



Occupational Risks and Health Status among Professional Driver in Erode District, Tamilnadu

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Abstract:

This paper analyzed on socio-economic status has been correlated with occupational risks and health status among professional driver in Erode district, Tamilnadu. Occupations of drivers, there are numerous jobs within the informal transport industry and its sub-sectors, passenger transport, goods and freight, and rail and air services. Hence drivers often ignore their health problems and carry on driving with headaches and other health impairments, or take over-the-counter medicines to relieve pain. They affected some habits actions by alcohol drug abuse appears to include an element of self-medication for an illness among the contributing factors are traffic, and road conditions, and violence or fear of violence, and risky behaviors including, drug use and, paying for sex. This leads to road accidents by drivers. Drivers have been doing the job all over the World. Most of the drivers drive the vehicles both day and night without continuous sleeping and rest and food in taking also. They have not proper necessities of life name Quality of Water, Clean Air, Good Environment, Hygienic Food, Rest, Sleep and Salary for the Work and health care facilities in their work places.

Keywords: Health status, Occupational risk, Professional driver

1. Introduction

The health status is determined by price of health inputs, income, and a set of social and demographic characteristics of the households, household environmental factors, and health infrastructure at the community level. It is hard to measure the prices of the health inputs. The usual practice is to include a set of variables such as wage rates or education, travel time and cost to capture the variation in prices across families. Income is measured as annual household income from all sources. The study indicates the health status which is associated with socio economic condition variables are age, mother tongue, marital status, nature of family, religion, social status, nativity, education, monthly income of sample respondents and family members.

2. Review of literature

Balarajan R and McDowall (1988) studied professional drivers and their mortality in London fewer deaths than expected from all causes, circulatory disease, and accidents. Lorry drivers showed excess deaths from stomach cancer, lung cancer, bronchitis, emphysema, and asthma, a pattern not evident among taxi drivers. Mortality from bladder cancers, leukaemia, and other lymphatic cancers were raised in taxi drivers, though the results did not achieve statistical significance. **Cheryl Albright et al., (1992)** measured hypertension which assessed as confounding factors included age, marital status, education, income, number of years employed as a bus driver, race, body mass index, family history of heart disease, smoking, fitness, alcohol consumption in a week, and caffeine intake per day. They added hypertension rates should be higher within the higher levels of job demands and lower within the higher levels of decision latitude. **Korelitz et al., (1993)** found truck drivers smoked cigarettes did not exercise regularly, were overweight, and or were not aware they had high blood pressure. Also, truck drivers tested positive on one measure of alcoholism which can be broadly categorized as

obesity, work/life balance and workplace injury issues. **Perez Chada D *et al.*, (2005)** studied the relationship between surrogate measures of sleep apnea, sleep duration, working hours and accident risk in Argentine truck drivers. In general, risk factors for sleep apnea e.g., elevated Body Mass Index, frequent snoring, witnessed apneas and Epworth scores greater than 10 showed a predictable association with elevated sleepiness and higher risk of accident and near accident. By significant odds ratios ranged from 2.5 for an Epworth greater than 10 down to 1.27 for reduced sleep.

3. Methodology

Primary data and secondary data were collected for study related to field in the Erode district to calculate health status of drivers. The sampling 600 drivers was carried out in the 5 blocks of the district namely Erode, Gobichettipalayam, Bhavani, Perundurai and Sathyamangalam and used stratified random. In each blocks, drivers were selected based on the nature of heavy vehicle i.e. 12 categories (120 drivers) each 10, per stratum was selected. In this study, every drivers who are engaged and drive in heavy vehicles like lorry, truck, tempo, bus, tourist bus, auto, mini-dore, tractor, omni, car and other types of heavy vehicles in the selected area Erode district. Here frequency was used to interpret the results about occupational risks and health status of drivers.

4. Occupational Status of the Professional Driver

Occupation may be associated with certain diseases, e.g. lung cancer in asbestos workers. Education helps to inform and guide choices. Choosing a healthy lifestyle helps prevent diseases. Habitat one life matters, High risk factors include home smoking, maternal smoking, use of synthetic pillow and bedding and the use of gas as cooking fuel. Environment is another factor by this World Health Organization estimates that every year over 5 million people die of illnesses linked to unsafe drinking water, improper excreta disposal and unclean domestic environments. Road transport workers are faced with a number of safety issues topped by driver fatigue which is considered the main cause of accidents in transport industry around the world. In the world, driving is very dangerous job as well as risky occupation because nobody predict the accidents when or where or by whom or how or what happens. Built on scrutiny, details about accident and its experience were gathered by researcher to identify the risk factor for driver's life. In reality, however a close relationship exists between occupation, income and education. Occupation of drivers was classified as transport services like goods and passenger. By frequency results, the study depicts that occupational risks and health status was mentioned. In the total of 600, 350 drivers were passenger transport service and 250 drivers with engaged by goods transport service and earned income of each group classified.

