



“A comparative study of ashwagandha churna and padabhyanga in the management of nidranash (insomnia) w.s.r to geriatrics.”

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ABSTRACT

Ahar, Nidra and Bhrahmacharya is considered to be pillars of life. Nidra plays an important role in everyone's life. It gives rest to sensory organs. Nidranash or inadequate sleep will lead to many physiological and mental disorders. Vitiated vata-pitta plays an important role in Nidranash. Due to pacification of kapha dohsa there is a aggravation of Vata and Pitta dosha, and it leads to Nidranash. Ashwagandha is Vata-Pitta shamak and Kaphavardhak, Madhura ,Tikta and Kashay Rasa, Sheeta Virya ,Katu Vipak and Laghu,Snigdha,Shleshma Gunas of Ashwagandha Churna acts as a Nidrajanan and Vata-Pittahara. Objective of this work is to see the effect of Ashwagandha churna and padabhyanga with ashwagandha ghrita in the management of Nidranash.

Keywords: Nidranash, Ashwagandha, Insomnia, Nidra, Nidrajanan.Vata-pitta.

INTRODUCTION

Nidranasha is a term of Ayurveda used for loss of Sleep. Ayurveda mentioned three important facts to keep a person healthy status as Aahar (diet), Nidra (Sleep) & Bramhacharya (Celibacy). Out of which Nidra (Sleep) is a state which refills our power of activity which we lose in daily routine and which plays an important role in maintaining health, proficiency and emotional well-being.. Due to loss of sleep person suffers from too many problems related with health. Ayurveda explained may reasons for loss of sleep as like work, age, diseased conditions, constitution and Dosha like Vata & Pitta. These factors directly affect on the sleep and causes loss of sleep (Nidranasha). It is the physiological state of rest of body, mind, sense and motor organ. When the mind is exhausted it gets detract from their object and persons sleep. Nidra is needed for

physical and mental maintenance of the body. According to Acharya charak Nidranash is considered as the eighty types of nannatmaj vatavyadhis. It is correlated with the insomnia according to modern science.

Being an eternal science, Ayurveda, the 'science of life', deals with the physical, psychological as well as spiritual well being of an individual.

According to Acharya charak,

जृम्भाऽडमर्दस्तन्द्रा च शिरोरोगोऽक्षिगौरवम् □

निद्राविधारणात्तत्र स्वप्न संवाहनानि च □ च.स.सु. ७/४

Acharya Charaka has stated that happiness and sorrow, growth and wasting, strength and weakness, virility and impotence, the knowledge and ignorance as well as existence of life and its cessation depend on the Nidra (sleep). According to him, Nidra gives Putty (Anabolic effect) and Jagarana produces Karshana (Catabolic effect) of the body. Untimely and excessive sleep and prolonged vigil take away both happiness and longevity. As wholesome diet is needed for maintenance of body so is the sleep. Obesity ,leanness and many other conditions are particularly caused by sleep and diet.

यदा तु मनसि क्लान्ते कर्मात्मान क्लमान्विताह □

विषयेभ्यो निवर्तन्ते तदा स्वपिति मानव □ च.स.सु. २१/३५

Acharya Charaka explained that when the mind as well as soul gets exhausted or becomes inactive and the sensory and motor organs become inactive then the individual gets sleep.

निद्राया मोहमुर्ध्वाक्षिगौरवालस्यजृम्भिका □

अङ्गमर्दश्च तत्रेष्टह स्वप्न संवाहनानि च □ अ.ह. ४/१२

Suppression of nidra causes the above symptoms like moha, akshihgaurava, alasya , jrumbha, angamarda

निद्रानाशादडमर्दशिरोरोगैरवजृम्भिका □ □

जाडयग्लानिभ्रमापत्तिकतन्द्रा रोगाश्च वातजा □ □ □

अ.ह. ७/६४

In Astanga Hridaya Nidra, Nidra Vikāras and its chikitsa are mentioned under Annarakshaadhyaya, where Trayopastambhas are explained.

According to modern science insomnia is a condition of inadequate quality and quantity of sleep and sleep is defined as unconsciousness state from which the person can be aroused by sensory or other stimuli. Human's sleep and awaken at a fairly constant 24 hours rhythm called circadian rhythm. When the brain aroused or awake, it is in a state of readiness and able to react consciously to various stimuli. Since neuronal fatigue proceeds sleep and the sign of fatigue disappear after sleep. Sleep restores energy of the body, particularly to the brain and nervous system. Slow wave sleep may help especially restoring the control of the brain and nervous system over the muscles and other body systems

It is the most common problem but often neglected until it become hazardous. Insomnia has a great impact on social, occupational and other functioning area of individual if it is chronic the person may develop various illness. Modern lifestyle and modern occupations are fuelling more and more expectation and work efficiency from humans. This is outing too much strain on us leading to Nidranash. It must be noted that among all the systemic diseases find their roots in Nidranash at one or other point of time.

