ISSN 2456-3110
Vol 3 · Issue 2
Mar-Apr 2018

Journal of Ayurveda and Integrated Medical Sciences

www.jaims.in

JAIMS

Charaka Publications

Indexed

ISSN: 2456-3110 ORIGINAL ARTICLE Mar-Apr 2018

A survey study on the effect of *Ratrijagarana* on health status in night shift workers

Venu S,[1] Bargale Sushant Sukumar.[2]

[1]Final Year PG Scholar, [2]Assistant Professor, Department of Swasthavritta, Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan, Karnataka, India.

ABSTRACT

Background: Sleep is a natural physiological phenomenon of human life. Research is revealing that sleep is a dynamic activity, during which many processes vital to health and wellbeing take place. Sleep deprivation can cause ill effects both physically and psychologically. Out of total global employees, nearly 1/5th of them are shift workers. In the present scenario, our society demands round the clock services in order to meet their needs. The present study was opted to analyse the health status of the individuals who do *Ratrijagarana* due to their work pattern. **Objective:** To Evaluate the effect of *Ratrijagarana* on Health Status in night shift workers. **Methods:** 208 night shift workers were selected for this Survey study. WHO-QOL BREF Questionnaire and Questionnaire on *Ratrijagarana* was used for analysing the health status of individuals (as per inclusion and exclusion criteria). **Results:** Maximum of 28.8% had 56 percent of physical health status, 27.9% had 56 percent of psychological health status, 30.3% had 75 percent of socio-economic health status, 30.8% had 50 percent of environmental health status. The Chi-square test is significant ($p<0.0005$) with WHO Bref questionnaires. **Conclusion:** *Ratrijagarana* has an impact on the health status of the individual by decreasing the physical, psychological and socio-economic health. Circadian misalignment is the cause for Shift Work Sleep Disorder (SWSD) and lead to Cognitive risks, Health risks and Social Risks of the individuals.

Key words: *Health Status, Ratrijagarana, Night Shift Workers, WHO-QOL BREF.*

INTRODUCTION

Nidra is an important phenomenon to provide rest and relaxation to the body, mind and senses which get tired and exhausted. *Ahara* (food), *Nidra* (sleep) and *Brahmacharya* (celibacy) are given prime importance in our Ayurvedic classics under the name of *"Trayopastambha"* the sub pillars of life.[1] They support our *Shareera* (body). This gives the importance of proper *Nidra*. *Nidra* is considered as one among the *Adharaneeya Vegas*.[2] Benefits of sleep includes *Sukha* (Pleasure), *Pushti* (Nourishment and growth), *Bala* (Strength and immunity), *Vrishataa* (Potency and sexual vigour), *Gynaanam* (Knowledge and intellect) and *Jeevitam* (Good life span, longeivity of life) are the desired impact of qualitative and quantitative *Nidra*.[3] Suppression of *Nidra Vega* results in *Jrumbha* (Yawning), *AngaMarda* (Malaise), *Tandra* (Drowsiness), *Shiroruja* (Headache), *Akshi Gourava* (Heaviness in eyes).[4] Sleep is the golden chain that ties health and body together. The best time for sleep is night.

Ratrijagarana is *Ruksha* which causes increase in *Vata* and day sleep causes *Snigdhata* i.e. increases *Kapha* in our body.[5] Hence both *Ratrijagarana* (night awakening) and *Divaswapna* (day sleep) are

Address for correspondence:
Dr. Venu S
Final Year PG Scholar, Department of Swasthavritta,
Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan, Karnataka, India..
E-mail: drvenuachar@gmail.com

Submission Date : 15/03/2018 Accepted Date: 23/04/2018

Access this article online

Quick Response Code

Website: www.jaims.in

DOI: 10.21760/jaims.v3i02.12083

ISSN: 2456-3110 ORIGINAL ARTICLE Mar-Apr 2018

contraindicated. Hence night sleep is the one all should follow because night is the best time for sleep. *Ratrijagarana* is mentioned among one of the *VataPrakopa Hetu*.[6] Those who are indulging in *Ratrijagarana* can affect with *Vata*and *Pitta* disorders.[7]

