



STUDY OF CAUSATIVE FACTORS OF VARIOUS DISEASES IN BUS DRIVING PROFESSION

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ABSTRACT

The work of professional bus drivers is considered as extremely stressful. This profession disrupts their work life and home life, makes social activities and regular breaks very hard to plan and supplies constant hassle. Study was conducted in depth interviews and clinical examination on 100 volunteer. Data was collected and analysed. **Aim-** Study of bus driving profession as a contributing Hetu in various diseases. **Objectives-** 1. Collects information of bus driving profession. 2. Study the Hetu's in bus driver profession for various diseases from Ayurvedic point of view. 3. Find out the exact nature and intensity of health hazards caused by bus driving. **Methodology-** A Qualitative Descriptive type of research conducted on the 100 patients of bus driver. **Discussion-** In all male Drivers 100% Yanasevan, uncomfortable cabin and inhalation of smoke in cabin was observed.

Change of Duty Pattern was observed in 81%. In Viharaja Avyayama 91% Diwaswap 73% were observed. Different Vyasans observed in 74%. In Manas Hetu Chinta 45%, Krodha 43% of patients observed moderately. Various Lakshana observed were Katishool, Janusandhishool, Aruchi, Agnimandya, predominantly. Various Srotas Dushti were observed like Asthivaha, Majjavaha, Annavaha, Pranavaha, Rasavaha. According to Vyadhi Katishool, Janusandhishool of patients predominantly were observed. **Conclusion-** Yanasevana,

inhalation of smoke, uncomfortable cabin, steering vibration, disturbance from conductor and passengers are the professional hazards of bus driving. Various Aharaja Hetu, Viharaj Hetu manas hetu and Vyasana contribute in the various types of diseases. Majority sroatas dusthi and turns into various types of diseases.

KEYWORDS: Drivers, Hetus, Worklife.

INTRODUCTION

In today's modern civilization transportation is the key factor. Fast moving vehicle like bus, trains make human life more faster. Bus driving as a profession make enormous change in drivers lifestyle. It deserves a serious thought whether bus driving has any pathogenic effects on bus drivers. In Ayurvedic classics, excessive travelling, excessive riding on animals like horses, camels etc. have been blamed for causing various ailments, especially those caused due to aggravation of Vata Dosha. It has similarity with today's four-wheeler driving. The Ayurved classics have referred them as Hetu i.e. factor capable of vitiating Doshas and causing diseases. 'Yanasevan' which means use of vehicle therefore appears repeatedly in these classics as an etiological factor of several diseases.

Vagbhata has mentioned that the cause of diseases is Heen, Meethya and Atiyoga of Kala, Indriarth and Karma. Samyak Yog of Kala, Indriarth and Karma is responsible for healthy state of individuals. Bus drivers are continuously watching, seating, listening loud, harsh sounds, inhaling dust particles, fumes etc. Seating for hours with rotating hand with steering without rest in every season, not taking sufficient sleep. These are Atiyoga, Heen and MeethyaYog of his Indriya, Sharir and Mana. So the present study was carried out in order to study the different Hetu, Lakshana and Vyadhi found as professional hazards in Bus Driver's.

Ayurveda the science of life had observed all the changes and was proved to be much effective in each stage of change. Man has changed his habits of eating, sleeping, and also habit of travelling. Being a medical science, Ayurveda is always in connection with habits and rules of community. Various communal activity and needs are described in Ayurveda, regarding their effect on the health.

Yana-sevana i.e. use of vehicle, is one of the basic of the society from ancient time till today. In the ancient time the transport or travelling media was especially animal but now a day's people are using vehicles for travelling. If we think about developing cities like pune we have

no escape key from this vicious circle of money, work, health and stress. In concern work, transport forms a major part especially public transport, indeed “Pune Mahanagar Pariwahan Mandal Limited” (PMPML) is a symbolic representation of these rapid life, and of course, the drivers are adversely affected. The journey of PMPML is a roller coaster ride because the roads are full of pits and elevations. Moreover, punctuality is the first priority because it carries thousands of passengers who are supposed to reach their destinations under constrains of time and place. Not only has this, but their way of working made the scenario even more intense. Thus they fall prey to Lakshana like Katishool. Katishool like pain has been a recognized human affection for a long time. The Description of different type of pain there causes and management are described in Ayurvedic texts that are said to be 2000 to 3000 years old.

AIM AND OBJECTIVES

AIM

To study bus driving profession as a contributing Hetu in various diseases.

OBJECTIVES

1. To collect information of bus driving profession.
2. To Study the Hetu's in bus driver profession for various diseases from Ayurvedic point of view.
3. To find out the exact nature and intensity of health hazards caused by bus driving.

