

Yoga as Remedy for Insomnia– A Review

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ABSTRACT

Today's corporate culture has brought in many illnesses, stress related ailments among which insomnia is being very common. Insomnia is commonest cause for all mental related health problems. Insomniadirectlyaffected work performance, both in the office and at home. **Objectives:** Reviewing the-Randomized control trials(RCT) and preclinical study trials of Yoga intervention (Classical yoga session, YOCAS, Patanjali from VYASA and Integrated types) forinsomnia. To observe the effect of Yoga in the improving the sleep, decreasing the disease condition and any other changes in the Quality of life, by using the following assessment tools; Pittsburgh Sleep Quality Index, Actigraphy and Turkish Version of Nottingham Health Profile. **Results:** Most of the trials (RCT and Preclinical study),Yoga intervention improved the sleep quality, compared to control groups assessed by Turkish Version of Nottingham Health Profile,Pittsburgh Sleep Quality Index and Actigraphy. The review paper includes the trial conducted among the adolescents, post-menopausal women and cancer patients. In post-menopausal group women, Yoga played significant changes in climacteric symptoms and insomnia severity and higher scores for quality of life and resistance phase of stress in cancer patients.

Key words Cancer, Insomnia, Post-menopausal women, Yoga therapy.

1. INTRODUCTION

Yoga is part of the *Astangayogam*, eight limbs to attain salvation. Yoga is the process by which the embodied spirit made to become one with the universal spirit. Yoga is not merely a set of *Yogasanam* or *Pranayama* or Meditation; but it is an art and science of Holistic Living consisting of a Holistic Value system featured by health and wealth, bliss and poise, harmony and efficiency. Yoga is a technique for balancing the mind through mastery over the mind. Yoga treats the person at five levels i.e. physical, vital energy, mental, intellectual and spiritual levels.^[1]Yoga is the science, which raises the capacity of the human mind to respond to higher vibrations and to perceive, catch and assimilate the infinite conscious movements going on around us in the Universe. Yoga is restraining the mind from taking various forms. Yoga helps us to cleanse

out mind and to get back to its natural pure state.

Various types of Yoga practiced for different purposes; they are:

1. *Bhakti yoga*(Yoga of devotion)
2. *Karma yoga*(Yoga of duty or action)
3. *Gnana yoga*(Yoga of knowledge)
4. *Raja yoga* (Yoga of bodily performances)

The final goal or general purpose of all the above varieties of yoga was the same. This goal was liberation from the cycle of rebirths, called *mukti* or *kaivalya*. The purposes of the four varieties of yoga in daily life are not the same.

1.1 Gnana yoga

Evolved by Thirumoolar and Patanjali involved techniques for purifying the mind by removing impurities through the eight-fold practice. These include,

Iyamaniyamamaeyennilaathanam
Nayamurum *pranayamam*
prathiyakaram
Sayamigutharanaidhyanam samadhi
Ayamuruattangamaavathumamae.

1. *Iyamam* or abstinence/ discipline.
2. *Niyamam* or observances.
3. *Asanam* or postures.
4. *Pranayamam*(Sara payirchi/ vayutharanai)
5. *Prathiakaram* or sense-withdrawal.
6. *Dharana*ior concentration.
7. *Dhyanam*or contemplation
8. *Samadhi* or Ecstasy or super conscious state.

The above eight- fold path leads to self-realization (*Athma Dharisanam*).

1.2 Insomnia

Insomnia is a common disorder with a prevalence of 10 to 48% in the general population. In South India, 18.6% of common public reported insomnia.^[3,4] It is usually associated with psychiatric disorders, particularly depression and having a direct proportion. Insomnia has been noted as a starting symptom of depression, thereafter it is the symptom that continues even after treatment in depression. Treatment of the insomnia is of paramount importance as insomnia is found to be the predictor of future episodes of depression across a number of studies.

Insomnia is defined in the fifth edition of Diagnostic and Statistical Manual of Mental Disorders (DSM-5) as difficulty in getting to sleep, staying asleep or having non-restorative sleep despite having adequate opportunity for sleep, together with associated impairment of daytime functioning, with symptoms being present for at least 4 weeks.^[5] Insomnia is

associated with substantial impairment in an individual's quality of life, influencing health, work and healthcare cost. Insomnia is a sleep disorder that is characterized by difficulty in falling and/or staying asleep.

1.2.1 Types of Insomnia

There are two types of insomnia: primary insomnia and secondary insomnia, the latter being associated with other health problems.

1.2.2 Symptoms of Insomnia

Sleepiness during the day, general tiredness, irritability, difficulty falling asleep, waking up too early in the morning.

2. Yoga interventions for insomnia in various clinical types

The insomnia mostly occurred from disturbance of mind, which is result of physical and environmental stress. The yoga therapy is balancing the mind through daily practice. The insomnia trials conducted in cancer survivors, osteo arthritis, post-menopausal women and pregnant women are listed in Table 1.