For those who had kept awake at night, sleeping during day for half of that period of wakefulness is desirable.[8]

Out of total global employees, nearly 1/5th of them are shift workers. In the present scenario, our society demands round the clock services in order to meet their needs. Hence to meet this, long and variable working hours for the shift workers lead to inadequate sleep. Rotating shift workers are exposed to unstable sleep pattern due to frequent disruption of circadian rhythm. When they work against their natural sleep cycle, they have more ill effects on physical and psychological health. In general it can be understood that *Nidra* gives a rest which is essentially required for the strained senses, Mind and soul. Thus, the sleep is vital for healthy brain activity during the day.

Sleep deprivation causes decrease in attention, decrease in working memory, decrease in decision making, decrease in vigilance, visual tasks may affected, mind-body co-ordination may be affected. Circadian rhythms are endogenous rhythms with a periodicity of approximately 24 hours.[9] These rhythms are synchronized to the physical environment by social and work schedules. The most common symptoms of these disorders are difficulties with sleep onset and/or sleep maintenance and excessive sleepiness that are associated with impaired social and occupational functioning.

Sleep disorders which in turn affects physical and psychological health which is becoming a burning crisis in the society and are increasing day by day due to life style and job pattern of people. The working pattern of job too has promoted irregular and improper sleep habits which is becoming increasingly prevalent amongst the people. People are engaged in night awakening for several reasons. In this present study, health status of individuals having *Ratrijagarana* due to their job pattern are analysed.

OBJECTIVE OF THE STUDY

To Evaluate the effect of *Ratrijagarana* on Health Status in night shift workers.

MATERIALS AND METHODS

Source of Data

Volunteers those who were having night duty shifts in an industry and hospitals in Hassan district were selected. Night shift workers of either gender who are fulfilling the criteria of inclusion are selected irrespective of gender, caste, creed etc.

Methods of collection of data

208 night shift workers who are doing night shift job as per inclusion criteria are selected and their health status were analysed.

Inclusion Criteria

Age - 18-50 years**,** Gender - Both, Night duty shifts for at least 7-15 days in a month, Subjects working at night shift at least 6-8/24 hours, Subjects working at night shift for a period of not <6 months

Exclusion Criteria

Any Systemic and Psychological illness, Sleep Related Disorders, Those who are under medications.

Study Design

208 night shift workers were selected for this Survey study. WHO-QOL BREF health assessment Questionnaire on health status and Questionnaire on *Ratrijagarana* and its effect was used for analysing the health status of individuals (as per inclusion and exclusion criteria). Questionnaire was translated to the regional language (Kannada) of the subjects, so that it made easy for them to understand.

Assessment Criteria

Health status was analyzed from the score obtained by the questionnaire.

Subjective Parameters

Health assessment questionnaire like WHO-QOL BREF,[10] Questionnaire on *Ratrijagarana* and its effect.

ISSN: 2456-3110 **ORIGINAL ARTICLE** Mar-Apr 2018

Statistical Analysis

Software 'Statistical Package for Social Sciences', Version 20 was used for the statistical analysis.

Cross tabulation, Correlation, and Chi square tests were used for the analysis of data and to correlate the impact of *Ratrijagarana* on the health status of individual.

OBSERVATIONAL AND RESULTS

208 night shift workers were selected and their health status was analysed using the questionnaire in the present study. The following observations were found.

Male subjects were 53.4% and 46.6% were female subjects. Majority of 72.6% were between the age group of 20-30 years. In occupation 51.4% subjects were Factory workers and 48.6% subjects were Medical staff workers. In Diet 10.6% were pure vegetarians and 89.4% were having mixed diet pattern.

Habits wise distribution of subjects

82.2% were having the habit of taking tea, 44.2% were having the habit of taking coffee, 34.1% were habituated for taking alcohol, 19.7% were having the habit of chewing tobacco and 39.9% were smokers. Majority of the subjects were habituated for tea in the present study.