MATERIAL AND METHODOLOGY

The data taken into classification by the researcher were as follows-

Bus vehicle driving. Health problems found among bus vehicle drivers. Since both of these were qualitative type of data, this became a Qualitative Descriptive type of research.

This data was purely based upon the past history and the present health status of bus drivers. Since, the researcher himself was not going to induce any change in the selected sample but rely on the available past and present facts; this became a retrospective type of study.

To study pathogenic nature of bus vehicle driving, the researcher used people driving bus vehicle as a source of input.

CRITERIA OF INCLUSION

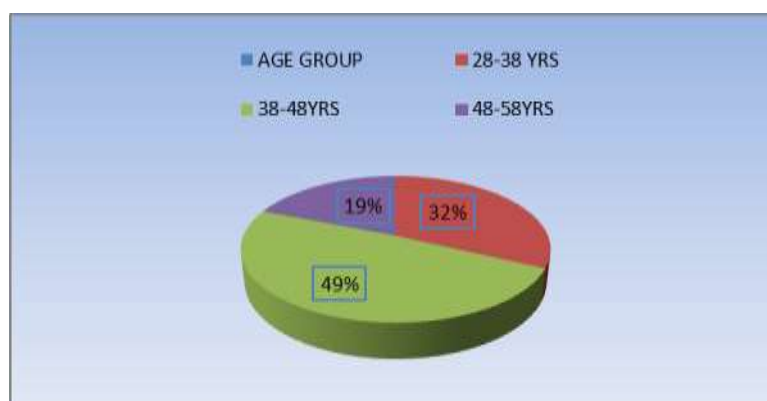
1. P.M.P.M.L. Bus drivers who are working for minimum 2 years.
2. Age group between 25 years to 58 years. Irrespective of sex, marital status, financial status.
3. Bus driver personnel available at the time of visit only were selected.

CRITERIA OF EXCLUSION

1. The persons who are suffering from any major illness from systemic disorders previously will be excluded.
2. Persons who are below the age 25 years and 58 years are excluded.
3. Persons who are not willing to get included in the study.

OBSERVATIONS AND DISCUSSION

1. DIVISION OF PATIENTS ACCORDING AGE GROUP

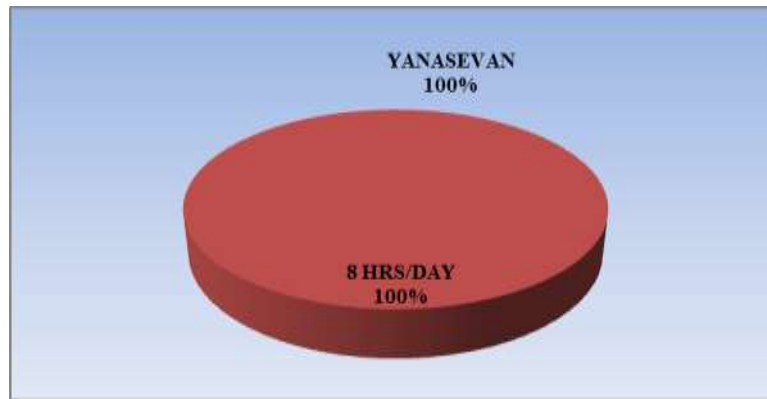


As per gender 100 male Drivers were observed. Distribution of examined bus driver personnel's according to the age group was 38 to 48 years 49% of Drivers were observed predominantly. In group of 28 to 38 years 32% and in Age group of 48 to 58 years 19 % of drivers were observed.

Therefore most of the subjects belong to middle age groups. In fact they belong to Taruna Vaya Avastha according to Ayurveda. Of course this was expected because the research work was restricted to the subjects who are currently in active service.

It also shows that there is a fair amount of equal distribution among the 10 years group.

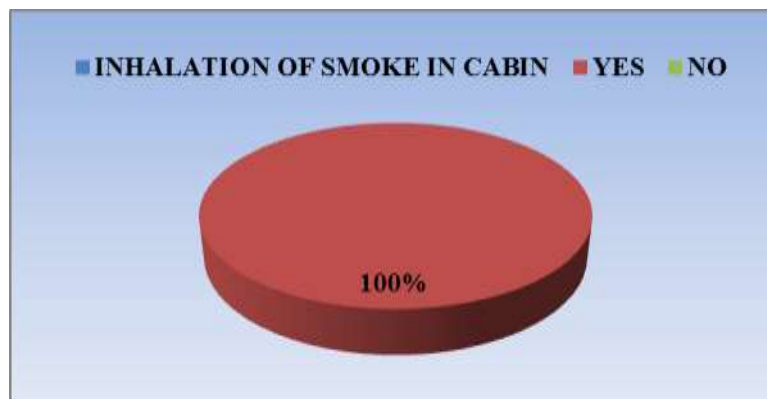
2. DIVISION OF PATIENTS ACCORDING TO YANASEVAN



All 100% of volunteers observed Yanasevan. They have to drive bus for 8 hours didn't get rest during the duty hours.