3. RESULTS AND DISCUSSION

Majority of the participants in the yoga therapy clinical trial mentioned in above list exhibit moderate to significant improvements in patient-reported outcomes of insomnia. The sleep quality impairment and quality of life after waking up also significantly increased. Intervention of Yoga therapy with active therapy in some trials of cancer patients, as post adjuvant therapy in some trials. These trials vast diverse with number of Yoga classes varying from 1-5 sessions per week and duration also varying from 60-120 minutes. There was also a very wide range regarding the duration of the intervention, with some studies lasting only 4 weeks and others lasting as long as 26 weeks. There is difference in types of

Table 1. Trials treating insomnia in various patients

Sl. no	Phase	Authors of Trial	Trial design	Sample size	Intervention status	Type of Yoga	Duration & frequency	Outcome measure	Outcome
1.	Phase -I	Ulger et al. 2010 ^[6]	Arm 1	N=20(Breast CA)	Post adjuvant	Classical	60min/2 sessions/week4weeks	Turkish Version of Nottingham Health Profile	Sleep * ↑
2	Phase -II,	Cohen et al., 2004 ^[7]	RCT, Arm 2,SC, waitlist	N=39(Lymphoma)	Active treatment and Post adjuvant	Tibetan	60 min/1session/ week, 7 weeks	Pittsburg Sleep Quality Index	Sleep * ↑ Sleep Medicines improved
3	Phase-II	Danhauer et al., 2009 ^[8]	RCT, Arm 2,SC, waitlist	N=44(Breast CA)	Active treatment and Post adjuvant-up to 24 months	Integral (Restorative Yoga Postures)	75 min/ session/week, 10 weeks	Pittsburg Sleep Quality Index	Sleep * ↑
4	Phase-II	Carson et al., 2009 ^[9]	RCT, Arm 2,SC, waitlist	N=37(Breast CA)	Post adjuvant	Yoga of Awareness	120min/session/week,8 weeks	Daily Diary Sleep Rating	Sleep * ↑
5	Phase-II	Vadiraja et al., 2009 ^[10]	RCT, Arm 2,SC, waitlist	N=88(Breast CA)	adjuvant during radiotherapy	Integrated	50min/sessions-3/week,6 weeks	Cancer QOL C30	-sleep * ↑
6.	Phase-II	Chandwani et al., 2010 ^[11]	RCT,Arm 2, SC, waitlist	N=61(Breast CA)	adjuvant during radiotherapy	Patanjali from VYASA	60min/sessions 2/ week, 6 weeks	Pittsburg Sleep Quality Index	Sleep NC
7.	Phase-II	Bower et al., 2011 ^[11]	RCT,Arm 2,SC, waitlist Health Education	N=31(Breast CA)	Post adjuvant therapy	lyengarsessions-2	90min/sessions2/week,12 weeks	Pittsburg Sleep Quality Index	Sleep NC

8.	Phase-II	Dhruva et al., 2012 ^[12]	RCT w/ SC	2-Arm	N=23, mixed types of CA	Receiving intravenous chemotherapy	Pranayamam	60min/session/12months	General Sleep Disturbance Scale	Sleep * ↑
9.	Phase-II	Cadmus-Bertram et al., 2013 ^[13]	BRCT, Arm 2,		N=32, Breast CA	Post-adjuvant	Viniyoga	75min/session5/week,6 months	Pittsburg Sleep Quality Index	Sleep NC
10	Phase-III	Mustian et al., 2013 ^[14]	RCT, Arm2, SC		N=410,Mixed CA survivors.	Post adjuvant	YOCAS [®]	75Min/sessions-2/week, 6 months	Pittsburg Sleep Quality Index & Actigraphy	Sleep * ↑, med.
11	Phase-II	Afonso et al, 2012 ^[15]	RCT, Arm 3,		N=44, menopausal women	Post- Individual therapy	Classical session yoga	60 min/session-2/week, 4 months		Sleep * ↑
12	Phase-II	R. Sobanaet al,2013 ^[16]	RCT, Arm 2		N=40, Stressful	Individual therapy	Classical	90 min/session, 4 months		Sleep * ↑
13	Phase-I	Khalsa 2004 ^[17]	SB Preliminary study		N=20, Chronic Insomnia	Adjuvant therapy	Classical	60 min/session/day, 2 weeks	Sleep wake diaries	Sleep * ↑

Note: An arrow pointing upward with an asterisk indicates significant improvement statistically in outcome of study (Improvement in sleep quality, decreased insomnia and less medications).

Classical yoga starts with prayer, loosening exercises, Tadasanam, Virutchanam, Arthapadmasanam, Padmasanam, Vajranasanam, Pathahasthanam, Arthachakrasanam, Salabasanam, Vakrasanam, Makarasanam, Chakra meditation. All asanas can be repeated according to their health condition.

Hatha yoga includes Shatkarma (purification), asanas, Pranayamam, Chakras, Kundalini (enlightenment energy), Bandhas (energy control), Kriya, Nadi and Mudras.

CA-Cancer, RCT = Randomized, Controlled Trial. BRCT = Block-Randomized, Control Trial. NC = No Change, SC = Standard Care, HE = Health Education.

YOCAS[®] - 4 weeks, two times a week, 75 minutes/session; Gentle Hatha and Restorative Yoga

Yoga, yoga postures, *pranayamam* addition in the studies. Despite of the use of the various types of Yoga sessions, above studies results Yoga intervention is safe, feasible, acceptable within cancer patients, osteoarthritis patients and other psychologically ill people. Also, in insomnia in pregnant women showed significant improvement. ^[18] Yoga therapy was preferred by most of the cancer survivors.

In addition, trials are also needed to the care givers of Cancer patients like spouse, siblings, son/daughter and friend who give the unpaid care for the cancer survivors throughout their life span along with own health. So, care providers will have greater benefits. Trials show *yoga* to be a low cost- effective therapeutic intervention.

4. CONCLUSION

Yoga therapy is working on the physical as well as mind (*Manomayakosam*), so the intervention works well in the insomnia patients. Therefore, in the upcoming years, addition of *yoga* to conventional medicine will improve the patient's quality of sleep and quality of life. Further trials also needed to reinforce active and adjuvant therapy in insomnia.

CONFLICT OF INTEREST No conflicts declared

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