Distribution of work experience in months

58.7% were having an experience of More than 2 years in the shift job pattern, 26% were having 6 months to 2 years of job experience and 15.4% were having Less than 6 months of experience as night shift workers.

Night shifts schedule wise distribution of subjects

15.4% were working for less than 1 week, 26% were working for 1 week continuously and 58.7% were working for more than 1 week continuously.

Duration of night duty time wise distribution of subjects

40.4% were working for 6-8 hours, 23.1% were working for 10 hours and 36.5% were working for more than 10 hours in night shifts.

Distribution of time in overtime duty

13% were doing overtime duty for ½ - 1 hour, 5.8% were doing overtime duty for 8 hour and 81.3% were not doing overtime at all.

Distribution of short nap/ sleep duration in night shifts

51.4% of the individuals were not taking any short naps (sleeping in between) during their night shifts. 3.4% of the individuals were taking a nap of ½ -1 hours, 13.9% were taking naps of 1-2 hours, 28.8% were taking naps of 2-3 hours and 2.4% were taking 3-4 hours of naps (sleeping in between) during their night shifts.

Distribution of day sleep duration after night shift

2.4% subjects were sleeping around 7-8 hours during the daytime after their night shifts, 1.0% were sleeping about 6-7 hours, 17.8% were sleeping about 5-6 hours, 46.2% were sleeping about 4-5 hours, 31.3% were sleeping less than 3-4 hours after their night shifts and only 1.4% were sleeping less than 2-3 hours. In the present study, majority of the subjects took around 4-5 hours sleep during daytime after their night shifts.

Distribution of day sleep without / after having breakfast after night shift

45.2% subjects were sleeping without having breakfast and 54.8% were sleeping after having breakfast.

Distribution of holidays in a month

24.3% of the individuals were getting less than 4 holidays, 67.3% were getting 4-6 holidays in a month and 8.2% were getting more than 6 days holidays in a month. Majority of the subjects were getting 4-6 holidays in a month.

Sleep in an average per day wise distribution of subjects

23.1% of the subjects were taking an average of less than 6 hours of sleep per day, 67.3% were taking sleep about 6-8 hours and 6% was sleeping more than 8 hours per day.

ISSN: 2456-3110 ORIGINAL ARTICLE Mar-Apr 2018

Lakshanas such as *Agnimandya* in (141 subjects), *Hrillasa* (141 subjects), *Pinasa* (94 subjects), *Kandu* (100 subjects), *Kasa* (83 subjects), *Galamaya* (97 subjects), *Dukha* (102 subjects), *Abala* (101 subjects), *Shirogowrava* (93 subjects) was observed among 208 subjects.

Symptoms of Shift Work Sleep Disorder (SWSD)[11] such as fatigue was observed in 87 subjects, Reduced Quality of sleep in 131 subjects, Inadequate sleep in 111 subjects, Falling asleep at work in 106 subjects, Insomnia in 63 subjects, Desire to nap in 115 subjects, Impaired mental acuity in 63 subjects, Irritability in 114 subjects, Reduced performance in work in 106 subjects, Loss of memory in 68 subjects and Loss of concentration in 59 subjects was observed among 208 subjects.

RESULTS

The two subjective questions of WHO QOL

1. **Rating the quality of life:** Among the 208 subjects maximum of 49.9% were satisfied with their quality of life and 39.4% were moderately satisfied with their quality of life.
2. **Health satisfaction:** Among 208 subjects 48.6 % were satisfied with their health and 41.3 % were moderately satisfied with their health

Total WHO QOL health status: Among 208 subjects 0.5% had poor health status, 89.9% had moderate health status and 9.6% were had good health status when assessed with the WHO QOL Bref questionnaire.