Yanasevan is a main Hetu for Vata Dosha Prakopa, Snayushaithilya, repeated jerks leads to Asthivaha Srotas, Majjavaha Srtas, Mansavaha Srotas Dushti which ultimately results in Katishool, Janusandhi Shool, Prustha Shool, Arsha, Sandhigatvata, Manyastamba.

3. DIVISION OF PATIENTS ACCORDING TO INHALATION OF SMOKE IN CABIN



In all 100% of driver's inhalation of smoke in cabin Dust, Fumes were observed.

In pune all routes are crowded two wheeler emit the smoke. The driver cabin of bus are not closed because many of the glasses of the window of driver cabin are observed broken. So that the dust smokes from vehicles, emission easily enters the drivers cabin.

Due to the poor bus engine maintenance loud sound from engine also affects the health of bus drivers.

Now the symptoms observed in drivers are classified in different diseases and their Ansha-Ansha Kalpana and Samprapti can be described as Inhalation of Smoke in Cabin is a Hetu which causes Pranavaha Srotas and Annavaha Srotas Dushti which leads to Tridosha Prakopa which ultimately results in Pratishaya, Shwasa, Kasa, Kanthadaha, Aruchi, Shirshool Vyadhis Utpatti.

5. DIVISION OF PATIENTS ACCORDING TO DUTY PATTERN



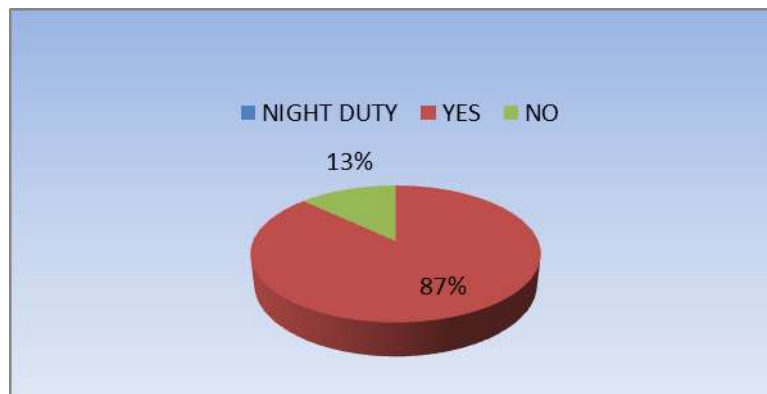
Duty Pattern Fix shift timing duty 11%, were Daily changes 8%, Daily changes 8% and Biweekly changes 81% of drivers were observed predominantly.

Duty pattern was Hetu of Pitta Dosha and Vata Dosha Prakop which vitiates Annavaha Srotas Dushti, Mansavaha Srotas Dushti.

Disturbance in Dincharya as well as Viharaj Hetu like Aushnya Sanidhya and frequent sitting posture on hard surfaces causes again Pitta Dosha and Vata Dosha Prakop.

These Hetus are also effect of Vata Dosha, Pitta Dosha Dushti results in the diseases like Arsha, Amlapitta, Ajirna, Arochak, Shirshool.

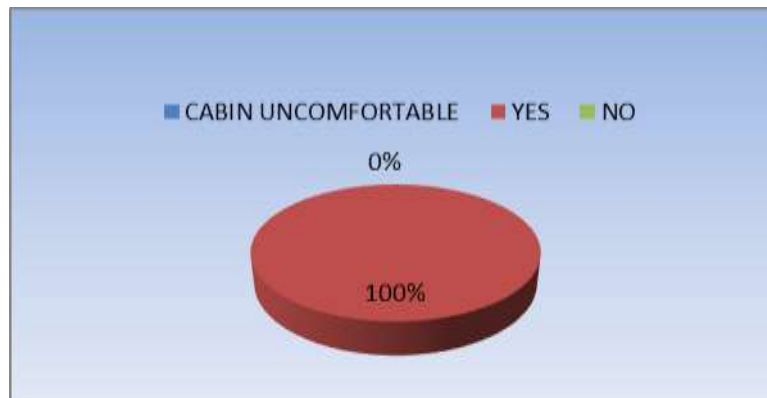
6. DIVISION OF PATIENTS ACCORDING TO NIGHT DUTY



Night duty biweekly changes were observed in 87% of drivers.

Night Duty was Hetu for Vata and Pitta Dushti which vitiates Annavaha Srotas, Mansavaha Srotas Dushti results in Agni Dushti because of which different diseases like Malavasthamba, Amlapitta, Ajirna, Arsha, Arochak, Shirshool, Agnimandya were observed.