5. Working Conditions of the Sample Respondents

The results indicated the system of transport, 75 drivers (12.5 per cent) served as down / local service and 84 respondents (14 per cent) served as regular route and long distance freight service respectively. Out of 100, only 7.5 per cent (45 respondents) were served passenger services. Most of them, 312 respondents, (52 per cent) were served as Agreement or Contract services by vehicles. The nature of the job of sample respondents, only 50 respondents (8.3 per cent) were public sector or government employee with only and most of them, 395 respondents (66 per cent) were private employees they do not have job security like government drivers. Only 155 respondents (25.8 per cent) have ownership of the vehicles they works for more profit. Based on the view, only 8 respondents (1.3 per cent) got monthly or weekly settlement of income payment given by owner of the company or organization and on the other hand mostly 592 respondents (98.7 per cent) got payment on contract base. From the observation they services based on agreement and get jobs in private sector and largely they get income for after every trip.

6. Working experience of the sample respondents

Drivers must learn about driving with few years of experience as cleaner for handling heavy vehicles by experiment. Respondent's years of experience as cleaner or assistant, 535 respondents (89.1 per

cent) had below 5 years and rest of them (11 per cent) had 5 to 10 years. After the long experience as cleaner or assistant they suspect get chance as driver to vehicle but this about the character of owner of the vehicles. After the practice as a cleaner, they become as drivers, so drivers experience of time, mostly 254 respondents (42.33 per cent) had below 10 years and 199 respondents (33.17 per cent) working in 11 to 20 years. Further, 107 respondents (17.83 per cent) had 21 to 30 years. Only 40 respondents, (6.67 per cent) had working above 30 years as driver. Most of the respondents belongs to young and middle age group that's they have working as driver below 10 years of experience. Respondent's working hours, monthly and annual working days of were mentioned, 580 respondents nearby (97 per cent) working 8 hours per day and 13 respondents (2.2 per cent) were working 10 hours per day. Only 7 drivers (1.2 per cent) were working in 12 hours per day. All over the world, 8 hours working in a day is international working hours per day called shift after the industry revolution so, researcher mention 8 hours per day to measure the time of work. Next, 580 respondents nearby (97 per cent) working below 20 days and 12 respondents (2.1 per cent) are working 21 to 25 days and only 8 respondents (1.3 per cent) working 26 to 30 days per month. Additionally basis of annual working days, 586 respondents (98 per cent) were working below 250 days. Followed by 10 respondents (1.5 per cent) was working 251 to 300 days and only 4 respondents (0.6 per cent) were working above 300 days per annum. In real world, full employment and continuous employment is not possible.

7. Working Kilometers on travelling per day of the Sample Respondents

Driver's working time distance on roadways per day were calculated for recognize their health status. It displays the respondent's working kilometers per day, 187 respondents (31.2 per cent) drove below 100 kms per day. Nearly 215 respondents (36 per cent) have driving 101 to 200 kms per day and 66 respondents (11 per cent) have driven 201 to 300 kms and 120 respondents (20 per cent) have driven 301 to 400 kms per day. Only 12 respondents (2 per cent) have driven above 400 kms per day. Professionally drivers have experience to drive the vehicles for long distance they working across the states, unfamiliar language speaking regions, if disease affected them suddenly they discounts and cannot find available probable and continuous health care services for illness of health.

8. Occupation activities of Sample Respondents

Water is one of the basic necessities of the all the species in the world. Every worker needs 5 liters of water in everyday life whereas it hurts human body and death too. So professional drivers have to keep water by own and know about water sources when driving and working environment. Nearly 64 respondents (11 per cent) have drinking well water, only 48 respondents (8 per cent) drinking metro water. Nearly (72 per cent) were drinking corporation water available in outer down areas. But 57 respondents (9.5 per cent) were purchased mineral water for their health condition therefore they avoid the drinking water to intake. The sleep condition of drivers is very important for health status which leads to do accidents on roadways. First 10 per cent were slept 6 hours daily, most of them 86.5 per cent slept 7 to 12 hours daily and only 3.5 per cent slept above 12 hours daily that were mostly working in stands like auto and tempo stands for waiting for works. By the frequency table 5.7 shows the eating condition and food item of the drivers in daily life which contributes to ensure the health status. The vegetarian professional drivers had 10.5 per cent but commonly 89.5 per cent intakes non-vegetarian foods of the total. In the list of table, food item was represented. In that shows hygienic foods available, only for 28. 2 per cent of the drivers they were working near hotel and home. Rests of them nearly 72 per cent were taken unhygienic foods because they cannot get hygienic food while their working places often.

