p = 0.0003^{***}$), Statistically, it shows more strength in stress relief through practicing advanced asana set than practicing basic asana set (ST, Cohen's d of advanced asana set is 0.70** and Cohen's d of basic asana set is 0.47*). Similarly, In Organ balance, the improvement of energy re-distribution in different organs/systems in advanced asana set turned more significant than in basic asana set (OB, advanced asana set 85.22 \pm 6.04 to 88.74 \pm 5.40, $p < 0.01^{**}$, Cohen's d 0.61** and basic asana set 86.70 \pm 6.90 to 90.11 \pm 4.08, $p < 0.05^*$, Cohen's d 0.57**). However, In Energy Reserve, the basic asana set showed a significant increasing trend than the advanced asana set (ER, advanced asana set 80.97 \pm 20.62 to 83.1 \pm 18.58, $p = 0.30$ and basic asana set 78.40 \pm 24.05 to 88.6 \pm 15.77, $p < 0.001^{***}$).

5.2 Table 2. Pre-post changes at subtle energy homeostasis level and mental levels (n = 30)

Asana Set	Variable	Pre	Post	t/v-value	p-value (t.test)	Cohen's d	power (%)
		mean±sd	mean±sd				
Advance asana set	Personal Integrated Energy	52.30±13.05	53.37±13.69	0.68	0.50	0.08	11
	Stress Decreased	3.10±0.59	2.71±0.52	53.50	0.00024***	0.70**	98**
	Organ Balance	85.22±6.04	88.74±5.40	-3.00	0.0055**	0.61**	95**
	Left/Right Symmetry	93.82±4.64	95.78±3.63	-2.02	0.05	0.46 *	80*
	Entropy Coefficient	2.59±0.24	2.51±0.19	-3.26	0.0029**	0.36 *	62
	Energy Stability	60.23±14.55	60.43±15.54	0.06	0.94	0.01	58
	Energy Reserve	80.97±20.62	83.1±18.58	33.00	0.30	0.11	14
Basic asana set	Personal Integrated Energy	52.63±12.05	52.63±12.00	0.00	1.00	0	5
	Stress Decreased	2.94±0.512	2.70±0.508	-4.10	0.0003***	0.47*	81*
	Organ Balance	86.70±6.90	90.11±4.08	3.54	0.0113*	0.57**	92*
	Left/Right Symmetry	95.87±3.29	96.56±2.61	1.36	0.18	0.23*	34
	Entropy Coefficient	2.63±0.29	2.52±0.26	361.50	0.0019**	0.4*	69
	Energy Stability	59.17±14.35	62.77±11.49	1.32	0.20	0.24*	36
	Energy Reserve	78.40±24.05	88.6±15.77	4.00	0.00065***	0.48*	82*

Significant level, *p < 0.05, **p < 0.01, ***p < 0.001; 0.2 < d* < 0.5 small effect size, 0.5 ≤ d** < 0.8 medium effect size, d*** ≥ 0.8 big effect size; 80% ≤ power < 100%, (the more the power is close to 1, the better the hypothesis test is at detecting a false null hypothesis).

5.3 Table 3. Pre-post changes at mean of difference of each variable asana set wise (n = 30)

Variable	Advanced asana		Basic asana	
	Mean(Diff)	difference%	Mean(Diff)	difference%
Personal Integrated Energy	2.07	9.57	0	2.96
Stress Decreased	0.38	11.40	0.25	8.03
Organ Balance	3.53	4.03	3.42	3.93
Left/Right Symmetry	1.96	2.30	0.72	0.81
Entropy Coefficient	-0.09	3.33	-0.11	3.88
Energy Stability	0.2	4.43	3.6	11.50
Energy Reserve	2.13	8.60	10.2	21.21

Gender-wise: Both interventions (both sets of asanas - advanced set of asanas and basic set of asanas) demonstrated significant reduction in stress levels. However, through performing advanced asana set, stress decreased significantly in the male group than basic asana set (ST male group, advanced asana set $p < 0.001^{***}$ / Cohen's d 0.83^{***} and basic asana set $p < 0.05^*$ / Cohen's d 0.52^{**}). Whereas In female group, through performing advanced asana set, Left/right Symmetry significantly increased than performing basic asana set (LRS female group, advanced asana set $p < 0.05^*$ / Cohen's d 0.89^{***} and basic asana set $p = 0.37$ / Cohen's d 0.23^{*}). However, by performing basic asana set, Energy Reserve value showed a significantly improvement in female group, whereas no significant difference was found in male group (ER, female group $p < 0.01^{**}$ and male group $p = 0.059$). Other parameters at subtle energy homeostasis level in both the groups did not reveal significant changes.