Domains	Maximum percentage among 208 subjects
Physical health status percentage	Maximum of 28.8 % had 56 percent of physical health status.
Psychological health status percentage	Maximum of 27.9% had 56 percent of psychological health status.
Socio-economic health status percentage	Maximum of 30.3% had 75 percent of socio-economic health status.
Environmental health status percentage	Maximum of 30.8% had 50 percent of environmental health status.

DISCUSSION

Age: In this study, the individuals were in the age group of 20-50years. 72.6% of individual's were age group of 20-30years. Nowadays mostlyyoung age people are doing shift works.

Gender: In the study 53.4% were males and 46.6% were females. This is because; infactory more male subjects were seen and in hospitals more female workers are doing night shifts.

Habit: 82.2% subjects were having habit of talking tea; the caffeine present in tea can act as a nerve stimulant. That may be the reason why most of the individuals were taking tea in order to avoid sleep during the duty time.

39.9% had the addiction like smoking and 19.7% had the addiction of tobacco chewing etc.

The addiction may be the cause for decrease in the quality of life of the individual by disturbing their health and socio-economic condition.

Overtime duty: 81.3%subjects were notdoing overtime at all and 13% were doing overtime duty. In hospitals during change in shift subjects were doing over duty ½-1 hour and some subjects were continuing day shift after night shift. The overtime duty may decrease the quality of life of the individual by their disturbing their physical health and psychological health.

Short naps (sleeping in between)**:** 51.4% of the individuals were not taking any shortnaps during their night shift. That may be because of their hectic work schedules which were seen more in factory workers. But 3.4% were taking a short nap of 30-60 minutes and 13.9 % were sleeping for 1-2 hours which was seen in hospital workers.

Day sleep duration after night shift (*Divaswapna*): 46.2% subjects were sleeping around4-5 hours during the daytime after their night shifts. 31.3% were sleeping less than 3-4 hours after their night shifts and only 1.4% was sleeping less than 2-3 hours. For those

ISSN: 2456-3110 ORIGINAL ARTICLE Mar-Apr 2018

who are doing *Ratrijagarana*, Day sleep (*Divaswapna*) for half of that period (of wakefulness) is desirable. Since the working hours vary from 8-10 hours, 4-5 hours of day sleep is a must for the shift workers.

Work experience: 58.7% subjects were having an experience of More than 2 years in the shift job pattern, 26% were having 6months- 2 years of job experience and 15.4% were having Less than 6 months of experience as night shift workers. Age group (20-30 years) may be one of the reasons, as they may enter the shift works at the age of 23 or 24 years.

Average working hours (shift) per day: Among the shift workers, 3.4% were working for less than 6 hours, 69.2% were working for 6-8 hours and 27.4% were working for more than 8 hours in day shifts. This may be because their working hours vary from 8-10 hours.

Holidays in a month: 24.3% of the individuals were getting less than 4 holidays, 67.3% were getting 4-6 holidays in a month and 8.2% were getting more than 6 days holidays in a month. Majority of the subjects were getting 4-6 holidays in a month. This may be because the permitted days of leaves were limited for individuals in their respective working area.

Average sleeping hours per day: 3.1 % subjects were taking an average of less than 6 hours of sleep per day, 67.3% were taking sleep about 6-8 hours and 9.6% was sleeping more than 8 hours per day. Day sleep duration is minimal when compared to normal sleeping hours for the subjects.

Discussion on *Lakshana*

Agnimandya was agreed in 141 subjects out of 208 subjects. This is due to the practice of *Divaswapna* after having breakfast, *Adyashana* (frequent intake of food), *Vegadharana* (suppression of urges), *Guru Ahara* (heavy food), and intake of less water. Due to which *Vata* and *Pitta* vitiates.

The digestive disorders, which are often complained by shift workers, are certainly favoured by the derangement of normal eating habits, particularly on night shift. The quality of food eaten by shift workers changes: on night shift they usually have quick meals, consisting of pre-packed food, and increase the intake of 'pep' drinks, such as coffee, wine and tea.