AIM AND OBJECTIVES:

Aim:

To study the effect of Ashwagandha Churna and Padabhyanga in Nidranash (Insomnia).

Objectives:

- To study the effect of Ashwagandha Churna in Nidranash.

- To study the effect of Padaabhyanga by Ashwagandha Ghruta in Nidranash .

MATERIALS AND METHODS

चूण- हयगन्धायाः सितया सहितच्च सपि-पा लीडम्
विदध्कति नष्टनिद्रे निद्रामाश्वेव सिध्दमिदम् आ .नि .

(a) material

1) ashwagandha

Sr.no	Drug name	Botanical name	Family	Part used	Quantity
1	Ashwagandha	<i>Withania Somnifera</i>	Solanaceae	Root	10 gm

2) ghruta

- Latin Name: Butyrum departum
- Rasa : Madhura
- Guna : Guru, Snigdha, Mridu
- Veerya : Sheeta
- Vipaka : Madhura
- Doshakarma : Vata-pittahara (Charaka), Pitta-vatahara (B.P.), Kaphakara

3) padabhyanga

निद्रकरोदेहसुखश्चक्षुष्यःश्रम्सुप्तिनुत्

पादत्वडमृदुकारिचपधभ्यङ्गःसदाहितः ॥
सु.चि. २४/७०

Massage of feet's brings sleep, is a pleasing and whole some for eyes, removes fatigue , numbness and softness of skin of feet.

Padhabhyanga imparts stability, induces sleep, alleviates fatigue, it is good for vision. It removes physical strain and numbness; also it is good for skin of feet.

Application of oil or ghruta to the feet followed by massage is popularly known as pasabhyanga.

METHODS

Type of study:

- Randomised controlled clinical trial.
- Lottery method

Place of study:

- OPD/IPD- Bharati Vidyapeeth Deemed University, Ayurveda Hospital, Pune.

Sample size

- Patients diagnosed with Nidranash will be selected for the study.
- Special case paper will be design.
- 60 patients will be selected for clinical trial under single group using sample size formula.(P= 2.5 %) Group A - 30 patients, Group B - 30 patients.

PLAN OF WORK:

Sr.No	Group A	Group B
No. of Patients	30	30
Medicine and procedure	Ashwagandha	Padabhyanga
Anupan	Ghruta and khadisharkara	-
Dose	10 gm	-
Time	Nishikala	15-20 minutes nishikala
Route of Administration	Oral	Local application
Duration	28 days	28 ays

FOLLOW UP:-

Treatment will be given for 28 Days duration and follow up will be taken once in a week for OPD patients and regular for IPD patients.

CRITERIA FOR ASSESSMENT**1) inclusion criteria:**

- Gender- either
- Age - above 60 years
- Patient having classical features of Nidranash mention in Ayurvedic samhitas.
- Angamarda (Malaise), Akshigaurava (Heaviness), Shirogaurava (Headache), Jrumbha (Yawning).
- Sleep Efficacy Index less than 80%.

2) exclusion criteria:

- Age below 60 years.
- Psychological disorder like Schizophrenia, Depression, Alcoholic.

- Systemic disorder like severe Hypertension, Malignancy, Epilepsy.
- Drug or alcohol induced sleep disorders.
- Insomnia caused by severe pain, Head injury.
- Patient suffering from prostatomegaly, should be excluded.

PARAMETERS OF ASSESSMENT:

Subjective and objective parameters are taken for assessment of results.

SUBJECTIVE PARAMETERS

Jrumbha (Yawning), Angamarda (Malaise), Tandra (stupor), Akshigaurava, (Heaviness) Shirogaurava (Headache)

EFFICACY SCORE SYSTEM**severity index:-**

Subjective parameters – severity of symptoms will be assessed by grading 0-3 for each symptom as mentioned below-

Absence of symptoms	0 Grade
Mild degree of symptoms	1 Grade
Moderate degree of symptoms	2 Grade
Severe degree of symptoms	3 Grade

Grading of lakshanas :

Grade	Jrumbha	Angamarda	Tandra	Akshigaurav	Shirogaurav
0	No	No	No	No	No
1	Mild	Mild	Mild	Mild	Mild
2	Moderate	Moderate	Moderate	Moderate	Moderate
3	Severe	Severe	Severe	Severe	Severe

OBJECTIVE PARAMETERS

- Based on improvement in sign & symptoms reported by the patients, relief in mental and physical health is assessed on the basis of score developed for grading these clinical factors followed by statistical analysis.

