

RESEARCH NOTE

Occupational problems of women bus conductors

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The present study was conducted during 2015-2016 in North-West Karnataka Road Transport Corporation (NWKRTC) Hubballi-Dharwad. The study revealed that majority of the women bus conductors giving full justice to the family with the mean score of 3.99, the mean score of perceived pain experienced in ankle/feet was 3.84 and 3.75 and there was highly significant association with musculoskeletal pain experience at 0.01 level of significance. It can be concluded that women bus conductors highly suffer from pain in different parts of the body mainly in the leg, ankle/feet, knees, thighs, lower back and in the palm /fingers regions, and it makes the women conductors hinders their normal work as well as feel to leave the job.

Key words: Ankle, Knee, Palm

It is an open truth that working women have to face problems just by virtue of their being women. A gender bias creates an obstacle in the working environment, the new generation of female transformed the traditional patriarchal social structure across the globe this social shift which had been set in motion at the end of 20th century in India (Somashekar and Vinod, 2012). The joint ILO/WHO committee on occupational health in 1951, defined occupational health as the maintenance of complete state of physical, mental, and social well being of worker in all occupations. Work-related musculoskeletal disorders (WMSDs) are diseases related and aggravated by work that can affect the upper limb extremities, the lower back area, and the lower limbs. WMSD can be defined by impairments of bodily structures such as muscles, joints, tendons, ligaments, nerves, bones and the localized blood circulation system, caused or aggravated primarily by work itself or by the work environment (Nunes, 2009).

The present study was designed to analyze the occupational problems and musculoskeletal pain of women bus conductors.

The present investigation was done in the year 2015 - 2016 in North-West Karnataka Road Transport Corporation (NWKRTC) Hubballi-Dharwad. The sample size was 100 women bus conductors selected based on random sampling. Body map is used to measure the localized discomfort, musculoskeletal problems and intensity of pain in different body parts resulting from postural discomfort (Corlett and Bishop, 1976). The questionnaires were collected and findings were entered into SPSS data base. Statistical analysis were

carried out to find out the association between the work experience and musculoskeletal pain of women bus conductors.

The data on occupational problems of women bus conductors at workplace given in Table 1 revealed that majority of the women bus conductors are giving full justice to their family by involving in almost all the domestic work with the mean score of 3.99 because they are balancing the personal and work life and least of the women bus conductors are anxious while carrying cash at work place with mean the mean score of 2.31 due to the rush hours women bus conductors facing difficulty in keeping the money in the bag. Similar study reported by Pooja and Reshma (2013) revealed that women bus conductors facing problems in doing night shift because of extension of working hours and perception of family members. They also never spent time quality time with the family and friends because of high pressure at workplace, they find difficulty in doing night shift because of unavailability of ladies room and security.

Table 2 depicts that the mean score for perceived pain experienced in leg and upper arm region was region was 3.84 and 2.28 respectively due to prolonged standing posture in the buses, the conductors assume an incorrect posture and the bus bouncing also make the legs painful. They have to control the body only on the legs because there is no other support to stand correctly in the bus. Similar findings have been reported by Ajit *et al.* (2015) it was showed that most common musculoskeletal problems observed among the bus conductors were low back pain and knees (34%) followed by shoulder (33%) whereas feet (25%), neck (13%) followed by upper back (11%), wrists and calf (10%) and least legs (5%). Prolonged standing posture in the buses exerted excessive pressure on the left leg.

Table 3 revealed that work experience has highly significant association with musculoskeletal pain experience at 0.01 level of significance. It also shows that shift hours are highly associated with musculoskeletal pain experience at 0.01 level of significance. There is a close association between their experience and musculoskeletal pain experience. The women bus conductors have the pain experiences in the legs, ankle/feet, knees, thighs, palm fingers and in other parts of the body. The sensation of pain arises in all these parts because of heavy workload and the age factor. Results in line with a study by Somanath *et al.* (2012).

It can be concluded that women bus conductors experience difficulty in their work because of overload work and extension of working hours. Majority of the women bus conductors have severe musculoskeletal pain experiences in the legs, ankle/feet, knees, thighs, palm/fingers and in the wrist primarily generated primarily by constant standing, prolonged working hours.

