



Effect of Night Shift on the Quality of Life of Health Care Workers in Bhopal City w.s.r. to *Nidra Vega* – A Pilot Study.

Rustam Mujalde,¹  Trupti Jain², Nitin Marwaha³, Vijendra Singh Mandloi⁴

1-PG scholar, Dept. of Swasthavritta, Pt. K.L.S. Govt. (Auto) Ayurvedic College and Institute, Bhopal.

2,4-Lecturer, Dept. of Swasthavritta, Pt. K.L.S. Govt. (Auto) Ayurvedic College and Institute, Bhopal

3-Professor, Dept. of Swasthavritta, Pt. K.L.S. Govt. (Auto) Ayurvedic College and Institute, Bhopal

Article Info

Article history:

Received on: 10-3-2023

Accepted on: 22-04-2023

Available online: 30-04-2023

Corresponding author-

Rustam Mujalde, PG scholar, Dept. of Swasthavritta, Pt. K.L.S. Govt. (Auto) Ayurvedic College and Institute, Bhopal.

[Email- r.s.mujalde06@gmail.com](mailto:r.s.mujalde06@gmail.com)

ABSTRACT:

Background: Vega (natural urges) is a unique concept of Ayurveda and according to Acharya *Vagbhatta* all disease arises from ‘Vega -Vidharana’ (suppression of natural urges). Night duty is the part and parcel of health care workers life so knowingly or unknowingly they are doing *Nidra Vegadharana* (Holding of sleep Urge). Thus, the present research work is planned to assess the effect of Night Shift in health care workers and its impact on Quality of Life.

Objective: To find-out the impact of Night Shift on Quality of Life in health care workers. To identify symptoms of *Nidra Vegadharan* (Holding of sleep Urge) mentioned in *Brihatrayi* in Night shift health workers.

Materials and Methods: This cross-sectional study was carried out as a pilot study among 30 health care workers who are doing night shift. To assess QoL, World Health Organization Quality of Life Questionnaire was used and assessment of other symptoms was done based on Classical *Nidra Vegadharana* (Holding of sleep Urge) Symptoms.

Result: Domain wise QoL showed that maximum 60% had intermediate physical QoL, maximum 73.3% had intermediate psychological QoL, maximum 60.6% had very weak social QoL and maximum 70% had intermediate environmental QoL. No one has good score of physical and psychological QoL and only 10% and 6.66% had good social and environment QoL respectively.

Conclusion: In this pilot study maximum night shift health workers had very weak, weak, or intermediate QoL so it can be concluded that Night shift has an impact on the health status of health care workers.

Key words: *Nidra Vegadharana*, Quality of Life, WHOQOL-BREF.

INTRODUCTION

Sleep is a divine gift for human beings. In Ayurvedic classics it has been accepted as the sub pillar of life¹ which is responsible for health and happiness.² Acharyas also mentioned it as one among the *Adharmeeya Vega* (non-

suppressible urges)³⁻⁵ and explained the negative effects of continuous suppression of *Nidra Vega*. Continuous suppression of natural urge of sleep produces the symptoms like headache, repeated yawning, heaviness in the eyes, drowsiness, disturbed digestion etc.⁶⁻⁸ and



hampers the Quality of Life. Night duty is the part and parcel of health care workers life so knowingly or unknowingly they are doing *Nidra Vegadharana* (Holding of sleep Urge) Ayurvedic classics mentioned the negative effect of *Nidra Vegadharana* (Holding of sleep Urge) and several epidemiological studies also reported that Night Shift affects the physical as well as mental health of workers. Thus, the present research work is planned to assess the effect of Night Shift in health care workers, with our main research question as to what is the impact of Night Shift on Quality of Life of health care workers in Bhopal city?

AIMS AND OBJECTIVE

1. To find-out the impact of Night Shift on Quality of Life in health care workers.
2. To identify the symptoms of *Nidra Vegadharan* (Holding of sleep Urge) mentioned in *Brihatrayi* in Night Shift Health care workers.