5.4 Table 4. Pre-post results of sub groups at subtle energy homeostasis level and mental levels.

Asana Set	Variable	Pre male	Post male	t/v-value	p-value (t.test)	Cohen's d	Pre female	Post female	t/v-value	p-value(t.test)	Cohen's d
		mean±sd	mean±sd				mean±sd	mean±sd			
Advanced asana set	PIE	46.2±11.77	46.73±12.42	0.12	0.91	0.04	58.40±11.61	62.00±10.44	0.88	0.40	0.33
	ST	3.07±0.65	2.60±0.32	2.00	0.00018***	0.83***	3.12±0.54	2.82±0.66	-2.27	0.04*	0.49*
	OB	84.62±5.96	87.77±5.47	2.11	0.05	0.55	85.81±6.26	89.72±5.34	2.10	0.06	0.67
	LRS	93.24±5.54	94.34±4.23	0.66	0.52	0.22	94.41±3.64	97.23±2.23	2.79	0.014*	0.89***
	EC	2.61±0.25	2.50±0.24	-3.13	0.007**	0.45*	2.59±0.23	2.51±0.15	-1.65	0.12	0.39
	ES	51.93±13.19	51.80±13.31	-0.03	0.98	0.00	68.53±10.83	69.07±12.80	0.14	0.89	0.05
	ER	83.80±16.77	82.53±20.04	-0.20	0.85	0.07	78.13±24.13	83.67±17.68	28.00	0.18	0.26
Basic asana set	PIE	47.53±9.87	47.20±12.01	-0.12	0.90	0.03	57.73±12.14	58.07±9.53	-0.10	0.92	0.03
	ST	2.89±0.55	2.63±0.43	-4.22	0.00086***	0.52**	3.00±0.49	2.76±0.58	2.21	0.04*	0.44*
	OB	86.28±8.90	89.97±3.58	85.00	0.17	0.48	87.11±4.36	90.25±4.66	-2.05	0.06	0.70
	LRS	96.22±3.08	96.92±2.67	0.98	0.34	0.24	95.52±3.55	96.26±2.58	-0.92	0.37	0.23
	EC	2.6±0.22	2.5±0.21	21.50	0.03*	0.47	2.67±0.34	2.55±0.31	2.38	0.03*	0.37*
	ES	55.53±12.81	60.53±12.06	1.29	0.22	0.40	62.80±15.30	65.00±10.83	-0.56	0.58	0.16
	ER	85.80±17.81	92.40±9.95	32.00	0.059	0.43	71±27.64	84.80±19.63	0.00	0.0092**	0.12

Abbreviations: PIE–personal integrated energy , ST–stress, OB–organ balance, LRS–left/right symmetry, EC–entropy coefficient, , ES–energy stability, ER–energy reservation; Significant level, *p < 0.05, **p < 0.01, ***p < 0.001; 0.2 < d* < 0.5 small effect size, 0.5 <= d** < 0.8 medium effect size, d*** >= 0.8 big effect size; 80% <= power < 100%, (the more the power is close to 1, the better the hypothesis test is at detecting a false null hypothesis).

The baseline comparisons between male and female groups, showed highly significant difference in Personal Integrated Energy in both asana sets and highly significant difference in Energy Stability in advanced asana set.

5.5 Table 5. Cross sectional results (between male and female) at subtle energy homeostasis level and mental levels.

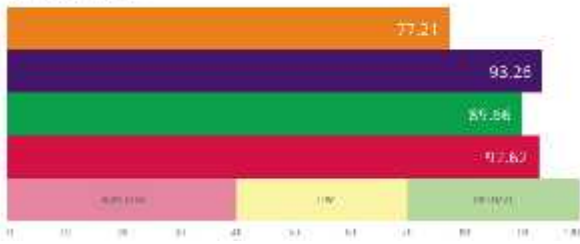
Asana Set	Variable	Pre male	Pre female	t/w- value	p- value(t.test)	Post male	Post female	t/w- value	p- value(t.test)
		mean±sd	mean±sd			mean±sd	mean±sd		
Advanced asana set	PIE	46.2±11.77	58.40±11.61	2.86	0.0079**	46.73±12.42	62.00±10.44	3.64	0.00108**
	ST	3.07±0.65	3.12±0.54	0.19	0.85	2.60±0.32	2.82±0.66	1.16	0.26
	OB	84.62±5.96	85.81±6.26	131.00	0.46	87.77±5.47	89.72±5.34	135.00	0.36
	LRS	93.24±5.54	94.41±3.64	114.00	0.97	94.34±4.23	97.23±2.23	160.00	0.05
	EC	2.61±0.25	2.59±0.23	-0.27	0.79	2.50±0.24	2.51±0.15	0.16	0.88
	ES	51.93±13.19	68.53±10.83	3.77	0.00078**	51.80±13.31	69.07±12.80	3.62	0.0011**
	ER	83.80±16.77	78.13±24.13	110.00	0.93	82.53±20.04	83.67±17.68	113.50	0.98
Basic asana set	PIE	47.53±9.87	57.73±12.14	2.52	0.018*	47.20±12.01	58.07±9.53	2.75	0.01*
	ST	2.89±0.55	3.00±0.49	135.00	0.36	2.63±0.43	2.76±0.58	0.70	0.49
	OB	86.28±8.90	87.11±4.36	100.00	0.62	89.97±3.58	90.25±4.66	118.00	0.84
	LRS	96.22±3.08	95.52±3.55	101.60	0.66	96.92±2.67	96.26±2.58	88.00	0.32
	EC	2.61±0.22	2.67±0.34	0.67	0.51	2.5±0.21	2.55±0.31	0.59	0.56
	ES	55.53±12.81	62.80±15.30	1.41	0.17	60.53±12.06	65.00±10.83	1.07	0.29
	ER	85.80±17.81	71±27.64	85.00	0.25	92.40±9.95	84.80±19.63	88.00	0.32