7. DIVISION OF PATIENTS ACCORDING TO CABIN UNCOMFORTABLE

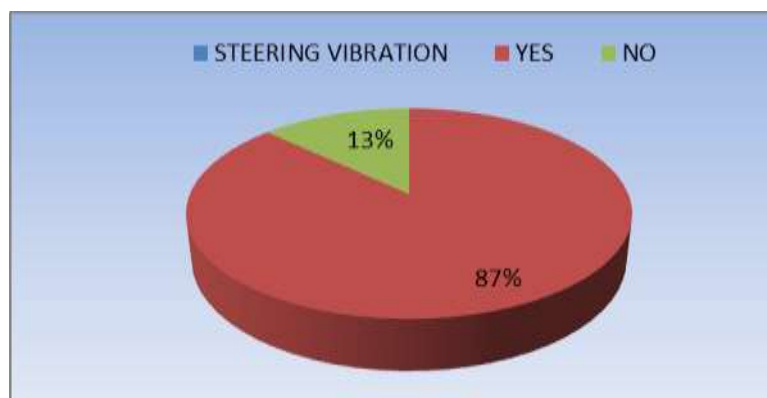


In 100% of drivers uncomfortable cabin were observed.

Uncomfortable Cabin and sitting on hard surface is a major Hetu for Vata Prakop.

This Vataprakop and Snayu Shaithilya because of repeated jerks together diminishes the Dharana Karma of different Dhatus such as Mansa, Meda, Asthi, which ultimately results in Katishool, Janusandhishool, Prusthshool, SandhigataVata, Manyastamba.

8. DIVISION OF PATIENTS OF ACCORDING TO STEERING VIBRATION

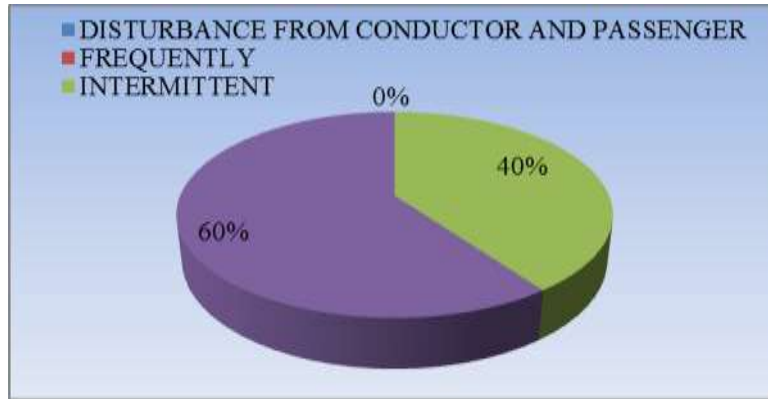


Vibration of Steering was complaint in 87% of drivers.

Vibrations of steering can be compared to seviour Kampa as a Hetu because of which seviour Vata Dosha Prakop in localized area happens.

Therefore, Asthivaha Srotas, Mansavaha Srotas Dushti occurs as well as Sthan Sansraya of Vata Dosha occurs in particularly Manyastamba as well as Kasheruka Asthi which results in diseases like Manyastamba, Prusthshool, Sandhigata Vata.

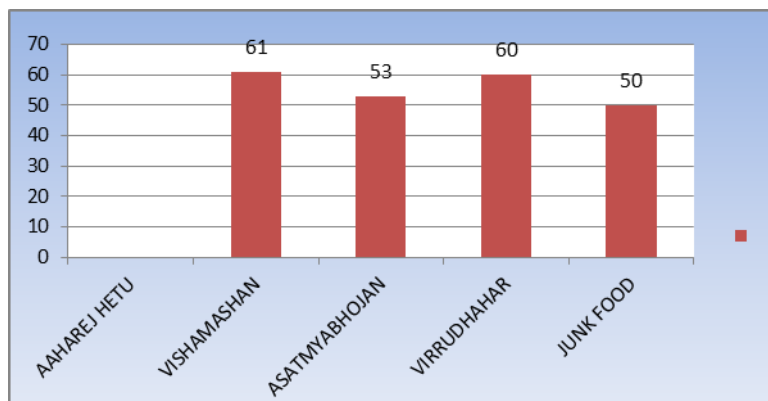
9. DIVISION OF PATIENTS ACCORDING TO DISTURBANCE FROM CONDUCTOR AND PASSENGERS



Disturbances from conductor and passengers in intermittently 40%, Rarely 60% of Drivers predominantly were observed.

Over stress in visual activity that is on Alochaka Pitta and disturbance in Buddhi and Dhruiti Karma vitiates Rasa Dhatu, Manovaha Srotas and Alochak Pitta. This Samprapti can lead to Shirshool, Klama, Netrashool.