9. Accidents Details of Drivers

The result displays the accidents details of drivers, out of 600, only 32 drivers (5.3 per cent) were involved in accidents when working time. Many reasons said by them accident was happened. Out of 32, only 4 drivers with 12.5 per cent had health problems and virtually 28.1 per cent were reported roadway problems, 53.1 per cent were claimed vehicles parts problems. Only 2 drivers (6.2 per cent)

were reported undefined how accidents happened. After the accidents happened, drivers were injured and immunized, only 2 sample respondents got medical expenditure from their company or organization, but rest of them (30 respondents) spent with nearly 94 per cent spent own pocket of money for medical expenditure. When accidents are happened respondents loss amount without health insurance. It leads to burden of original income because mostly they were spent on self-payment for medical expenses.

10. Factor Determining Health Status

Anyone is ill when who suffer from diseases; however, before discuss disease, need to define health and how health is achieved. A healthy person therefore needs to maintain healthy habits such as taking regular exercises and adequate rest, adopting a high level of personal hygiene, eating a nutritionally balanced diet, abstaining from the abuse of drugs and alcohol, taking care of one's mental well-being and developing social skills to interact in a positive manner within society. In the present study by referring the Hendry Garrett ranking, the present position estimated has been converted into scores. Hendry Garrett ranking formulae was showed, that was indicated, Per cent position= $100 (R_{ij} - 0.5) / N_j$, R_{ij} = Rank given for the i^{th} factor by the j^{th} Respondents, N_j = Number of Factors ranked by the j^{th} Respondents, x = Scale Value, f_x = No. Respondents and f = Score Value. The factors having highest mean value has been considered to be the most important factors. Among that the mean value, in the list drinking habit had first rank (55.19 ms), Spinal action of handling shared second rank (52.78 ms). Sleeping disorder shared third rank (52.75 ms). Sitting works shared fourth rank (51.52 ms), Engine heating/ high temperature shared fifth Rank (51.04 ms), Food varieties shared sixth rank (50.06 ms), Climate condition shared seventh rank (50.03 ms), Un-voluntarily fasting shared eighth rank (49.92 ms). Noise pollution shared ninth rank (48.18 ms), emission from wheel tyres shared tenth rank (48.01 ms), Diesel emission shared eleventh rank, (47.92 ms), Both water problem and air pollution had shared twelfth rank (46.80 ms). Mate with Commercial Sex Workers shared fourteenth Rank (46.12 ms) and finally, dust spreading shared fifteenth rank (45.89 ms) which destroy the lever and heart of respondents. They travelled across the states and all over the country more than 300 kilometers per day and 5000 kilometers annually.