Abbreviations: PIE–personal integrated energy, ST–stress, OB–organ balance, LRS–left/right symmetry, EC–entropy coefficient, , ES–energy stability, ER–energy reservation; Significant level, *p < 0.05, **p < 0.01, ***p < 0.001; 0.2 <d* < 0.5 small effect size, 0.5<= d** <0.8 medium effect size, d*** >=0.8 big effect size; 80% <= power < 100%, (the more the power is close to 1, the better the hypothesis test is at detecting a false null hypothesis).

Example 1: Data image for single participant (male/24years)



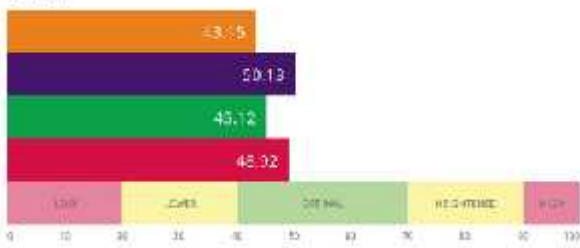
ORGANS BALANCE



- 2018-11-05 16_32 - msc_105_pre_advance
- 2018-11-05 16_58 - msc_105_post_advance
- 2018-11-06 16_38 - msc_105_pre_basic
- 2018-11-06 17_08 - msc_105_post_basic

Example 2: Data image for single participant (female/24years)

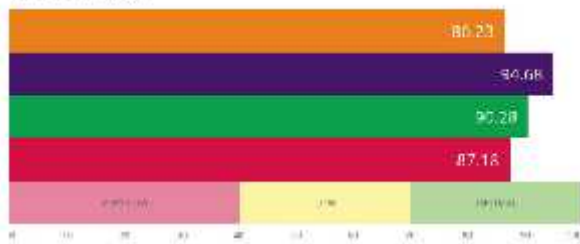
ENERGY



EMOTIONAL PRESSURE



ORGANS BALANCE



- 2018-11-02 16_46 - msc_102_pre_advanced
- 2018-11-02 17_37 - msc_102_post_advanced
- 2018-11-03 16_54 - msc_102_pre_basic
- 2018-11-03 17_45 - msc_102_post_basic

6.0 Discussions

The results from the experiment (subtle energy homeostasis level and mental level) was found that through practicing advanced asana set, there was a highly significant decrease in stress level and a statistical improvement in energy re-distribution in different organ/systems. Similar changes were also observed from subgroups of male and female, a highly significant decrease was found in Stress in male group through performing advanced asana set than performing basic asana set, and a highly significantly increase in Left/right Symmetry in female group through performing advanced asana set than performing basic asana set. Further, the baseline comparisons between the genders have also demonstrated the significant difference in Personal Integrated Energy and Energy Stability.

Compared with the previous research in the field of yoga, the present study is first of its kind to measure the effect of subtle energy homeostasis and stress relief in practicing advanced asana set and basic set of asana set on healthy volunteers. Present study also makes an attempt to find out whether EPI and Acugraph parameters before and after advanced set practice or basic set practice differ gender-wise.

6.1 Mental level

6.1.1 Stress

A number of studies have evidence of the phenomenon that regular practice of integrated yoga reduces stress in various populations (Buffart et al., 2012). The results from the present study also show that advanced asanas has an immediate effect which reduces stress significantly ($p < 0.001$) in healthy people (marginally more than basic asana set). This may be due to the yoga practices which work on autonomic nervous system (Streeter, Gerbarg, Saper, Ciraulo, & Brown, 2012) and restore balance between sympathetic and parasympathetic responses. Development of a coherence zone between both sympathetic nerve system and parasympathetic nerve system responses may regulate, unify and correct the imbalances in the flow of Prana in the body. This may be confirmed by the uniformity throughout the EPI image glow area which increases after the yoga practice (Kushwah K K, Nagendra R H, 2015)

6.2 Subtle Energy Homeostasis Level

6.2.1 Organ Balance

It is well known that yoga components, i.e, physical postures improve health and well-being in individuals (Villacres, Jagannathan, Nagarathna, & Ramakrishna, 2014). The present study also showed a highly significant increase in energy balance in visceral organs through practicing advanced asana set ($p < 0.01^{**}$) which suggests improvement of energy re-distribution for different organs and systems. It may be due to reduction in stress level leading towards harmony and improved Pranic circulation, indicating improvement in subtle energy homeostasis level (Kushwah K K, Nagendra R H, 2015).

6.2.2 Entropy Coefficient (disorderliness)

The integrated practices of yoga improve and regulate the vital energy called Prana (Sharma, Hankey, Nagilla, Meenakshy, & Nagendra, 2014). Keeping harmonious homeostasis of this energy is a key essence of yoga practice, which keeps one healthy and promotes positive health. Loss of homeostasis of the energy produces entropy, which is otherwise known as disorderliness in the human energy systems (Korotkov G Konstantin, 2002), and high or low entropy may lead to diseases in the body. The shift of EC higher to lower values in both advanced and basic asana set, it indicates better energy homeostasis through advanced asana practice.