MATERIAL & METHODS

This cross – sectional study was carried out in month of December & January 2023 on 30 subjects who are doing Night duty in the different Government and Private Hospitals of Bhopal city. The sample was selected by Non probability sampling technique irrespective of cast, creed, religion, gender, etc. Data collection was done by person-to-person interview. Quality of life was evaluated by using the World Health Organization Quality of Life (WHOQOL) questionnaires. Questionnaire will be categorised into two sections: First section would include demographic details such as name, age, sex, date of birth, educational background, marital status, working hours, physical activity, sleep hours, addiction etc. along with past medical history, family history and consequences of *Nidra Vegadharan* (Holding of sleep Urge) described in *Brihatrayi*. Second section will consist of 26 Questions of WHO Quality of Life based on WHOQOL-BREF scale. The questionnaire comprised a total of 26 questions pertaining to four domains, Viz., physical, psychological, social, and environmental. The physical domain includes questions pertaining to pain, energy, sleep, work, and activities. The psychological domain was on positive and negative feelings and body image. Social domain is included questions pertaining to personal relationship and social support. Environmental domain was on home and work environment and satisfaction regarding facilities such as transport, health, living, financial arrangements. The

respondent was asked to reply the questions as perceived by them on a five – point scale, wherein a score of five was for the most positive response.⁹

Inclusion Criteria

1. Subjects between the age group of 21 to 60 years of either sex
2. Subject who has been working in Night Shift at least more than 6 Months.
3. Subject who is doing Night Duty of 8,10,12 hours in shifts
4. Subjects working in Government or Private Hospitals in Bhopal city
5. Subject who is willing to join the survey study.

Exclusion Criteria:

1. Subjects below the age 21 years and above the 60 years
2. Subjects having any other severe systemic illness which affects the Quality of Life of health care workers.
3. Pregnant and lactating women.
4. Subjects who are not willing for survey study.

OBSERVATIONS AND RESULT

In this pilot study 30-Night shift health care workers were interviewed and their health status was analysed using the specially designed questionnaire. The following observations were found-

1. Age and Sex: Majority 99.6% were between the age group of 21-40 years and 3.33% were in the age group of 41-60 years. Maximum 90% were female and 10% were male. (Table no.1)

2. Marital status: Maximum 63.3% were married, 36.6% were unmarried. (Table no.2)

3. Physical Activity: Maximum 99.6% were inactive and 1.33% had active. (Table no.3)

4. Work experience: Maximum 70% health care workers had ≥ 5 years' work experience, 13.3% were ≥ 1 years' experience and 1.3% had ≥ 6 months' work experience. (Table no.4)

5. Night shift schedule: Maximum 99.6% had doing 12 hrs. Night duty. and 3.44% were doing 10 hrs. Night duty. (Table no.5)

6. Distribution of short nap / sleep duration in night shifts: Maximum 93.3% were 2 hrs. and 6.66% were 3 hrs short nap during Night shift and 10% were do not have sleep during night shift. (Table no.6)

7. Distribution of day sleep duration after night shifts: Maximum 30% were taking 2 to 3 hrs day sleep after Night shift, 20% were taking ≥ 5 hrs day sleep, 20% were taking 5 hrs day sleep and 10% were not taking sleep after night shift. (Table no.7)

8. Symptoms of *Nidra Vegadharana* (Holding of sleep

Urge): As per the present study majority of 76.6% had *alasya* (Unenergetic), 76.6% had *akshigaurava* (Heaviness of eyes) and 66.6% had *angamarda* (Generalised body ache), 60% had *Angajadya* (Stiffness of body parts), 60% had *Murdha Gaurava* (Heaviness of forehead), 60% had *AkshiJadya* (Stiffness of eyes), 56.6% had *Shiro Ruja* (Headache), 46.6% had *Tandra* (Drowsiness), 36.6% had *Jrambha* (Yawning), 33.3% had *Shiro Roga* (Head related ailments), 20% had *Moha* (Delusion). (Table no.8)

9. WHOQOL BREF-

As per the WHO user manual, raw score for the domains of WHOQOL-BREF were calculated by adding values of single items and were transformed on the scale ranging from 0 to 100, where 100 is the highest and 0 is the lowest QoL. Mean score of each domain and the total score were calculated.

The first two questions in the WHOQOL-BREF were taken together for the analysis of perceived QoL. The total items score was measured score and finally rated on 4-level rating scale. Very weak level is with cut-off point ranged from 0 to 25; weak level is with cut-off point ranged from 26 to 50; intermediate level is with cut-off point ranged from 51 to 75; good level is with cut-off point ranged from 75 to 100.