10. DIVISION OF PATIENTS ACCORDING TO AAHARAJ HETU



Irregular dietary habit is a typical cause of professional hazards associated with this profession.

The enormous burden of duty with irregularly spreading cities and relative lack of work force compels these personnel to perform duties beyond regular timings.

Added to this the factor of discipline which is considered as of paramount importance in any bus driver ensures that these personnel have to give second priority to their diet which is a route cause of their troubles.

VISHAMASHAN

Vishamashan more than 6 times per week was observed in 61% drivers predominantly.

Vishamashan is a main Hetus for Tridosha Prakopa.

These Tridosha vitiates Annavaha Srotas Dushti which leads to contributing the diseases Aruchi, Amlapitta, Arsha, Ajirna, Arochak.

ASATMYA BHOJAN

Asatmya Bhojan more than 6 times weekly was observed in 53% of drivers.

Asatmya Bhojan is main contributing Hetu for Pitta Dosha Dushti as well as Pranavaha Srotas Dushti, Annavaha Srotas Dushti which results in diseases like Arsha, Amlapitta, Ajirna, Arochak in bus drivers.

VIRRUDDHAHAR

Viruddhahar more than 6 times per week is observed in 60% drivers.

Which can stated as follows in the Samprapti of these diseases it has been stated that Virrudhahar vitiates TriDosha and form Garavisha which can be harmful for all Dhatus.

This Garavish situates in Rakta Dhatu, Mansa Dhatu specially because of which Guda Marma and Annavaha Srotas are vitiated which can be finally results in Arsha, Amlapitta, Ajirna, Arochak.

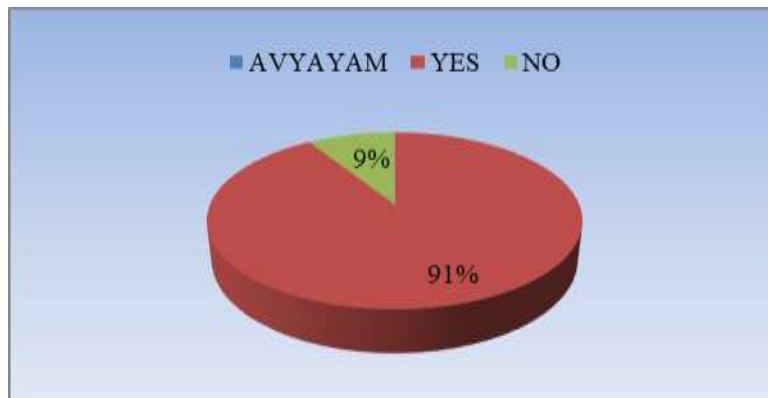
JUNK FOOD

Junk Food (Vadapav, Pizza, Dosa, etc.) is observed consuming more than 6 times weekly by 50% drivers.

Junk Food is main Hetu for Pitta Prakopa and Rakta Dushti. The preserving and artificial colours both acts as Garavish.

The Tikshna Guna in junk food vitiates. Annavaha Srotas, Medovaha Srotas, Mansavaha Srotas Dushti and Rakta Dhatu Dushti because of which results in diseases like Arsha, Amlapitta, Ajirna, Malavasthamba, Arochak.

11. DIVISION OF PATIENTS ACCORDING TO AVYAYAMA



Avyayama were observed in 91% of drivers.

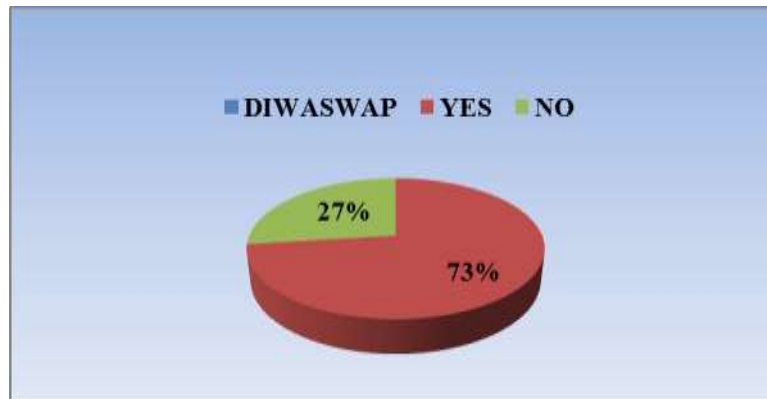
A high percentage of Avyayama is an indication that the beneficial principles of Ayurved have not perpolated into the society.

The fear of being stamped as indisciplined comels these personnel to remain in their post of duty inspite of various Avyayama is the root cause of this behaviour.

Avyayama is a Hetu for Rasavaha Srotas, Pranavaha Srotas, Asthivaha Srotas Purishvaha Srotas Dushti.