- The sleep efficiency index will be given
- Sleep efficiency is the ratio of the total time spent asleep (total sleep time) in a night compared to the total amount of time spent in bed.

$$\text{SEI} = \frac{\text{Time in bed} \times 100}{\text{Hours of sleep}}$$

SEI above 80%	0 Grade
SEI between 60 to 80%	1 Grade
SEI between 40 to 60%	2 Grade
SEI below 40%	3 Grade

Pittsburgh Sleep Quality Index (PSQI)

- The Pittsburgh Sleep Quality Index (PSQI) was utilized as a more global index of sleep quality and specifically assessed subtypes of sleep disturbance during the past month.
- The Pittsburgh Sleep Quality Index (PSQI) measures retrospective sleep

quality and disturbances over a 1-month period for use in clinical practice and research (1). The PSQI discriminates between good and poor sleepers, and provides a brief, clinically useful assessment of multiple sleep disturbances.

Sleep quality Grade

No (very good)	0
Mild (fairly good)	1
Moderate (fairly bad)	2
Severe (very bad)	3

Sleep latency Grade

No (≤15 min)	0
Mild (16-30 min)	1
Moderate (30-60-min)	2
Severe (>60 min)	3

Sleep duration Grade

No (>7 hours)	0
Mild (6-7 hours) with ½ to 1 hour day nap	1
Moderate (5-6 hours) without day nap	2
Severe (< 5 hours)	3

Habitual sleep efficiency Grade

No (>85%)	0
Mild (75-84%)	1
Moderate (65-74%)	2
Severe (<65%)	3

Sleep disturbances Grade

No	0
Mild	1
Moderate	2

Use of sleeping medication Grade

No	0
Mild	1
Moderate	2

Severe

3

Severe

3

Daytime dysfunction**Grade**

No

0

Mild

1

Moderate

2

Severe

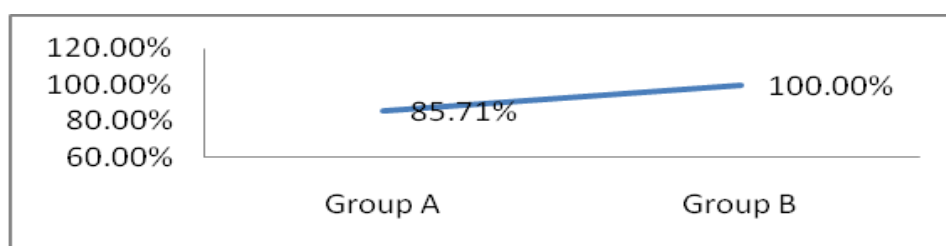
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OBSERVATION AND RESULT

parameter	Mean		x	% of improvement	negative rank	positive rank	t	z	P
	BT	AT							
JRUMBHA	1.967	0.367	1.60	81.36%	23	0	7	-4.63	0
parameter	Mean		x	% of improvement	negative rank	positive rank	t	z	P
	BT	AT							
ANGAMARDA	2.933	0.833	2.13	72.73%	30	0	0	-5.106	0
parameter	Mean		x	% of improvement	negative rank	positive rank	t	z	P
	BT	AT							
TANDRA	0.633	0.033	0.60	94.74%	10	0	20	-2.972	0.003
parameter	Mean		x	% of improvement	negative rank	positive rank	t	z	P
	BT	AT							
SHIROGAURAV	2.667	0.733	1.93	72.50%	29	0	1	-5.107	0
parameter	Mean		x	% of improvement	negative rank	positive rank	t	z	P
	BT	AT							
AKSHIGAURAV	1.5	0.2	1.30	86.67%	18	0	12	-3.9	0

parameter	Mean		X	% of improvement	negative rank	positive rank	t	z	P
	BT	AT							
JRUMBHA	2.233	0.6	1.63	73.13%	26	0	4	-4.765	0

parameter	Mean		X	% of improvement	negative rank	positive rank	tie	z	P
	BT	AT							
ANGAMAR DA	2.867	0.767	2.10	73.26%	29	0	1	-4.906	0
parameter	Mean		X	% of improvement	negative rank	positive rank	tie	z	P
	BT	AT							
TANDRA	1	0.1	0.90	90.00%	15	0	15	-3.626	0
parameter	Mean		X	% of improvement	negative rank	positive rank	tie	z	P
	BT	AT							
SHIROGAU RAV	2.9	0.667	2.23	77.01%	30	0	0	-4.912	0
Parameter	Mean		X	% of improvement	negative rank	positive rank	tie	z	P
	BT	AT							
AKSHIGAU RAV	1.9	0.233	1.67	87.72%	22	0	8	-4.211	0