6.2.3 Gender-wise comparisons

Through performing advanced asana set, stress decreased significantly in the male group than basic asana set. Whereas In female group, through performing advanced asana set, Left/right Symmetry significantly increased than performing basic asana set. However, by performing basic asana set, Energy Reserve value showed a significantly improvement in female group, whereas no significant difference was found in male group. Moreover, these findings suggest that gender has an influence on energy patterns which needs to be studied more deeply.

7.0 Appraisals

7.1 Strength

The findings of EPI and Acugraph outcomes a highly significant reduction in stress, a highly significant decrease in energy disorderliness through practice of both advanced asana set and basic asana set, the results revealed a highly significant improvement in stress reduction and a statistical improvement in energy re-distribution in different organs/systems through practicing advanced asana set than practicing basic asana set. The subgroup analysis in different gender, practice of advanced asana set demonstrated more significant increase in left and right symmetry in females than practice of basic asana set, which indicates the equilibrium between left and right parts of the brain, Measures of harmony. Similarly, more significant reduction in stress was found in males through practice advanced asana set than practice of basic asana set. All above indices providing the strength for the study. The present study is first of its kind to measure the effect of subtle energy homeostasis and stress relief in practicing advanced asana set and basic set of asana set on healthy volunteers.

7.2 Limitations

Since self as control study is done, all the participants were practitioners of both basic and advanced set of asanas, the effect of their regular practice will obscure to give actual amount of immediate effect because of the practice of basic set or advanced set.

7.3 Suggestions for future study and Implication of the study

From the findings of significant difference in subtle energy trend between the males and females, especially in the baseline comparison of personal integrated energy and energy stability there are significant differences between males and females, it is suggested that males and females should be studied separately. Further, it is also suggested that future study should attempt to follow the subjects of two separate but matching groups one group practicing only basic set and another group practicing only advanced set and one more matching set as control (not doing any asanas) and a long term effect of the practice should be studied.

7.4 Conclusions

In conclusion, advanced asana practice reduces more stress level of an organism, meanwhile, it brings more energy re-distribution in different organs/systems as well. It regulates and improves the equilibrium and harmony between left and right parts of the brain (significant improvement in female). Besides it reduces more stress (especiallly significant in male). Therefore, it helps in preserves health both in subtle energy homeostasis and mental aspect. Further, the present study found that the energy pattern differs with gender. Hence, it is suggested that studies with male and female participants may be conducted separately with more data to substantiate the findings. Further, the findings from the investigations also suggest that advanced asana practice can be used to regulate, improve and sustain the energy homeostasis of an organism. This is important in the field of prevention and sustenance of mental and physical health.

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Appendix - 1. PARTICIPANT FORM

Participant code: Group: Name: Course: Cellphone: Email: Date of Birth:
How many years of practicing advanced asanas? _____

STEPS:

1. Nadishudhi pranayama 5 min

2. Pre-data collection (Biowell/Acugraph)

3. Asana Perform

(1) Basic Asana name: Advanced Asana name:

Maintaining 60sec. Relax 30 sec

(Yes / No, _____Sec). (Yes / No, _____Sec)

(2) Basic Asana name: Advanced Asana name:

Maintaining 60sec. Relax 30 sec

(Yes / No, _____Sec). (Yes / No, _____Sec)

(3) Basic Asana name: Advanced Asana name:

Maintaining 60sec. Relax 30 sec

(Yes / No, _____Sec). (Yes / No, _____Sec)

(4) Basic Asana name: Advanced Asana name:

Maintaining 60sec. Relax 30 sec

(Yes / No, _____Sec). (Yes / No, _____Sec)

(5) Basic Asana name: Advanced Asana name:

Maintaining 60sec. Relax 30 sec

(Yes / No, _____Sec). (Yes / No, _____Sec)

(6) Basic Asana name: Advanced Asana name:

Maintaining 60sec. Relax 30 sec

(Yes / No, _____Sec). (Yes / No, _____Sec)

(7) Basic Asana name: Advanced Asana name:

Maintaining 60sec. Relax 30 sec

(Yes / No, _____Sec). (Yes / No, _____Sec)

(8) Basic Asana name: Advanced Asana name:

Maintaining 60sec. Relax 30 sec

(Yes / No, _____Sec). (Yes / No, _____Sec)

(9) Basic Asana name: Advanced Asana name:

Maintaining 60sec. Relax 30 sec

(Yes / No, _____Sec). (Yes / No, _____Sec)

- RELAX In Savasana for 7 min

Please kindly remind the participant to read Post-data as soon as they finish the performance, in case of subtle energy diffusion

5. Post-data collection (Biowell / Acugraph)

Appendix - 2. Asana Set (Basic set & Advanced Set)