Table 1. Occupational problems of women bus conductors at work place

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Sl. No.	Statements	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Weighted Mean score
1	Difficulty in doing night shift because of perceptionof family members.	9(9.00)	16(16.00)	18(18.00)	37(37.00)	20(20.00)	2.57
2	Difficulty in doing night shift because of unavailability of ladies room and security.	11(11.00)	35(35.00)	13(13.00)	29(29.00)	12(12.00)	3.04
3	Difficulty in doing long route because of extension of working hours.	9(9.00)	37(37.00)	27(27.00)	23(23.00)	4(4.00)	3.24
4	Difficulty in doing ordinary/local route duties because of overload workload.	9(9.00)	39(39.00)	24(24.00)	24(24.00)	4(4.00)	3.97
5	Working hours are fixed.	20(20.00)	47(47.00)	10(10.00)	19(19.00)	4(4.00)	3.6
6	Because of fluctuating working hours it's difficult to face misunderstanding of family members.	7(7.00)	20(20.00)	19(19.00)	35(35.00)	19(19.00)	2.61
7	Fluctuating working period is foremost reason to leave the job.	5(5.00)	34(34.00)	25(25.00)	21(21.00)	15(15.00)	2.93
8	I am often think or worry about work(when you are not actually at work)	7(7.00)	38(38.00)	16(16.00)	22(22.00)	6(6.00)	2.85
9	I am ever miss out any quality time with my family or my friends because of pressure of work.	27(27.00)	39(39.00)	16(16.00)	12(12.00)	6(6.00)	3.69
10	I ever feel tired or depressed because of work.	11(11.00)	46(46.00)	20(20.00)	11(11.00)	12(12.00)	3.33
11	Male domination at work place and companionship	6(6.00)	23(23.00)	14(14.00)	26(26.00)	31(31.00)	2.47
12	The management is more concerned about the problems of women	4(4.00)	31(31.00)	26(26.00)	30(30.00)	9(9.00)	2.91
13	Doing full justice to your family	33(33.00)	46(46.00)	12(12.00)	5(5.00)	4(4.00)	3.99
14	Worry about family when at work	12(12.00)	27(27.00)	28(28.00)	20(20.00)	13(13.00)	3.05
15	Iam anxious while carrying cash at work place	2(2.00)	24(24.00)	14(14.00)	23(23.00)	37(37.00)	2.31
16	It creates constant worry when there is no proper coordination with bus driver	13(13.00)	40(40.00)	10(10.00)	25(25.00)	12(12.00)	2.77

Figures in parenthesis indicate percentages

Table 2. Musculoskeletal pain experiences of women bus conductors

						N=100
Body part	Very severe F (%)	Severe F (%)	Moderate F (%)	Mild F (%)	Very mild F (%)	Weighted Mean score
Neck	13(13.00)	6(6.00)	23(23.00)	16(16.00)	42(42.00)	2.32
Shoulder	17(17.00)	12(12.00)	17(17.00)	20(20.00)	34(34.00)	2.58
Upper back	17(17.00)	18(18.00)	19(19.00)	20(20.00)	21(21.00)	2.75
Upper arms	14(14.00)	8(8.00)	18(18.00)	12(12.00)	48(48.00)	2.28
Elbows	6(6.00)	11(11.00)	19(19.00)	14(14.00)	50(50.00)	2.09
Lower back	23(23.00)	15(15.00)	31(31.00)	10(10.00)	21(21.00)	3.09
Lower arms	12(12.00)	11(11.00)	22(22.00)	6(6.00)	49(49.00)	2.31
Wrist	15(15.00)	12(12.00)	22(22.00)	7(7.00)	44(44.00)	2.47
Palm/fingers	21(21.00)	11(11.00)	16(16.00)	11(11.00)	41(41.00)	2.76
Thighs	36(36.00)	17(17.00)	14(14.00)	7(7.00)	26(26.00)	3.3
Knees	42(42.00)	18(18.00)	12(12.00)	10(10.00)	18(18.00)	3.56
Legs	52(52.00)	14(14.00)	13(13.00)	8(8.00)	13(13.00)	3.84
Ankle /feet	49(49.00)	17(17.00)	10(10.00)	8(8.00)	16(16.00)	3.75

Figures in the parentheses indicate percentages

Remedial measures

- Providing separate seat for the women bus conductors who are working in the local/ordinary routes.
- Providing ladies room in each depot in bus stand separately for women bus conductors
- Ergonomic intervention at workplace has to be recommended to reduce the risk level of physiological discomfort of conductors in different parts of the body.

Table 3. Association between experience and musculoskeletal pain experience of women bus conductors

					N=100
Experience (years)	Musculoskeletal pain range			Total	χ^2
	Low	Medium	High		
	<76	76-79	>79		
<4	12(27.3)	28(63.6)	4(9.1)	44(44)	8.072**
4-8	21(80.7)	3(11.6)	2(7.7)	26	
>8	4(13.4)	19(63.3)	7(23.3)	30	
Total	37			50	13

**significant at 0.01 % level

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