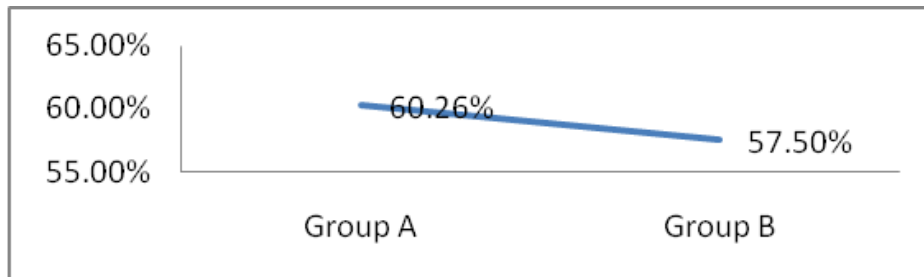
`SLEEP QUALITY	%of improvement	Mann Whitney u	Z value	p value
Group A	67.11%	385	-1.2	0.23
Group B	66.13%			

As p value>0.05 we found that there was statistical significant difference

between Group A and Group B on SLEEP QUALITY in Nidranash (Insomnia).

Also as percentage of improvement seen from above table we get percentage of improvement in Group A was more than Group B hence we can say that Group A is

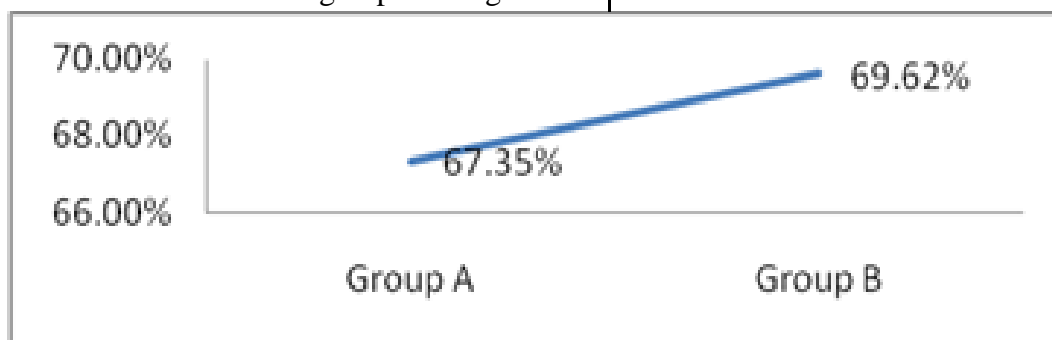
more effective as compared to Group B on SLEEP QUALITY in Nidranash (Insomnia).



SLEEP LATENCY	% of improvement	Mann Whitney u	t value	p value
Group A	67.35%	432	-0.29	0.77
Group B	69.62%			

As $p \text{ value} > 0.05$ we found that there was statistical significant difference between Group A and Group B on SLEEP LATENCY in Nidranash (Insomnia). Also as percentage of improvement seen from above table we get percentage of

improvement in Group B was more than Group A hence we can say that Group B is more effective as compared to Group A on SLEEP LATENCY in Nidranash (Insomnia).



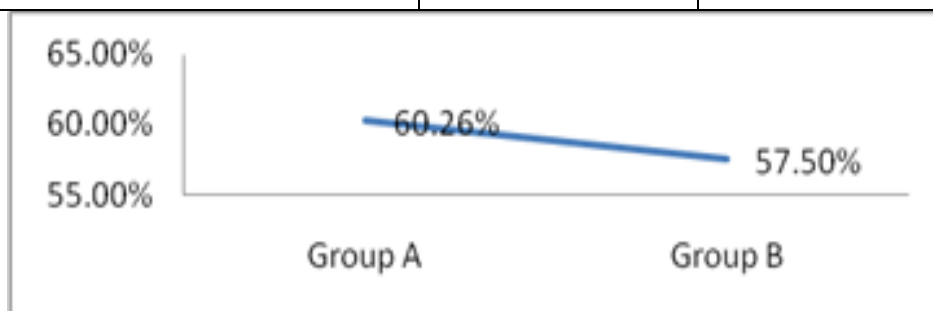
SLEEP LATENCY	% of improvement	Mann Whitney u	t value	p value
Group A	67.35%	432	-0.29	0.77
Group B	69.62%			

As $p \text{ value} > 0.05$ we found that there was statistical significant difference between Group A and Group B on SLEEP LATENCY in Nidranash (Insomnia). Also as percentage of improvement seen from above table we get percentage of

improvement in Group B was more than Group A hence we can say that Group B is more effective as compared to Group A on SLEEP LATENCY in Nidranash (Insomnia).