Appendix - 3. Raw Data

ID	Age	Gender	PIEAdvPre	PIEAdvPost	DiffPIEAdv	PIEBasPre	PIEBasPost	DiffPIEBas	ESAdvPre	ESAdvPost	DiffESAdv	ESBasPre
bnys101	21	F	38.00	55.00	17.00	54.00	47.00	-7.00	44.00	56.00	12.00	54.00
phd101	33	F	61.00	62.00	1.00	69.00	49.00	-20.00	73.00	75.00	2.00	76.00
bsc101	20	M	58.00	46.00	-12.00	55.00	71.00	16.00	37.00	30.00	-7.00	60.00
bsc102	22	M	56.00	50.00	-6.00	62.00	62.00	0.00	74.00	63.00	-11.00	74.00
bsc103	21	M	63.00	45.00	-18.00	51.00	50.00	-1.00	72.00	37.00	-35.00	70.00
bsc104	22	F	40.00	76.00	36.00	83.00	77.00	-6.00	56.00	80.00	24.00	90.00
bsc105	23	F	73.00	63.00	-10.00	72.00	55.00	-17.00	86.00	77.00	-9.00	78.00
bsc106	25	M	49.00	54.00	5.00	55.00	33.00	-22.00	35.00	57.00	22.00	65.00
bsc107	21	M	56.00	34.00	-22.00	41.00	52.00	11.00	71.00	40.00	-31.00	72.00
bsc108	21	M	35.00	71.00	36.00	53.00	57.00	4.00	43.00	83.00	40.00	58.00
bsc109	21	M	50.00	34.00	-16.00	51.00	47.00	-4.00	43.00	61.00	18.00	47.00
msc101	23	F	59.00	54.00	-5.00	58.00	48.00	-10.00	55.00	66.00	11.00	49.00
msc102	24	F	68.00	50.00	-18.00	52.00	62.00	10.00	67.00	68.00	1.00	47.00
msc103	23	M	33.00	48.00	15.00	32.00	40.00	8.00	44.00	58.00	14.00	44.00
msc105	24	M	26.00	37.00	11.00	45.00	33.00	-12.00	43.00	56.00	13.00	31.00
msc106	22	F	52.00	65.00	13.00	56.00	69.00	13.00	74.00	70.00	-4.00	80.00
msc107	25	M	38.00	25.00	-13.00	28.00	41.00	13.00	54.00	48.00	-6.00	43.00
msc108	22	F	63.00	77.00	14.00	70.00	70.00	0.00	76.00	86.00	10.00	79.00
msc109	28	M	55.00	67.00	12.00	59.00	61.00	2.00	40.00	36.00	-4.00	67.00
msc110	23	F	43.00	46.00	3.00	57.00	46.00	-11.00	60.00	61.00	1.00	68.00
msc111	23	F	52.00	74.00	22.00	35.00	65.00	30.00	69.00	86.00	17.00	46.00
msc112	25	M	40.00	55.00	15.00	52.00	53.00	1.00	61.00	45.00	-16.00	40.00
msc114	23	M	35.00	50.00	15.00	45.00	34.00	-11.00	46.00	55.00	9.00	55.00
msc116	23	F	73.00	50.00	-23.00	55.00	56.00	1.00	76.00	65.00	-11.00	64.00
msc117	25	F	59.00	75.00	16.00	62.00	56.00	-6.00	73.00	77.00	4.00	66.00

mssc118	23	F	74.00	70.00	-4.00	50.00	65.00	15.00	78.00	74.00	-4.00	40.00
mssc121	22	F	63.00	56.00	-7.00	51.00	56.00	5.00	75.00	37.00	-38.00	51.00
mssc124	23	M	61.00	36.00	-25.00	49.00	39.00	-10.00	54.00	49.00	-5.00	51.00
mssc125	27	M	38.00	49.00	11.00	35.00	35.00	0.00	62.00	59.00	-3.00	56.00
mssc127	23	F	58.00	57.00	-1.00	42.00	50.00	8.00	66.00	58.00	-8.00	54.00

ID	Age	Gender	ESBasPost	DiffESBas	CELAdvPre	CELAdvPost	DiffCELAdv	CElBasPre	CElBasPost	DiffCElBas	LRSAdvPre	LRSAdvPost
bnys101	21	F	41.00	-13.00	129.00	110.00	-19.00	98.00	59.00	-39.00	91.29	97.40
phd101	33	F	59.00	-17.00	69.00	74.00	5.00	92.00	106.00	14.00	99.69	99.28
bsc101	20	M	80.00	20.00	80.00	77.00	-3.00	70.00	61.00	-9.00	97.55	93.44
bsc102	22	M	68.00	-6.00	72.00	78.00	6.00	82.00	83.00	1.00	97.92	93.62
bsc103	21	M	71.00	1.00	70.00	102.00	32.00	51.00	47.00	-4.00	99.99	97.70
bsc104	22	F	76.00	-14.00	112.00	81.00	-31.00	74.00	88.00	14.00	96.81	96.98
bsc105	23	F	63.00	-15.00	78.00	73.00	-5.00	86.00	82.00	-4.00	93.13	97.38
bsc106	25	M	63.00	-2.00	97.00	98.00	1.00	123.00	131.00	8.00	93.21	98.81
bsc107	21	M	75.00	3.00	44.00	84.00	40.00	50.00	49.00	-1.00	87.97	97.64
bsc108	21	M	48.00	-10.00	68.00	64.00	-4.00	75.00	75.00	0.00	97.84	98.32
bsc109	21	M	67.00	20.00	108.00	86.00	-22.00	113.00	119.00	6.00	97.38	96.50
mssc101	23	F	51.00	2.00	93.00	85.00	-8.00	68.00	87.00	19.00	92.72	98.36
mssc102	24	F	74.00	27.00	61.00	78.00	17.00	85.00	66.00	-19.00	89.28	99.51
mssc103	23	M	60.00	16.00	93.00	89.00	-4.00	103.00	105.00	2.00	91.79	89.39
mssc105	24	M	48.00	17.00	95.00	112.00	17.00	89.00	122.00	33.00	83.68	94.40
mssc106	22	F	72.00	-8.00	62.00	72.00	10.00	66.00	77.00	11.00	96.64	99.09
mssc107	25	M	53.00	10.00	123.00	137.00	14.00	130.00	101.00	-29.00	92.32	91.94
mssc108	22	F	81.00	2.00	33.00	32.00	-1.00	55.00	46.00	-9.00	90.63	98.57
mssc109	28	M	39.00	-28.00	94.00	76.00	-18.00	74.00	81.00	7.00	87.17	94.43