9.1: Rating the quality of life: On analysis of the perceived QoL questions maximum of 53.3% were good quality of life and 33.3% moderately quality of life and 3.33% very good quality of life and 10% were poor quality of life. (Table no.9.1)

9.2: Health satisfaction: Maximum 66.6% were satisfied with their health and 20% were dissatisfied with their health and 13.3% were moderately satisfied. (Table no.9.2)

9.3: Domain wise Quality-of-life distribution: Domain wise distribution showed that maximum 60% had intermediate physical QoL, maximum 73.3% had intermediate psychological QoL, maximum 60.6% had very weak social QoL and maximum 70% had intermediate environmental QoL. No one has good score of physical and psychological QoL and only 10% and 6.66% had good social and environment QoL respectively. (Table no.9.3)

DISCUSSION

In this pilot study a lower score in social domain was reported. Health 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. Shift works

can thus lead to social marginalisation.¹⁰

Maximum 70% subjects showed intermediate environmental QoL score. Impact of long-term working in night shift decreases the satisfaction of oneself and happiness and thus it reflects in the decreases in the satisfaction of environmental acceptance.

Under psychological health 73% had intermediate QoL score and no one had good psychological QoL score. Improper sleep Pattern may affect thinking of mind and psychological health.

In case of physical QoL, 60% had intermediate QoL score and no one had good physical QoL score. It implies that the night shift decreases the sleep satisfaction, hence disturbance in normal physiological function of the body and disturb the normal circadian rhythm of body.

Maximum health workers were suffering by *Nidra vegadharan* (Holding of sleep Urge) symptoms specially - *Alasya* (Unenergetic), *Angamarda* (Generalised body ache), *Angajadya* (Stiffness of body parts), *Tandra* (Drowsiness), *Shiro Ruja* (Headache), *Shiro Jadya* (Stiffness of head), *MurdhaGaurava* (Heaviness of forehead), *Akshi Gaurava* (Heaviness of eyes), *AkshiJadya* (Stiffness of eyes). Almost all may be due to *vataprokopa* caused by *Ratrijagarana*, irregular timing of sleep, were pressure in night shift and due to circadian misalignment.

CONCLUSION

In this pilot study maximum night shift health workers had very weak, weak, or intermediate QoL. Almost all the Health care workers were suffering by *Nidra Vegadharan* (Holding of sleep Urge) symptoms. Night shift (*Ratrijagarana*) has an impact on the health status mainly due to the misalignment of circadian rhythm. Present study was a pilot study on 30 health care workers further follow up studies with larger sample, size, enrolling health care worker from different hospital of Bhopal city can be done to assess their QoL and to identify *Nidra Vegadharan* (Holding of sleep Urge) symptoms.

Acknowledgment- Nil

Conflicts Of Interest- Nil

Source of finance & support – Nil

ORCID

Rustam Mujalde , <https://orcid.org/0000-0002-7145-8524>

REFERENCE

1. Shastri K, editor. Charak Samhita of Agnives; Shutrasthana, Chapter 11, Vers No.35. Vol. 1 Varanasi; Chaukhambha Bharti Academy, 2013; P.227
2. Gupta A, editor Ashtanghridaya; Sutra Sthana, Chapter 7, Verse No.53. Vol. 1Varanasi; Chaukhambha Prakashan,2010; P.164
3. Shastri K, editor. Charak Samhita of Agnives; ShutraSthana, Chapter 7, Vers No.23 Vol.1Varanasi; Chaukhambha Bharti Academy, Varanasi,2013; P.157
4. Shastri AD, editor. Sushruta Samhita Uttar Sthana, Chapter 55, Verse No.17. Vol.2 Varanasi Chaukhamba Sanskrit Sansthan,2015; P.519
5. Gupta AD, editore. AshtangHridaya Sutra Sthana, Chapter 4, Verse No.12 Chaukhambha Prakashan, Varanasi, 2010; P.79
6. Shastri K, editor. CharakShahita, ShutraSthana, Chapter 7, Vers No.3 Vol.1 Varanasi; Chaukhambha Bharti Academy,2013 Page.150
7. Shastri AD, Sushruta Samhita, Uttar Sthana, chapter 55, Verse No.4,5,6 Varanasi; Chaukhamba Sanskrit Sansthan,2015 Page 515.
8. Gupta AD, Ashtanga Hridaya, Sutra Sthana, Chapter 4, Verse No.01 Varanasi; Chaukhambha Prakashan,2010 Page.75
9. Kumar P, Agarwal Neeraj, Singh Chandra, Pandey Sanjay, Ranjan Alok, Kumar Dhananjay, Diabetes and quality of life a pilot study, 2016, Vol.5, issue 06, 10.5455/ijmsph.2016.18092015155, International Journal of Medical Science and Public Health, <https://www.researchgate.net/publication/283902703> Diabetes and quality of life a pilot study.
10. Harrington JM. Health effects of shift work and extended hours of work. Occupational and Environmentalmedicine.2001Jan1;58(1):68-72.