Also, during the day shifts the timetable of at least one of the two main meals has to be shifted by some hours or taken in the canteen at work, often in a hurry in a short-break, and not always of good quality. Such situations in the long run can give rise to troubles and disorders of the digestive system. (Giovanni Costa et all. 1996)[12]

Hrillasa was agreed in 141 subjects, *Pinasa* was agreed in 94 subjects, *Kandu* was agreed in 100 subjects, *Kasa* was agreed in 83 subjects, *Galamaya* was agreed in 97 subjects out of 208 subjects. This due to having breakfast and going to *Divaswapna*, *Adyashana*, *Kapha Dosha* gets vitiated and working environmental factors such as dust, toxins and infection spreading through hospitals cause the above mentioned symptoms.

Dukha was agreed in 102 subjects out of 208 subjects, this is due to impaired *Manasika Bhavas*, increased stress in working place, less leisure time with friends and family members.

Abala was agreed in 101 subjects out of 208 subjects, is due to more physical distress, fatigue and less nourishment of *Dhatus.*

Shirogowrava was agreed in 93 subjects out of 208 subjects, *Ratrijagarana* is one of the *Nidana* for *Shirogowrava*, where *Vata* gets vitiated due to *Ratrijagarana*. Improved sleep habits helps in reducing the frequency of Migraine headaches. (Vaghela, D. B., et al. 2016)[13]

Discussion on Symptoms of Shift Work Sleep Disorder (SWSD)

Fatigue was agreed in 87 subjects, Reduced Quality of sleep was agreed in 131 subjects, Inadequate sleep was agreed in 111 subjects, Falling asleep at work was agreed in 106 subjects, Insomnia was agreed in 63 subjects, Desire to nap was agreed in 115 subjects out of 208 subjects, Although the longer a person works, the more they will tired, it is also vital to relate work to the time of day at which it is performed as,

ISSN: 2456-3110 ORIGINAL ARTICLE Mar-Apr 2018

according to Fletcher and Dawson (1997), fatigue is observed faster during night work compared with day work.[14]

Self-reported short sleep duration, poor sleep quality, impaired ADL score and insomnia are common among US workers especially among night shift workers. (Yong, Lee C.et all 2016).[15]

Impaired mental acuity was agreed in 63 subjects, Irritability, was agreed in 114 subjects, Reduced performance in work, was agreed in 106 subjects, Loss of memory was agreed in 68 subjects and Loss of concentration was agreed in 59 subjects out of 208 subjects. This may be due to *Vata Prakopa* caused by *Ratrijagarana,* Irregular timings of sleep, work pressure in night shift and Circadian misalignment which Lead to Cognitive risks, Health risks and Social Risks of the individuals.[16]

WHO QOL Bref

The quality of life assessment questionnaire of WHO consisted of 26 questions with two subjective questions likely the rating the quality of life and rating the satisfaction of the health.[17]

i) Rating the quality of life:

39.4% of moderate quality of life was seen among the subjects of night shift workers.

It implies that, night shift *(Ratrijagarana*) has an impact on the quality of life and working for long time decreases the quality of the individual.

ii) Rating the health satisfaction:

41.3% of moderate health satisfaction was seen among the subjects of night shift workers.

It implies that, night shift (*Ratrijagarana*) has an impact on the health and working for long time decreases the health and consequently the health satisfaction reduces.

1. Physical domain of the WHO QOL Bref: The question of the physical domain of WHO Brief implies the physical health of the individual with 7 questions.

Among 208 subjects maximum of 28.8 % had 56 percent of physical health status.

a) Physical pain preventing the activity: Out of 208 subjects, 56 subjects were suffering from more and 118 suffering with moderate type of physical pain.

It implies that night shift *(Ratrijagarana*) has an impact on physical pain and working for long time causes some sort of physical discomfort preventing normal physical activities of the individuals. Due to *Nidravegadhaarana/ Ratrijagarana* there will be *Vataprokopa* which leads to *Angamarda.*

It has been observed by the researches that shift workers needed more physical efforts to complete their work and reported being more physically tired.(Kaliterna LLet al. 2004)[18] Fatigue accumulates faster during night work compared with day work. (Fletcher and Dawson.1997)[19]

b) Need of medical treatment for the daily life

Out of 208 subjects, 59 sample required medical treatment very much and 104 sample required medical treatment moderately.