msc110	23	F	64.00	-4.00	140.00	126.00	-14.00	126.00	142.00	16.00	88.33	91.46
msc111	23	F	71.00	25.00	67.00	95.00	28.00	85.00	80.00	-5.00	98.32	92.92
msc112	25	M	65.00	25.00	120.00	109.00	-11.00	89.00	91.00	2.00	97.70	99.40
msc114	23	M	51.00	-4.00	150.00	123.00	-27.00	125.00	118.00	-7.00	82.89	90.48
msc116	23	F	76.00	12.00	62.00	68.00	6.00	69.00	43.00	-26.00	95.94	97.77
msc117	25	F	57.00	-9.00	72.00	66.00	-6.00	66.00	93.00	27.00	97.25	97.53
msc118	23	F	58.00	18.00	49.00	61.00	12.00	70.00	71.00	1.00	91.47	96.80
msc121	22	F	71.00	20.00	87.00	75.00	-12.00	64.00	86.00	22.00	98.72	98.30
msc124	23	M	72.00	21.00	116.00	63.00	-53.00	96.00	83.00	-13.00	97.59	83.64
msc125	27	M	48.00	-8.00	131.00	100.00	-31.00	103.00	84.00	-19.00	93.63	95.44
msc127	23	F	61.00	7.00	71.00	86.00	15.00	74.00	91.00	17.00	95.89	97.03

ID	Age	Gender	DiffLRSAdv	LRSBasPre	LRSBasPost	DiffLRSBas	ECAdvPre	ECAdvPost	DiffECAdv	ECBasPre	ECBasPost	DiffECBas
bnys101	21	F	6.11	91.89	98.17	6.28	2.30	2.30	0.00	2.27	2.13	-0.14
phd101	33	F	-0.41	95.96	99.35	3.39	2.89	2.50	-0.39	3.25	2.74	-0.51
bsc101	20	M	-4.11	98.64	98.36	-0.28	2.76	2.57	-0.19	2.61	2.62	0.01
bsc102	22	M	-4.30	94.97	97.67	2.70	2.63	2.37	-0.26	2.30	2.35	0.05
bsc103	21	M	-2.29	95.53	97.20	1.67	2.56	2.41	-0.15	2.49	2.46	-0.03
bsc104	22	F	0.17	91.70	90.74	-0.96	2.74	2.80	0.06	3.36	3.32	-0.04
bsc105	23	F	4.25	89.66	93.45	3.79	2.50	2.31	-0.19	2.46	2.40	-0.06
bsc106	25	M	5.60	97.60	98.18	0.58	2.22	2.20	-0.02	2.48	2.34	-0.14
bsc107	21	M	9.67	98.68	95.86	-2.82	2.73	2.68	-0.05	2.64	2.67	0.03
bsc108	21	M	0.48	96.69	99.78	3.09	2.87	3.00	0.13	2.93	2.98	0.05
bsc109	21	M	-0.88	94.26	99.06	4.80	2.93	2.72	-0.21	2.80	2.75	-0.05
msc101	23	F	5.64	99.96	97.54	-2.42	2.90	2.69	-0.21	3.02	2.60	-0.42
msc102	24	F	10.23	94.90	92.88	-2.02	2.96	2.60	-0.36	2.84	2.57	-0.27