How to cite this article: Mujalde R, Jain T, Marwaha N, Mandloi VS “Effect of Night Shift on The Quality of Life of Health Care Workers in Bhopal City W.S.R. to *Nidra Vega* – A Pilot Study” IRJAY. [online] 2023;6(4);24-29. Available from: <https://irjay.com>
DOI link- <https://doi.org/10.47223/IRJAY.2023.6404>

Table no. 1: Age and Gender Wise distribution of subjects:

GENDER	21 – 40 YEARS	41 – 60 YEARS	TOTAL
Male	2 (6.66%)	1 (3.33%)	3 (10%)
Female	27 (90%)	0 (0%)	27 (90%)
Total	29 (99.6%)	1 (3.33%)	30 (100%)

Table no. 2: Marital status wise distribution of subjects:

MARITAL STATUS	TOTAL NO.	PERSENTAGE (%)
Unmarried	11	36.6%
Married	19	63.3%
Widow	0	0%
Divorced	0	0%
Total	30	100%

Table no. 3: Physical activity wise distribution of subjects:

Physical activity	TOTAL NO.	PERSENTAGE (%)
Active	1	3.33%
Inactive	29	99.6%
Total	30	100%

Table no. 4: Work Experience wise distribution:

Total Work Experience (yrs.)	No. of HWC (%)
≥ 6 Month	3 (10%)
≥ 1	4 (13.3%)
≥ 5	21 (70%)

Table no. 5: Night shift schedule wise distribution:

Night shift schedule (HRS)	No. of HCW (%)
8	0 (0%)
10	1 (3.33%)
12	29 (99.6%)

Table no. 6: Sleep during Night Shift wise distribution:

Sleep during Night Shift (hrs)	No. of HCW (%)
Do not sleep	3 (10%)
2	28 (93.3%)
3	2 (6.66%)
5	0 (0%)

Table no. 7: Day sleep after Night shift wise distribution:

Day sleep after Night shift	No. of HWC (%)
Do not sleep	3 (10%)
2	6 (20%)
3	9 (30%)
5	6 (20%)
>5	6 (20%)

Table no. 8: Assessment of *Nidra Vegadharana* (Holding of sleep Urge) symptoms wise distribution:

SYMPOMS	TOTAL NO.	PERSENTAGE (%)
Jrambha (Yawning)	11	36.6%
Moha (Delusion)	6	20%
Alasya (Unenergetic)	23	76.6%
Angamarda (Generalised body ache)	20	66.6%
Angajadya (Stiffness of body parts)	18	60%
Tandra (Drowsiness)	14	46.6%
Shiro Roga (Head related ailments)	10	33.3%
Shiro Ruja (Headache)	17	56.6%
Shiro Jadya (Stiffness of head)	12	40%
MurdhaGaurava (Heaviness of forehead)	18	60%
AkshiGaurava (Heaviness of eyes)	23	76.6%
AkshiJadya (Stiffness of eyes)	18	60%

Table no. 9.1: Rating the quality-of-life wise distribution:

Option	Frequency	Percentage
Very poor	0	0%
Poor	3	10%
Moderate	10	33.3%
Good	16	53.3%
Very good	1	3.33%

Table no. 9.2: Health satisfaction wise distribution:

Option	Frequency	Percentage
Very dissatisfied	0	0%
Dissatisfied	6	20%
Moderate	4	13.3%
Satisfied	20	66.6%
Very satisfied	0	0%

Table no. 9.3: Domain wise Quality-of-life distribution:

QOL (DOMANE)	Very weak SCORES (0-25)	Weak SCORES (26-50)	Inter mediate SCORES (51-75)	Good SCORES (76-100)
Physical domain	1 (3.33%)	11 (36.6%)	18 (60%)	0 (0%)
Psychological domain	0 (0%)	8 (26.6)	22 (73.3%)	0 (0%)
Social domain	5 (60.6%)	3 (10%)	1 (3.33%)	3 (10%)
Environmental domain	1 (3.33%)	6 (20%)	21 (70%)	2 (6.66%)