It implies that night shift (*Ratrijagarana*) causes various health disturbances which makes a need of medical treatment for the daily routine work in the individuals.

Periodic checks are important tools aimed at detecting early signs of difficulty in adjustment or intolerance that may require prompt intervention both at the organizational and the individual level.

Furthermore, advances in clinical diagnosis, pharmacology and rehabilitation now offer better possibilities for the treatment of some diseases (e.g. peptic ulcer, hypertension, ischaemic heart diseases, metabolic and hormonal disorders) (Giovanni Costa.2003)[20]

c) Energy for daily activity:

Out of 208 subjects, 16 subjects had less energy and 102 subjects had moderate energy for everyday life.

It implies that night shift (*Ratrijagarana*) decreases the energy required for daily activity. Wellbeing status of individual decreases because of *Ratrijagarana.*

ISSN: 2456-3110 ORIGINAL ARTICLE Mar-Apr 2018

Reduced nourishment of *Dhatus* makes a person feel loss of energy in the work.

d) Ability to get around: Out of 208 subjects, 92 subjects had moderate ability to get around with the surrounding.

It implies that night shift (*Ratrijagarana)* decreases the ability of adjustment and the ability to cope up with the environment. This may be due to decrease energy and decreased health status of the individuals.

e) Sleep satisfaction: Out of 208 subjects, 65 subjects were dissatisfied and 78 subjects were moderately satisfied with sleep.

It implies that night shift (*Ratrijagarana)* decreases the sleep satisfaction, hence disturbances in the normal physiological functions of the body is seen. This may be due to the improper diet, continuous night shifts, more work pressure, and irregular sleeping habits in day time.

Night work causes a mismatch between the endogenous circadian timing system and the environmental synchronizers (the light/dark cycle in particular), with consequent disturbances of the normal circadian rhythms of psycho-physiological functions, beginning with the sleep/wake rhythm (FolkardS et all.1987)[21]

In the past few years investigations have found that sleep loss may have harmful consequences for our immune and endocrine systems, as well as contribute to serious illness.[22]

f) Satisfaction of ability of performance in daily living activities:

Out of 208 subjects, 104 subjects were moderately satisfied with their ability to perform daily living activities.

It implies that night shift (*Ratrijagarana)* decreases the satisfaction of ability of performance in daily living activities. Poorer performance especially at night in shift workers (J M Harrington.2018)[23]

g) Satisfaction on working capacity:

Out of 208 subjects, 122 subjects were moderately satisfied with their capacity for work.

It implies that night shift (*Ratrijagarana*) decreases the capacity for work satisfaction.

2. Psychological domain of the WHO QOL Bref: The question of the psychological domain of WHO Bref implies the psychological or the mental health of the individual with 6 questions. Among 208 subjects maximum of 27.9% had 56 percent of psychological health status.

Under psychological health, 99 subjects had Moderate satisfaction in enjoyment of life, 117 subjects had Moderate satisfaction in the meaningful of life, Ability to concentrate was moderate in 120 subjects, Acceptance of body appearance was moderate in 97 subjects, Self-satisfaction was moderate with 75 subjects, Increases in negative feelings was observed in 67 subjects.

Disruption in normal circadian rhythm which finally leads to Shift Work Sleep Disorder(SWSD). And resulted in short term and long term effects. So improper sleep pattern may affect thinking of mind and psychological health.[24]

Fixed night shift was associated with greater risks for sleep and mental health problems. (cheng,Wan-Ju,.et al.2016)[25]

Manasika Bhavas like *Veerya* (energy), *Sanjna* (recognition), *Medha* (intelligence), *Mana*, *Shraddha* (attention or desire), *Smriti* (memory), *Avasthaana* (Stability of mind), *Harsha* (joy), *Vigyaana* (knowledge), *Dhairya* (Courage), *Chinta* were hampered due to *Vataprakopa* during *Ratrijagarana* in shift workers. (ELGEENA.2017)[26]

3. Socio-economical domain of the WHO QOL Bref: The three questions of the socio-economical domain of WHO Brief implies the inter-personal relationship of the individual with society to lead life. Among 208 subjects maximum of 30.3% had 75 percent of socio-economic health status.