msc103	23	M	-2.40	91.05	96.64	5.59	2.36	2.45	0.09	2.54	2.42	-0.12
msc105	24	M	10.72	97.98	98.33	0.35	2.73	2.35	-0.38	2.83	2.30	-0.53
msc106	22	F	2.45	90.76	94.55	3.79	2.51	2.50	-0.01	2.72	2.69	-0.03
msc107	25	M	-0.38	96.24	92.22	-4.02	2.23	2.22	-0.01	2.27	2.25	-0.02
msc108	22	F	7.94	98.16	96.43	-1.73	2.47	2.41	-0.06	2.48	2.34	-0.14
msc109	28	M	7.26	98.16	95.26	-2.90	2.38	2.21	-0.17	2.30	2.25	-0.05
msc110	23	F	3.13	95.00	98.10	3.10	2.73	2.49	-0.24	2.34	2.16	-0.18
msc111	23	F	-5.40	92.11	95.82	3.71	2.60	2.58	-0.02	2.82	2.96	0.14
msc112	25	M	1.70	97.49	98.30	0.81	2.47	2.46	-0.01	2.76	2.43	-0.33
msc114	23	M	7.59	99.86	98.68	-1.18	2.53	2.40	-0.13	2.54	2.40	-0.14
msc116	23	F	1.83	99.94	95.99	-3.95	2.35	2.66	0.31	2.56	2.44	-0.12
msc117	25	F	0.28	97.45	99.58	2.13	2.28	2.34	0.06	2.60	2.41	-0.19
msc118	23	F	5.33	99.95	98.82	-1.13	2.64	2.55	-0.09	2.51	2.51	0.00
msc121	22	F	-0.42	97.24	94.68	-2.56	2.64	2.59	-0.05	2.59	2.72	0.13
msc124	23	M	-13.95	88.34	89.97	1.63	3.10	2.86	-0.24	2.49	2.48	-0.01
msc125	27	M	1.81	97.85	98.25	0.40	2.67	2.60	-0.07	2.98	2.73	-0.25
msc127	23	F	1.14	98.06	97.74	-0.32	2.31	2.35	0.04	2.19	2.30	0.11

ID	Age	Gender	ERAdvPre	ERAdvPost	DiffERAdv	ERBasPre	ERBasPost	DiffERBas	STAdvPre	STAdvPost	DcrsSTAdv	STBasPre
bnys101	21	F	58.00	47.00	-11.00	56.00	94.00	38.00	3.89	3.90	-0.01	3.24
phd101	33	F	38.00	67.00	29.00	34.00	90.00	56.00	4.02	2.62	1.40	3.18
bsc101	20	M	64.00	81.00	17.00	75.00	80.00	5.00	2.37	1.98	0.39	2.32
bsc102	22	M	50.00	73.00	23.00	81.00	83.00	2.00	3.14	2.48	0.66	2.50
bsc103	21	M	100.00	100.00	0.00	96.00	92.00	-4.00	2.74	2.46	0.28	2.78
bsc104	22	F	81.00	69.00	-12.00	31.00	36.00	5.00	3.19	3.32	-0.13	2.86
bsc105	23	F	71.00	74.00	3.00	45.00	66.00	21.00	3.70	3.74	-0.04	3.72

bsc106	25	M	100.00	51.00	-49.00	72.00	72.00	0.00	3.01	2.79	0.22	2.69
bsc107	21	M	69.00	80.00	11.00	100.00	100.00	0.00	2.51	2.31	0.20	2.30
bsc108	21	M	90.00	79.00	-11.00	100.00	100.00	0.00	2.34	2.44	-0.10	2.28
bsc109	21	M	100.00	100.00	0.00	76.00	87.00	11.00	3.52	2.77	0.75	3.99
msc101	23	F	62.00	87.00	25.00	50.00	72.00	22.00	2.93	2.07	0.86	2.39
msc102	24	F	33.00	67.00	34.00	42.00	61.00	19.00	2.68	1.87	0.81	2.36
msc103	23	M	87.00	92.00	5.00	64.00	99.00	35.00	4.16	2.80	1.36	3.95
msc105	24	M	56.00	94.00	38.00	40.00	77.00	37.00	2.49	2.15	0.34	2.70
msc106	22	F	70.00	69.00	-1.00	54.00	71.00	17.00	2.47	2.38	0.09	2.51
msc107	25	M	97.00	87.00	-10.00	97.00	96.00	-1.00	3.10	2.77	0.33	3.02
msc108	22	F	100.00	100.00	0.00	100.00	100.00	0.00	2.99	2.20	0.79	3.09
msc109	28	M	100.00	100.00	0.00	100.00	100.00	0.00	3.67	3.18	0.49	2.97
msc110	23	F	100.00	100.00	0.00	68.00	82.00	14.00	2.95	3.11	-0.16	3.65
msc111	23	F	59.00	75.00	16.00	100.00	100.00	0.00	2.38	2.40	-0.02	2.45
msc112	25	M	84.00	77.00	-7.00	100.00	100.00	0.00	2.40	2.38	0.02	2.79
msc114	23	M	87.00	29.00	-58.00	100.00	100.00	0.00	3.25	2.95	0.30	3.59
msc116	23	F	100.00	100.00	0.00	100.00	100.00	0.00	3.30	3.62	-0.32	3.36
msc117	25	F	100.00	100.00	0.00	100.00	100.00	0.00	3.33	2.75	0.58	3.25
msc118	23	F	100.00	100.00	0.00	100.00	100.00	0.00	2.61	2.16	0.45	2.87
msc121	22	F	100.00	100.00	0.00	100.00	100.00	0.00	2.57	2.75	-0.18	2.41
msc124	23	M	79.00	95.00	16.00	86.00	100.00	14.00	4.47	2.90	1.57	2.83
msc125	27	M	94.00	100.00	6.00	100.00	100.00	0.00	2.95	2.70	0.25	2.70
msc127	23	F	100.00	100.00	0.00	85.00	100.00	15.00	3.74	3.47	0.27	3.65