It also vitiates Mansa, Meda, Rakta Dhatu. Avyayama is a Hetu for Agni Dushti also. This combinely vitiates TriDosha and results in Agnimandya which causes which it leads to contributing diseases Amlapitta, Ajirna, Arochak, Arsha, Katishool, Janusandhishool, Manyastamba, Grudhrasi.

12. DIVISION OF PATIENTS ACCORDING TO DIWASWAP

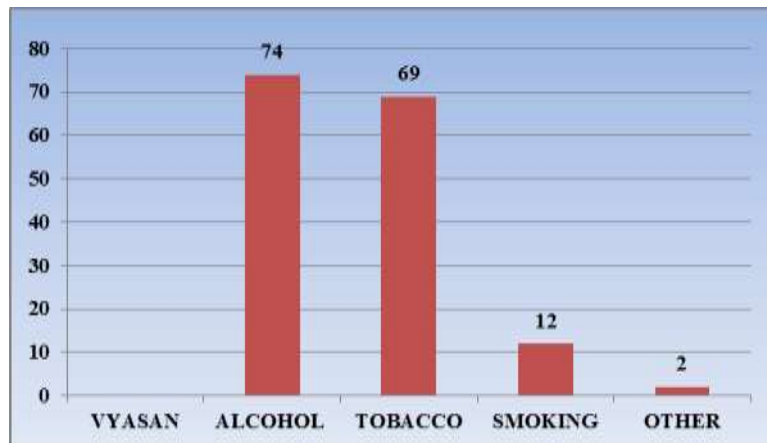


Diwaswap taken were observed in 73% of drivers.

Diwaswap is a main Hetu of Kapha Dosha Dushti, Pitta Dosha Dushti Prakop as well as Aamajirna and Vidagdhajirna.

It vitiates Annavaha Srotas, Purishvaha Srotas, Rasavaha Srotas, Mansavaha Srotas Dushti. Which ultimately results in Arsha, Amlapitta, Ajirna, Arochak.

13. DIVISION OF PATIENTS ACCODING TO VYASANA

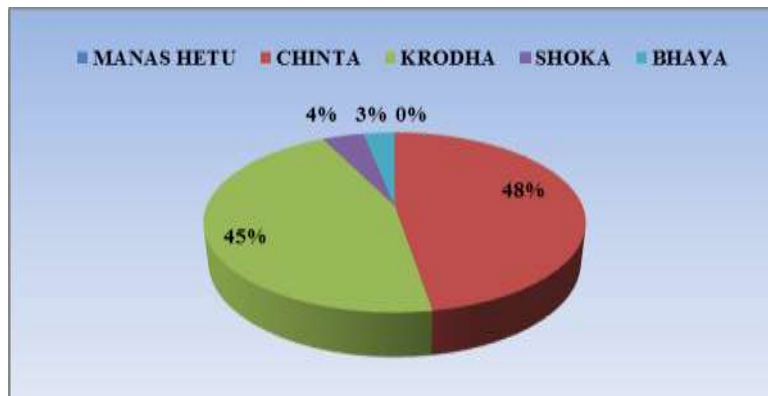


In Vyasana, Alcohol Consumption 74%, Tobacco Chewing 69%, Smoking 12% were observed.

Madhyapana and Tobacco chewing for smoking vitiates Pitta Dosha with the help of Tikshna, Ushna, Guna with their Vyavayi Vikasi Guna.

Pranavaha Srotas, Annavaha Srotas, Majjavaha Srotas Dushti happens which leads to Tivra Aamashaya Daha as well as Rakta Dushti this results in diseases like Arsha, Amlapitta, Ajirna.

14. DIVISION OF PATIENTS ACCORDING TO MANAS HETU



In Manas Hetu- Chinta is seen in 45% of drivers were observed. Krodha is seen in 43% of drivers were observed.

These Chinta and Krodha is seen predominant personnel. It is anybody's guess why Chinta and Krodha is seen in laxanas because when one sees the pitiful tendency of Indriyas of breaking law rather than coping up with it.

From the eyes of bus driver personnel it is frustrating to see the public in general does not follow the rules of traffic but still blame the department for the on the road.

Another feature of their duty is that these personnel can devote very little time to themselves their hobbies and their family members.

In fact these people are made to work even on Sundays and holidays and hence are deprived of the family and social life. This is a primary cause of mental imbalance in these personnel.