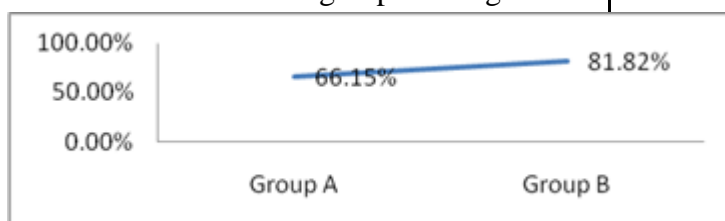
HABITUAL SLEEP EFFICIENCY	%of improvement	Mann Whitney u	t value	p value
Group A	66.15%	286	-2.74	0.01
Group B	81.82%			

SLEEP DURATION	%of improvement	Mann Whitney u	t value	p value
Group A	60.26%	431	-0.31	0.76
Group B	57.50%			



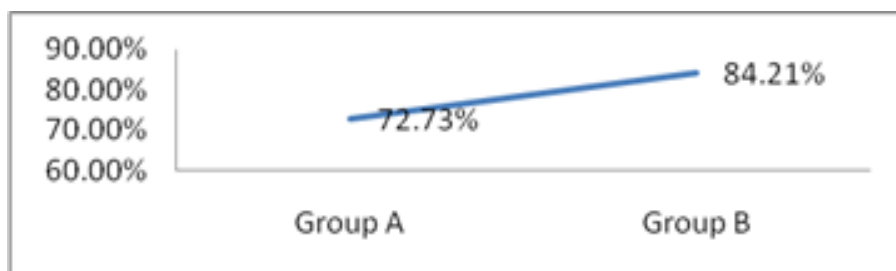
As $p \text{ value} > 0.05$ we found that there was statistical significant difference between Group A and Group B on SLEEP DURATION in Nidranash (Insomnia). Also as percentage of improvement seen from above table we get percentage of

improvement in Group A was more than Group B hence we can say that Group A is more effective as compared to Group B on SLEEP DURATION in Nidranash (Insomnia)



As $p \text{ value} > 0.05$ we found that there was statistical significant difference between Group A and Group B on HABITUAL SLEEP EFFICIENCY in Nidranash (Insomnia). Also as percentage of improvement seen from above table we get percentage of

improvement in Group B was more than Group A hence we can say that Group B is more effective as compared to Group A on HABITUAL SLEEP EFFICIENCY in Nidranash (Insomnia)

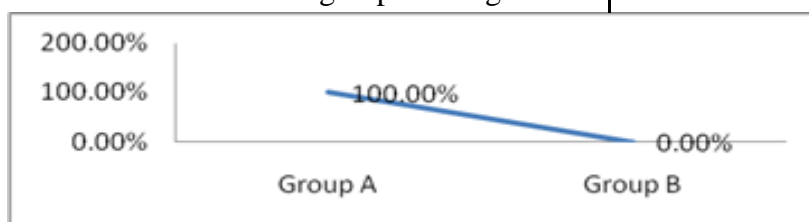


SLEEP DISTURBANCES	%of improvement	Mann Whitney u	t value	p value
Group A	72.73%	437	-0.42	0.68
Group B	84.21%			

As p value > 0.05 we found that there was statistical significant difference between Group A and Group B on SLEEP DISTURBANCES in Nidranash (Insomnia).

Also as percentage of improvement seen from above table we get percentage of

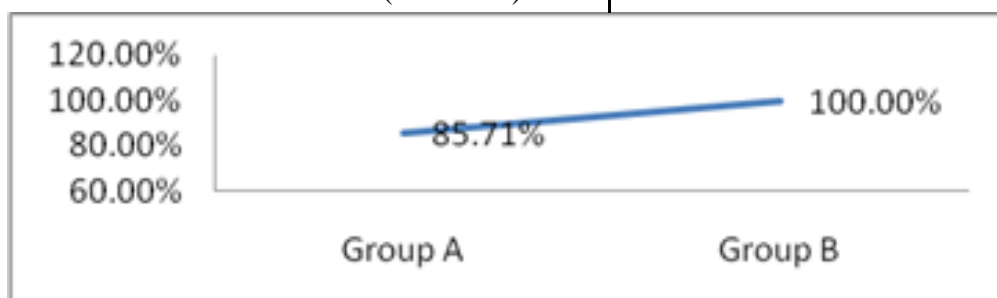
improvement in Group B was more than Group A hence we can say that Group B is more effective as compared to Group A on SLEEP DISTURBANCES in Nidranash (Insomnia)



USE OF SLEEPING MEDICATION	%of improvement	Mann Whitney u	t value	p value
Group A	100.00%	450	0	1
Group B	0.00%			

As p value > 0.05 we found that there was statistical significant difference between Group A and Group B on SLEEPING MEDICATION in Nidranash (Insomnia).

But Group A and Group B was not effective on USE OF SLEEPING MEDICATION in Nidranash (Insomnia).