ID	Age	Gender	STBasPost	DcrsSTBas	OBAAdvPre	OBAAdvPost	DiffOBAAdv	OBBasPre	OBBasPost	DiffOBBas
bnys101	21	F	2.79	0.45	69.77	84.84	15.07	87.84	89.21	1.37
phd101	33	F	2.56	0.62	78.22	91.70	13.48	81.25	97.45	16.20
bsc101	20	M	2.30	0.02	87.82	92.09	4.27	89.48	93.95	4.47
bsc102	22	M	2.25	0.25	85.45	83.36	-2.09	91.18	90.36	-0.82
bsc103	21	M	2.59	0.19	94.15	93.84	-0.31	93.81	91.48	-2.33
bsc104	22	F	2.90	-0.04	90.66	84.10	-6.56	87.40	82.69	-4.71
bsc105	23	F	4.09	-0.37	90.73	89.01	-1.72	77.18	85.33	8.15
bsc106	25	M	2.82	-0.13	84.66	82.77	-1.89	82.44	83.80	1.36
bsc107	21	M	2.09	0.21	87.13	94.37	7.24	93.63	89.29	-4.34
bsc108	21	M	2.30	-0.02	88.81	93.66	4.85	91.08	90.91	-0.17
bsc109	21	M	3.54	0.45	74.43	87.60	13.17	58.97	90.36	31.39
msc101	23	F	2.04	0.35	81.89	93.74	11.85	88.05	92.83	4.78
msc102	24	F	2.01	0.35	86.23	94.68	8.45	90.28	87.18	-3.10
msc103	23	M	3.25	0.70	82.83	80.80	-2.03	81.47	92.14	10.67
msc105	24	M	2.26	0.44	77.21	93.26	16.05	89.66	92.62	2.96
msc106	22	F	2.48	0.03	90.77	93.74	2.97	83.86	89.87	6.01
msc107	25	M	2.53	0.49	88.50	84.87	-3.63	83.15	89.06	5.91
msc108	22	F	2.53	0.56	83.18	95.67	12.49	90.73	95.43	4.70
msc109	28	M	3.07	-0.10	85.29	85.57	0.28	93.43	89.60	-3.83
msc110	23	F	2.89	0.76	80.62	75.71	-4.91	87.93	92.58	4.65
msc111	23	F	2.38	0.07	91.57	93.02	1.45	85.80	93.40	7.60
msc112	25	M	2.53	0.26	93.95	93.46	-0.49	89.55	93.47	3.92
msc114	23	M	3.13	0.46	81.79	82.95	1.16	81.63	90.43	8.80
msc116	23	F	3.56	-0.20	89.78	91.41	1.63	83.65	84.99	1.34
msc117	25	F	2.50	0.75	89.87	92.06	2.19	86.95	90.20	3.25
msc118	23	F	2.26	0.61	84.54	92.88	8.34	94.59	93.67	-0.92

msc121	22	F	3.00	-0.59	86.83	85.43	-1.40	91.91	83.55	-8.36
msc124	23	M	2.55	0.28	74.85	78.32	3.47	82.41	80.34	-2.07
msc125	27	M	2.27	0.43	82.50	89.63	7.13	92.31	91.77	-0.54
msc127	23	F	3.46	0.19	92.46	87.75	-4.71	89.23	95.44	6.21

Appendix - 4. Consent Form

Consent form Information to the participants:

WHAT IS INVOLVED IN THE STUDY?

basic set asanas and advanced set asanas practice according to Hatha Yoga Pradipika and Electro Photonics Imaging (Biowell) & Electro-Acupuncture Instrument Acu graph tool.

RISKS

Risk of this study is extremely low.

BENEFITS TO TAKING PART IN THE STUDY?

It is reasonable to expect the following benefits from this research: you can balance your subtle energy level and see how much it has been balanced. However, author can't guarantee that you will personally experience benefits from participating in this study. Others may benefit in the future from the information we find in this study.

CONFIDENTIALITY

Author of this study will take the following steps to keep information about you confidential, and to protect it from unauthorized disclosure, tampering, or damage:

) Protecting the personal information.

The data will be described anonymously if published or shared with others.

) Protecting the subject's information.

The data will be kept on a computer, is a password required for getting onto the system; only author can access to the data.

YOUR RIGHTS AS A RESEARCH PARTICIPANT?

Participation in this study is voluntary. You have the right not to participate at all or to leave the study at any time. Deciding not to participate or choosing to leave the study will not result in any penalty or loss of benefits to which you are entitled, and it will not harm your relationship with co-participants.

CONTACTS FOR QUESTIONS OR PROBLEMS?

Call Shuchang at +918861668798 or email happyrosie0424@gmail.com if you have questions about the study, any problems, unexpected physical or psychological discomforts, any injuries, or think that something unusual or unexpected is happening.

Consent of Subject (or Legally Authorized Representative)

Signature of Subject or Representative

Date