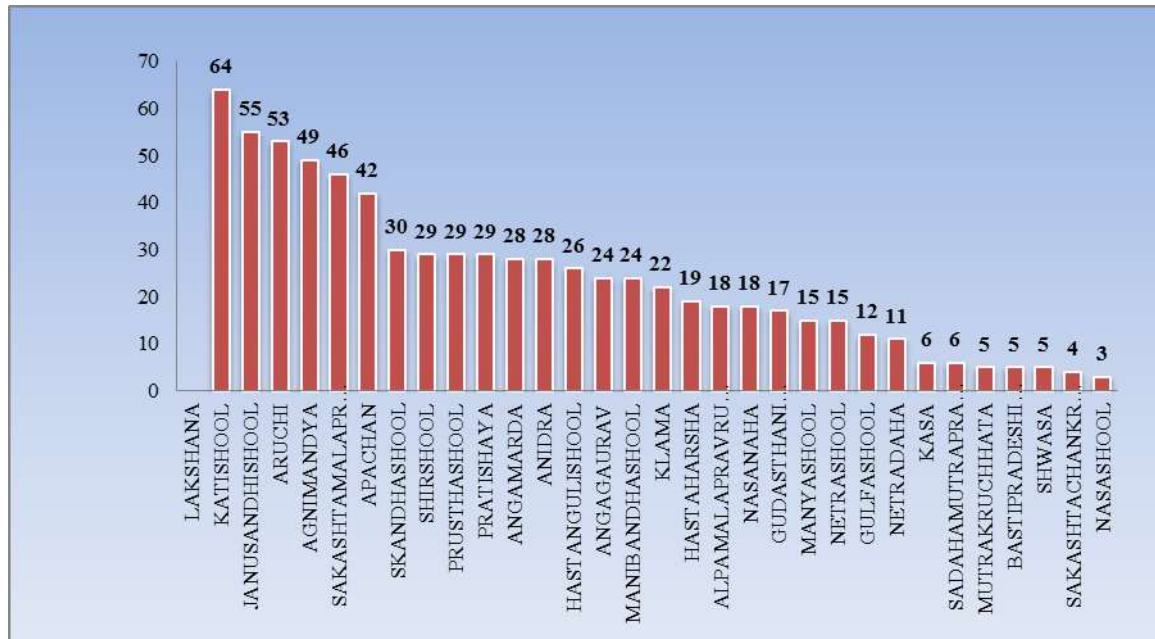
Manovaha Srotas is the commonest observed during study. Most of Laxanas of Manovaha Srotas Dushti have been observed. About 28% of personnel have shown Laxanas associated with one of the most important Srotas of body namely Pranavaha.

The severity of professional hazard can be judged by this fact that 39% of personnel have Prana Vayu affected and shows its Laxanas. Rasavaha Srotas, Annavaha Srotas are affected.

Manas Hetu like Chinta, Krodha, causes Pitta Dosha Prakop and Rasa Dushti which results in Dhatwagni Mandya.

This causes Rasavaha Srotas, Manovaha Srotas, Annavaha Srotas Dushti which leads to Anidra, Amlapitta, Arochak.

15. DIVISION OF PATIENTS ACCORDING TO OBSERVED LAKSHANA



A specific pattern has been followed while enlisting the Lakshanas found in the personnel. The Laxanas which are present at the time of case-taking have been included whereas the Laxanas which are present frequently over a period of time included.

This has been done to avoid inclusion of previous Vyadhis which are not related to the profession and hence can not be called “Professional Hazards”. This pattern also rules out the inclusions of trivial Laxanas which are a common place for any individual.

As per Lakshanas Katishool 64%, Janusandhishool 55%, Aruchi 53%, Agnimandya 49% Sakashtamalapravrutti 46%, Apachan 42%, Skandhashool 30%, of lakshana predominantly observed of drivers.

16. DIVISION OF PATIENTS VYADHIS DOSHA DOMINANCE

VATA	PITTA	KAPHA
KATISHOOL	AMLAPITTA	PRATISHAYA
JANUSANDHISHOOL	AJIRNA	SHWASA
PRUSTHASHOOL		KASA
SANDHIGATAVATA		ARSHA(stravi)
MANYASTAMBA		AROCHAK
GRUDHRASI		
MALAVASTHAMBA		
ARSHA(shushka)		
MUTRASHMARI		

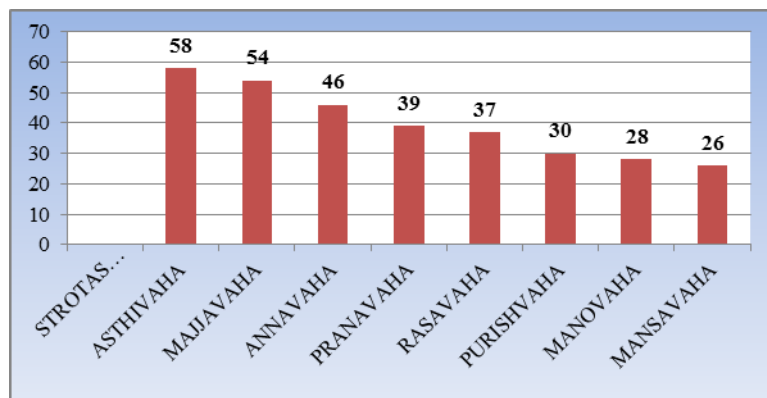
Dushti of Vata Dosha is seen more than Pitta and Kapha.