Table: 1. Factors affected in Working Places by Hendry Garrett Ranking

Factors	Rank S Value	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	Total Value	Mean Value	Rank
		85	75	69	64	60	56	53	50	46	43	39	35	30	24	14			
Engine Heating/ High temperature	f	21	59	109	81	46	28	10	6	14	12	7	41	43	67	56	600	51.04	v
	F _x	1785	4425	7521	5184	2760	1568	530	300	644	516	273	1435	1290	1608	784	30623		
Sleeping Disorder	F	35	58	81	52	50	21	20	14	33	53	37	52	61	12	21	600	52.75	iii
	F _x	2975	4350	5389	3328	3000	1176	1060	700	1518	2279	1443	1820	1830	288	294	31650		
Drinking Habit	F	114	84	56	15	14	21	11	36	6	67	22	43	39	20	52	600		i
	F _x	9690	6300	3864	960	840	1176	583	1800	276	2881	858	1505	1170	480	728	33111	55.19	
Emission from Wheel Tyres	F	49	60	25	14	33	22	13	32	33	38	57	87	95	16	26	600		x
	F _x	4165	4500	1725	896	1980	1232	689	1600	1518	1634	2223	3045	2850	384	364	28805	48.01	
Un-Voluntarily Fasting	F	56	54	10	45	35	23	20	31	30	53	78	78	46	19	22	600		viii
	F _x	4760	4050	690	2880	2100	1288	1060	1550	1380	2279	3042	2730	1380	456	308	29953	49.92	
Spinal Action of Handling	F	57	46	40	57	20	36	32	42	43	51	89	28	26	9	24	600		ii
	F _x	4845	3450	2760	3648	1200	2016	1696	2100	1978	2193	3471	980	780	216	336	31669	52.78	
Food Varieties	F	47	53	44	23	18	15	43	44	51	62	56	49	43	23	29	600		vi
	F _x	3995	3975	3036	1472	1080	840	2279	2200	2346	2666	2184	1715	1290	552	406	30036	50.06	
Sitting Works	F	55	66	18	52	42	63	25	29	25	53	16	39	34	37	48	600		iv
	F _x	4675	4950	1242	3328	2520	3528	1219	1450	1150	2279	624	1365	1020	888	672	30910	51.52	
Noise Pollution	F	19	17	21	43	52	44	73	51	50	49	49	41	36	21	34	600		ix
	F _x	1615	1275	1449	2752	3120	2464	3869	2550	2300	2107	1911	1435	1080	504	476	28907	48.18	
Air Pollution	F	12	4	16	47	52	36	95	64	55	26	56	23	36	47	31	600		xii
	F _x	1020	300	1104	3008	3120	2016	5035	3200	2530	1118	2184	805	1080	1128	434	28082	46.80	
Dust Spreading	F	14	10	5	60	34	69	61	65	45	32	27	36	51	46	45	600		xv
	F _x	1190	750	345	3840	2040	3864	3233	3250	2070	1376	1053	1260	1530	1104	650	27535	45.89	
Diesel Emission	F	13	11	10	28	65	112	54	52	56	35	37	19	31	51	26	600		xi
	F _x	1105	825	690	1792	3900	6272	2862	2600	2576	1505	1443	665	990	1224	364	28753	47.92	
Mate with Commercial Sex Workers	F	3	7	51	17	39	35	51	68	90	44	44	48	44	31	28	600		xiv
	F _x	255	525	3519	1088	2340	1980	2703	3400	4140	1892	1716	1680	1320	744	392	27674	46.12	
Water Problem	F	44	23	48	35	63	12	66	32	34	3	11	6	11	188	24	600		xiii
	F _x	3740	1725	3312	2240	3780	672	3498	1600	1564	129	429	210	330	4512	336	28077	46.80	
Climate Condition	F	61	48	66	31	37	63	28	34	35	22	14	10	4	13	134	600		vii
	f _x	5185	3600	4554	1984	2220	3528	1484	1700	1610	946	546	350	120	312	1876	30015	50.03	
Total		600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600		

Source: Computed from Primary Data

11. Health status related to common of illness

The diseases may be classified into two broad categories and classification of human diseases. A disease status or medical problem is an abnormal condition of an organism that impairs bodily functions, associated with specific symptoms and signs. Based on common the diseases status of illness, out of 600, 503 drivers (83.3 percent) were affected and 97 (17 per cent) had chronicle ailment diseases. Basis of sources for treatment 319 respondents (53.2 percent) went to public hospitals and 240 drivers (40 per cent) went to private hospitals. Only 4 (1 per cent) respondents took own treatment by preparation of medicines as separate. Importantly to note that 18 had no treatment for sickness and 19 respondents (3.2 per cent) were utilized purchased tablets and medicines in medicals shops. Illness and sickness are generally used as synonyms for disease. For the disease status, out of the 600 drivers, most of them (21.1 per cent) were affected by head ache. Followed by respondents affected by food poisoning (14.1 per cent) next, dysentery/diarrhea (12.7 per cent), Typhoid fever (10.1 per cent), Stomach ache (53 per cent) and followed by an eye related diseases (8.3 per cent), Other unclassified fever (47 per cent), Fracture and injury (6.6 per cent), Skin diseases (5.4 per cent), Pains on their body (4 per cent) and lastly nearby 2 per cent were affected by Cold and Cough for drunken types of water and climate change.

The source of treatment of drivers, Majority of them, 74 per cent were affected one day and two days of illness (18.5 per cent) for the illness and 8 per cent had reported more than 2 days illness of health. Additionally, basis of the source of treatment, out of 503 drivers, half of them (261 drivers) proximate 52 per cent were went to government hospital; similarly 41 per cent went to private hospital or clinic nursing home. Only 4 drivers got treatment by self (1 per cent). 18 drivers did not take treatment for their illness and otherwise they were omitted health care services. Only 14 respondents were (2.8 per cent) took own treatment and 4 per cent benefited by medical shops. If illness was continuing more than one day after took of own treatment automatically they prefer health care services like hospitals and medical shops.