Under socio economic domain, the satisfaction of personal relationship was moderate in 82 subjects, sex satisfaction was moderate in 110 subjects and friends support was moderately satisfied in 78 subjects.

ISSN: 2456-3110 ORIGINAL ARTICLE Mar-Apr 2018

The impact of long term working in nightshift decreases the socio economic status. On the other hand it has a negative impact on personal life including sexual life may be due to reduced feeling of wellbeing and increased chances of affliction with disease ailments.

Workers who engage in shift work or who work long hours can experience considerable disruption of family and social activities as many of these rhythms of the general population are oriented around the day. Saturday and Sunday work, for example, can preclude involvement in sporting events or religious activities. Shift work can thus lead to social marginalisation.[27]

Family and marital responsibilities can be severely disrupted by shift work or long hours. Childcare, housework, shopping and leaving a partner alone at night can all lead to marital strain and family and social health dysfunction. (J M Harrington.2018)[28]

4. Environmental domain of the WHO QOL Bref: The question of this domain refers to the environmental satisfaction of the individual. It constitutes eight questions. Among 208 subjects maximum of 30.8% had 50 percent of environmental health status.

Under environmental domain, 127 subjects were moderate safe in their daily life, Healthiness of physical environment was moderate in 134 subjects, Money for daily life was moderate in 131 subjects, Information for daily life was moderate in 123 subjects, Opportunity for leisure activity was less in 56 subjects, Living place satisfaction was moderately satisfied in 115 subjects, Health service satisfaction was moderately satisfied with 124 subjects and Transportation facility satisfaction was moderately satisfied with 122 subjects.

The impact of long term working in nightshift decreases the satisfaction of oneself and happiness and thus it reflects in the decrease in the satisfaction of environmental acceptance.

CONCLUSION

Health status of night shift workers was moderate. *Ratrijagarana* has an impact on the health status of the individual by decreasing the physical, psychological and socio-economical health. Circadian misalignment is the cause for Shift Work Sleep Disorder (SWSD) and lead to Cognitive risks, Health risks and Social Risks of the individuals.

REFERENCES

1. Acharya JT. Sutrasthana chapter 11 verse 35. Charaka Samhita with Ayuveda Deepika commentary of Chakrapani Datta. Reprint edition. Varanasi(India): Chaukhambha Prakashan : 2013.p.74.
2. Acharya JT. Sutrasthana chapter 7 verse 4. Charaka Samhita with Ayuveda Deepika commentary of Chakrapani Datta. Reprint edition. Varanasi(India): Chaukhambha Prakashan : 2013.p.49.
3. Acharya JT. Sutrasthana chapter 21 verse 36 .Charaka Samhita with Ayuveda Deepika commentary of Chakrapani Datta. Reprint edition. Varanasi(India): Chaukhambha Orientalia: 2013.p.118.
4. Acharya JT. Sutrasthana chapter 7 verse 4. Charaka Samhita with Ayuveda Deepika commentary of Chakrapani Datta. Reprint edition. Varanasi(India): Chaukhambha Prakashan : 2013.p.49.
5. Acharya JT. Sutrasthana chapter 21 verse 50. Charaka Samhita with Ayuveda Deepika commentary of Chakrapani Datta. Reprint edition. Varanasi(India): Chaukhambha Orientalia: 2013.p.119.
6. Paradara HSS. Nidanasthana chapter 1 verse 4. Ashtanga Hrudaya with Sarvangasundara commentary of Arunadatta and Ayurveda rasayana commentary of Hemadri. Reprint ed. Varanasi (India): Chaukambha Sanskrit Sansthan; 2011. p.444.
7. Acharya JT. Shaarerasthana chapter 4 verse 38. SusrutaSamhita with Nibandhasangraha commentary of Dalhana. Reprint edition. Varanasi(India): Chaukhambha Sanskrit Sansthan: 2013.p.359.
8. Acharya JT. Shaarerasthana chapter 4 verse 38. SusrutaSamhita with Nibandhasangraha commentary of Dalhana. Reprint edition. Varanasi(India): Chaukhambha Sanskrit Sansthan: 2013.p.359.
9. "Sleep wake cycle; Its physiology and Impact on Health" National sleep foundation.<http: www.sleepfoundation.org
10. *WHo QOL Bref manual*. www. WHO QOL (accessed 5-12-11).