Vata Dosha- Katishool, Janusandhishool, Prusthashool, Sandhigatavata, Manyastamba, Grudhrasi Malavasthamba, Arsha (Shushka), Mutrashmari these diseases were observed.

Pitta Dosha- Amla Pitta, Ajirna these diseases were observed.

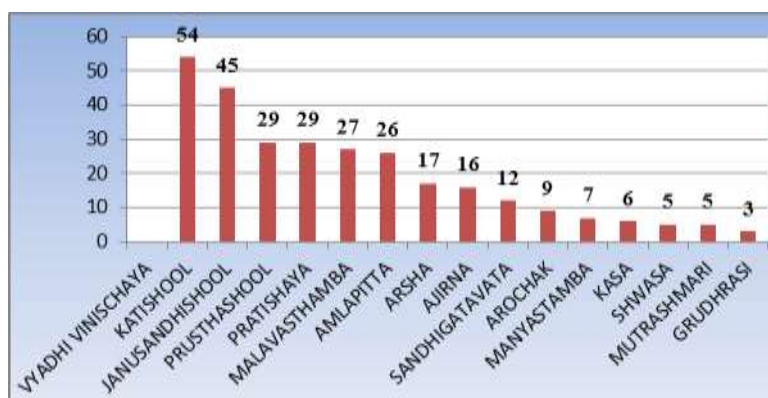
Kapha Dosha- Pratishaya, Shwasa, Kasa, Arsha (stravi), Arochak these diseases were observed.

17. DIVISION OF PATIENTS ACCORDING TO SROTAS DUSHTI



Asthivaha 58%, Majjavaha 54%, Annavaaha 46%, Pranavaha 39% Srotas Dushti is predominantly observed in drivers.

18. DIVISION OF PATIENTS ACCORDING TO VYADHI VINISCHAYA



Division of Vyadhi Vinischaya Katishool 54%, Janusandhishool %, Prusthashool 29%, Pratishaya 29%, Malavasthamba 27%, Amlapitta 26%, Arsha 17%, Ajirna 16%, SandhigataVata 12%, Arochak 9%, Manyastamba 7%, Kasa 6%, Shwasa 5%, Mutrashmari 5%, Grudhrasi 3% were observed vyadhi seen in the bus drivers.

19. DIVISION ACC. TO YEARS OF SERVICE OF DRIVERS

According to Service of Drivers	0-10 yrs	11-20 yrs	21-30 yrs
Katishool	2	23	29
Janusandhishool	4	15	26
Prusthashool	5	9	14
Pratishaya	14	10	5
Arsha	9	6	2
Malavasthamba	7	11	9
Amlapitta	11	8	7
Ajirna	10	5	1
SandhigataVata	1	5	6
Arochak	5	2	2
Manyastamba	0	3	4
Kasa	0	2	4
Shwasa	0	3	2
Mutrashmari	0	3	2
Grudhrasi	0	1	2

Disease observed according to years of service of Drivers. In drivers having a service of 00 to 10 years, Vyadhis observed are Pratishaya 14%, Amlapitta 11%, Ajirna 10%, Arochak 5%. In drivers having a service of 11 to 20 years, Vyadhis observed were Katishool 37%, Janusandhishool 29%, Malavasthamba 11%, Pratishaya 10%. In drivers having a service of 21 to 30 years, Vyadhis observed were Katishool 15%, Janu Sandhi Shoola 26%, Prusthashool 14%, SandhigatVata 6%.

CONCLUSION

1. Yanasevana, inhalation of smoke, uncomfortable cabin, steering vibration, disturbance from conductor and passengers are the professional hazards of bus driving.
2. Irregular food habits due to changing duty pattern are the causative factor for various Lakshana and Vyadhis in the bus drivers.
3. Viharaj Hetu Diwaswap, Avyayam and Vyasan like alcohol consumption, tobacco chewing, and smoking are the contributory factors in the bus drivers.
4. Asthivaha, Majjavaha Annavaha, Pranavaha, Rasavaha, Purishvaha, Manovaha, Mansavaha Srotas Dushti were predominantly found in the bus drivers.
5. Ajirna, Katishool, JanuSandhi Shoola, Pratishaya, Shwasa, Kasa, Amlapitta, Arsha, Malavsthamba, Arochak, Grudhrasi, Manyastamba, Mutrashmari, Sandhigatvata Vyadhis were found in the bus drivers.

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