DAYTIME DYSFUNCTION	%of improvement	Mann Whitney u	t value	p value
Group A	85.71%	450	0	1
Group B	100.00%			

As p value>0.05 we found that there was statistical significant difference between Group A and Group B on DAYTIME DYSFUNCTION in Nidranash(Insomnia).

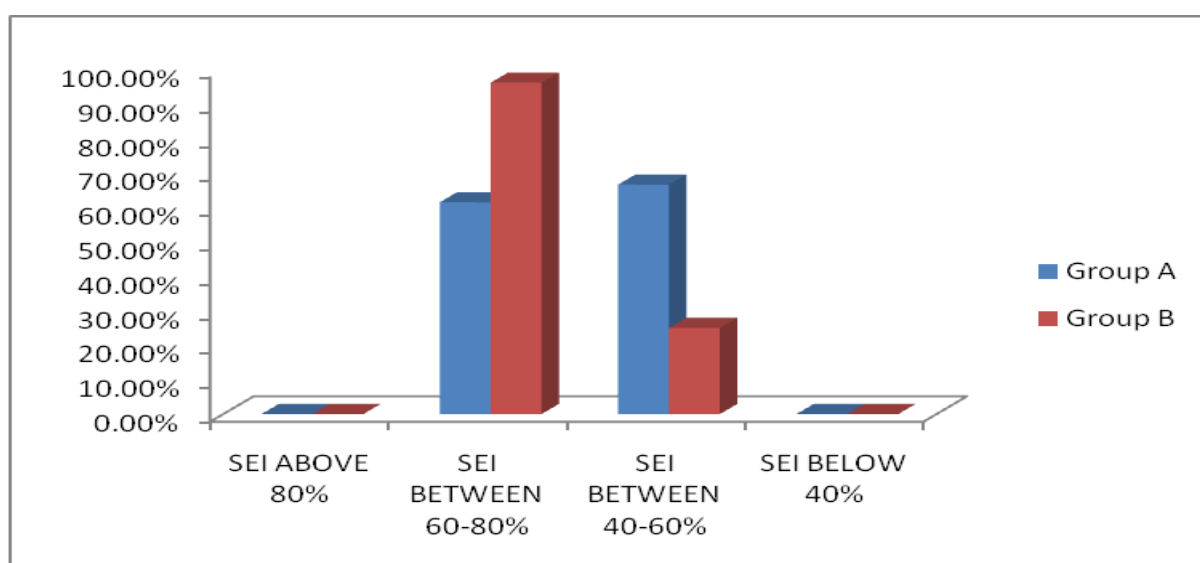
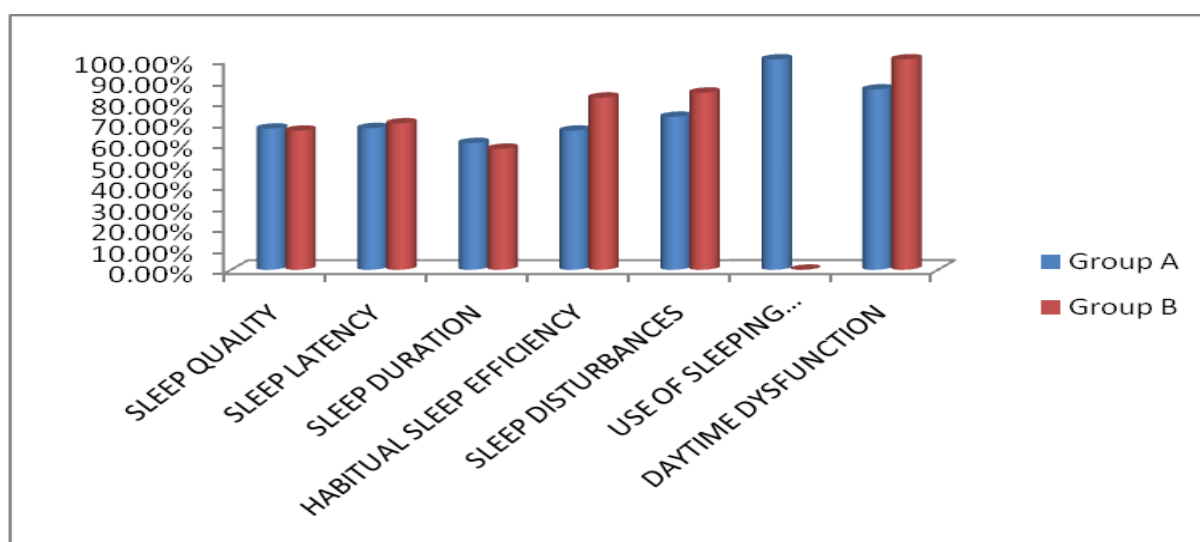
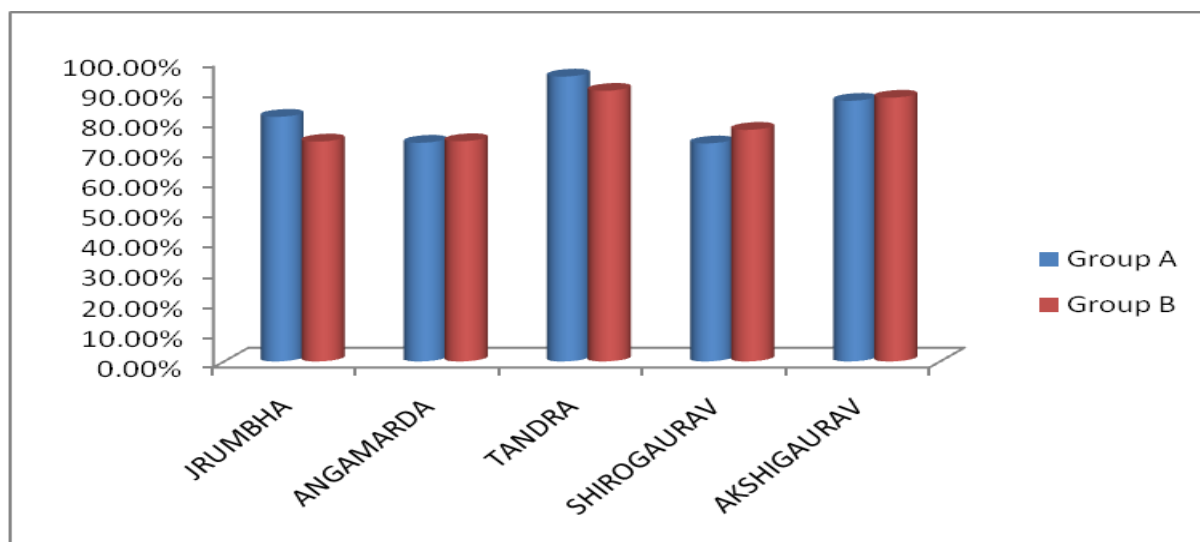
Group A was effective on DAYTIME DYSFUNCTION in Nidranash(Insomnia).but Group B was not effective on DAYTIME DYSFUNCTION in Nidranash(Insomnia).