ISSN: 2456-3110 **ORIGINAL ARTICLE** Mar-Apr 2018

11. "Why sleep matters", National Sleep foundation. .<http: www.sleepfoundation.org>
12. Costa G. The impact of shift and night work on health. Applied ergonomics. 1996 Feb 1;27(1):9-16.
13. Vaghela DB, Mata S, Dhiman KS, Manjusha R. A Randomized clinical trial on Ardhavabhedaka–Migraine and its Ayurvedic management. International Journal of Ayurvedic Medicine. 2016 Apr 4;7(1).
14. Fletcher A, Dawson D. A predictive model of work-related fatigue based on hours-of-work.
15. Cheng WJ, Cheng Y. Night shift and rotating shift in association with sleep problems, burnout and minor mental disorder in male and female employees. Occup Environ Med. 2016 Nov 3:oemed-2016.
16. "Why sleep matters", National Sleep foundation. .<http: www.sleepfoundation.org>
17. *WHo QOL Bref manual*. www. WHO QOL (accessed 5-12-11).
18. Tepas DI, Barnes-Farrell JL, Bobko N, Fischer FM, Iskra-Golec I, Kaliterna L. The impact of night work on subjective reports of well-being: an exploratory study of health care workers from five nations. Revista de SaúdePública. 2004 Dec;38:26-31.
19. Fletcher A, Dawson D. A predictive model of work-related fatigue based on hours-of-work.
20. Costa G. Shift work and occupational medicine: an overview. Occupational medicine. 2003 Mar 1;53(2):83-8.
21. Folkard S, Minors DS, Waterhouse JM. Chronobiology and shift work: current issues and trends. Chronobiologia. 1985 Jan.
22. AlDabal L, BaHammam AS. Metabolic, endocrine, and immune consequences of sleep deprivation. The open respiratory medicine journal. 2011;5:31.
23. Harrington JM. Health effects of shift work and extended hours of work. Occupational and Environmental medicine. 2001 Jan 1;58(1):68-72.
24. Atantu Kumar Pati, Arti Parganiha" Shift work: Circadian Rhthm Disruption and Beyond", School of Life Sciences.30 May 2006.
25. Cheng WJ, Cheng Y. Night shift and rotating shift in association with sleep problems, burnout and minor mental disorder in male and female employees. Occup Environ Med. 2016 Nov 3: oemed-2016.
26. Elgeena varghese, Prashanth kekuda T.R. A study on analysis of Manasa Bhava with special reference to Ratrijagarana, PG thesis Hassan: RGUHS Banglore: 2017.p.130
27. Harrington JM. Health effects of shift work and extended hours of work. Occupational and Environmental medicine. 2001 Jan 1;58(1):68-72.
28. Harrington JM. Health effects of shift work and extended hours of work. Occupational and Environmental medicine. 2001 Jan 1;58(1):68-72.

How to cite this article: Venu S, Bargale Sushant Sukumar. A survey study on the effect of Ratrijagarana on health status in night shift workers. J Ayurveda Integr Med Sci 2018;2:29-37.
http://dx.doi.org/10.21760/jaims.v3i02.12083

Source of Support: Nil, **Conflict of Interest:** None declared.

****