In the study area drivers were satisfied with last visit of hospital or own treatment and medical shops, own treatment or not taken treatment as benefits of their health services. Out of 503 drivers, 18 respondents were subtracted from total because they have not taken treatment for illness. Drivers reported as like highly satisfied (6 per cent), satisfaction (74 per cent), neutral satisfaction (10.1 per cent), dissatisfaction (6.4 per cent) and highly dis satisfied (4 per cent) on treatment. It is clear, majority of drivers are receiving good quality treatment and health care services from sickbay which make them satisfaction in their visit to hospital or have own treatment. Actually 4 per cent were reported very poor health status and in fact 9.3 per cent were poor health status. Likewise 17.1 per cent were informed average health status. More than half of them, 63.2 per cent were stated good health status after treatment. Last but not least 6.8 per cent were reported excellent health status. Compare to poor health status, both excellent and good health status respondents were happier about treatment.

12. Health status related to Chronicle Ailment diseases

Chronic ailment includes all long standing diseases which are mostly non-communicable diseases like diabetes, blood pressure, anemia etc. The result presents the chronic ailment of disease status of drivers. Out of the 97 sample respondents, as well 17.5 per cent were affected by heart attack / cardiac failure. Furthermore 15.5 per cent of the drivers were affected by asthma. Likewise 13.4 per cent was affected by ulcerative colitis and besides 11.3 per cent were affected by diabetes and High Pressure/ Low Pressure respectively. Mostly drivers were affected by Piles (10.3 per cent) and Skin Diseases (6.2 per cent). Meanwhile 3.1 per cent were affected by Gastro-Enteritis, Kidney Problem and Jaundice respectively. Finally by 2.1 per cent were affected by Cancer and Tuberculosis respectively and only one respondent with one per cent were affected by HIV. The number of days ill or month observes for chronic ailment, among the 97 drivers, 24 drivers (25 per cent) were suffered by illness below 5 days. Furthestmost 44 drivers (45.4 per cent) were 5 to 10 days illness. For chronic diseases 29 drivers were suffered (30 per

cent) above 10 days. By the result researcher, above 10 days of illness of health they cannot drive or work continuously.

Medical treatment is used when one suffer health problems or harms for human being. Out of the total 97, 38 respondents (60 per cent) went to government hospitals and 34 drivers (35 per cent) went to private hospitals, rests of them 5 drivers (5.2 per cent) were utilized the medical shops for instant treatment and relief. Drivers avoided public hospitals for various reasons like lack of technology, proper management, Incuriosity of health specialists, limited working time, and lack of beds and rooms facilities in the hospitals. But drivers supposed the public hospitals to have good treatment than private hospital's expenses for illness of health. Existing data explains respondent's number of days of treatment in hospitals was accounted except 5 respondents (67.4 per cent) were utilizors of medical shops, they had treatment in below 5 days and meantime 26.1 per cent (24 respondents) took treatment in 5 to 10 days. Lastly 6 drivers (6.5 per cent) took treatment in above 5 days. Due to severe condition of driver's health, doctors and nurses and other professionals given treatment and were cared in hospitals around 5 days and after that they sendoff or discharged from hospitals to continue the treatment in home.

Based on the driver's admission, 78 respondents (84.8 per cent) were out-patient and whereas 14 drivers (15.2 per cent) were as in- patient. Totally, 14 respondents were admitted in both hospitals as inpatients in ward for treatment, only 6 drivers (42.9 per cent) were stayed in general ward and 8 drivers (57.1 per cent) were stayed in special ward. This result displays driver's satisfaction level after treatment, 40 respondents (41.2 per cent) were highly satisfied, 43 respondents (44.3 per cent) were highly satisfied, 10.3 per cent were reported neutral and only 4 respondents (4.1 per cent) were dissatisfied. This displays driver's overall health status after treatment, only 8 drivers (8.2 per cent) had poor health condition and 15 respondents (15.5 per cent) were had average health condition, more than half of them, 68 per cent got Good health status and only 8 respondents (8.2 per cent) had poor health condition had excellent health status after treatment.

13. Conclusion

A healthy community constitutes the infrastructure needed for building economically viable society. The present study was conducted in order to find out the socio-economic outline of drivers and prevalence of health problems. The observation from past studies health diseases were mentioned to drivers namely hypertension, cancer, asthma, cardiovascular diseases, skin problems and etc. meanwhile health care services they cannot afford and its expenses always high propionate. This paper always insists of illness of health and other medical services critical to maintain the health status of professional drivers.

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