COMPARISON OF GROUP A AND GROUP B ON SLEEP EFFICIENCY INDEX IN NIDRANASH(INSOMNIA).

parameter	Group	%of improvement	Mann Whitney u	t value	p value
SEI BELOW 40%	Group A	0.00%	450	0	1
	Group B	0.00%			
SEI BETWEEN 40-60%	Group A	66.67%	315	-2.98	0
	Group B	25.00%			
SEI BETWEEN 60-80%	Group A	61.54%	414	-0.69	0.49
	Group B	96.30%			
SEI ABOVE 80%	Group A	0.00%	450	0	1
	Group B	0.00%			

For Group Sleep efficiency index between 40-60% there were not statistically significant as p value <0.05 but as percentage of improvement seen Group A was more effective than Group B in Nidranash (Insomnia).

Similarly For Group Sleep efficiency index between 60-80% were statistically significant as p value >0.05 also as percentage of improvement seen Group B was more effective than Group A in Nidranash (Insomnia).



DISCUSSION

Age-Most of the people belong to age group 60-70 years. In this age group patients are more concern about Nidranash Lakshanas,when I discussed with so many patients, patients above 70 years, they are less concern about their sleep, as per their opinion Nidranash is quite common so they were not willing to take any medicine or treatment.

Gender-Out of 60 patients from both group females are 58% and males are 42%.Females are more concern about their sleep and health and also they are more worried about their personal issues than males, males are quite casual about sleep related problems.

Religion-in this study maximum number of patients belong to Hindu religion.

Marital status-in this study 90% patients were married,8% are widow and remaining 1 patient is unmarried.

Educational status-literate patients found in maximum number in this study.

occupational status-out of 60 patients from both group housewives are 50%,retired 18%,farmer 18%,worker 3%,maid 2%,Vaidya 2%,shopkeeper 2%,businessman 3%.

socio economic status- From this study we found that maximum no of patients belongs to upper middle class

habitat- Urban patients found in maximum count in this study.

agni- Vishamagni found in 43% of patients.

koshtha- Madhyam Koshtha seen in 45%,Krura Koshtha seen in 44%,Mrudu seen in 8%,Manda seen in 2%.

prakruti-60% patients from both group having Vata-Pittaj Prakruti. This shows there is predominance of Vata dosha.

manasik prakruti- 57% patients having Tamasik prakruti and 43% having Rajasik Prakruti.

diet-Maximum number of patients from both group having mixed diet that is 52% and remaining 48% having vegetarian diet.

viharaj-Maximum number of patients having light workout that is 45%,sedentary are 30% and moderate are 25%.

vyasan-In this study 18% patients having habit of tobacco chewing.

ON THE BASIS OF SUBJECTIVE CRITERIA

1.jrumbha-

- As p value>0.05 we found that there was statistical significant difference between Group A and Group B on Jrumbha in Nidranash(Insomnia).
- Due to Madhur,Tikta ,Kashay Rasa,Ushna Virya,Madhura Vipak,Laghu,Snigdha,Shleshma Guna and Balya, Rasayani Vata-Pittahara Doshghnata, it helps in reducing Jrumbha Lakshan and hence group A is more effective than group B.
- Compared to local effect of Padabhyanga by Ashwagandha Ghrita in this study, we find the Sarvadehik effect of Ashwagandha Churna in group A was more.

2.angamarda

- As p value>0.05 we found that there was statistical significant difference between Group A and Group B on angamarda in Nidranash(Insomnia).
- Also as percentage of improvement seen from above table we get percentage of improvement in Group B was more than Group A hence we can say that Group B is more effective as compared to Group A Angamarda in Nidranash(Insomnia)

- It helped to reduce Angamarda Lakshana due to Vatashamka local action of Ashwagandha Ghrita found in Nidranash.
- The local effect of Padabhyanga is more as compared to Abhyantar Sevan of Ashwagandha Churna of Group A.

3.tandra

- As p value>0.05 we found that there was statistical significant difference between Group A and Group B on Tandra in Nidranash(Insomnia).
- Also as percentage of improvement seen from above table we get percentage of improvement in Group A was more than Group B hence we can say that Group A is more effective as compared to Group B on Tandra in Nidranash(Insomnia)
- The Lakshanas reduced due to Vatahara karma of Ashwagandha Churna.

4.shirogaurav

- As p value>0.05 we found that there was statistical significant difference between Group A and Group B on Shirogaurav in Nidranash(Insomnia).
- Also as percentage of improvement seen from above table we get percentage of improvement in Group B was more than Group A hence we can say that Group B is more effective as compared to Group A on Shirogaurav in Nidranash(Insomnia)
- lakshanas reduced due to Vata-Pittahara property of Ashwagandha

Ghruta and also due to Medhya Karma.

- Ghrita is Madhur Rasatmak, Madhur Vipak, Veerya is Sheeta due to these properties there is Vata Pitta Dosha Shaman & it elevates the Shirogaurav.

5.Akshigaurav

- As p value>0.05 we found that there was statistical significant difference between Group A and Group B on Akshigaurav in Nidranash(Insomnia).
- Also as percentage of improvement seen from above table we get percentage of improvement in Group A was more than Group B hence we can say that Group A is more effective as compared to Group B on Akshigaurav in Nidranash(Insomnia)
- The Lakshanas is reduced due to Tikta Rasa.

RESULT

- The symptoms like Jumbha, Angamarda, Tandra, Shirogaurav and Akshigaurav were reduced significantly.
- The comparative study of Ashwagandha Churna and Ashwagandha Ghrita is observed to be effective in reducing the Symptoms of Nidranash.
- P- Values shows that both drugs are statistically significant effective on Nidranash.
- P-values shows that both drug are significantly effective in Nidranash but percentage of improvement of Ashwagandha

Churna is more effective than Ashwagandha Ghruta.

- For comparison between Group A and Group B, we have used Mann Whitney U test. From above table we can observe that P-Values for Jumbha, Angamarda, Tandra, Shirogaurav, Akshigaurav are less than 0.05. Hence there is significant difference between Group A and Group B. Also mean rank for group A is greater than group B. Hence Group A is more effective than Group B

CONCLUSION

- Ashwagandha Churna is effective in reducing symptoms Jumbha, Tandra, Akshigaurav in Nidranash.
- Ashwagandha Ghrita is effective in reducing symptoms Angamarda and Shirogaurav.
- Padabhyanga helps in reducing Nidranash. It improves sleep quality. It also reduced Lakshanas like Angamarda
- Ashwagandha Churna have better results on Nidranash compare to Ashwagandha Ghrita.
- Madhura, Tikta and Kashay Rasa, Sheeta Virya, Katu Vipak and Laghu, Snigdha, Shleshma Gunas of Ashwagandha Churna acts as a Nidrajanan and Vata-Pittahara.
- Hence we conclude that Ashwagandha Churna is more effective than Ashwagandha Ghruta in reducing symptoms of Nidranash
- During this study no any adverse effects and toxicity of drug occurred.

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