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SYNOPSIS OF THE THESIS ON

“A Comparative Analysis of Motivation and Job Satisfaction
Level of Employees of Different Departments
in Indian Railways”

(Special Reference to Rajkot Division of Western Railway)

SUBMITTED BY

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FOR

Ph. D Degree in Motivation
Under the Faculty of Management
Saurashtra University, Rajkot

UNDER THE GUIDANCE OF

DR PRATAPSIKH CHAUHAN
Professor & Head of the
Department of Business Management
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STATEMENT-I

This is to certify that synopsis titled “A COMPARATIVE ANALYSIS of MOTIVATION AND JOB SATISFACTION LEVEL OF EMPLOYEES OF DIFFERENT DEPARTMENTS IN INDIAN RAILWAYS (SPECIAL REFERENCE TO RAJKOT DIVISION OF WESTERN RAILWAY)” submitted by P C Sehgal for the award of the Degree of Doctor of Philosophy in Management under the Faculty of Management is based on the research work carried out by him under my guidance and supervision. To the best of my knowledge and belief it has not been submitted for any other degree or diploma.

Research Supervisor

(DR. PRATAPSIKH CHAUKAN)

STATEMENT-II

I hereby declare that synopsis; I am going to sum it on the topic, "A COMPARATIVE ANALYSIS OF MOTIVATION AND JOB SATISFACTION LEVEL OF EMPLOYEES OF DIFFERENT DEPARTMENTS IN INDIAN RAILWAYS (SPECIAL REFERENCE TO RAJKOT DIVISION OF WESTERN RAILWAY)" award of the Degree of Doctor of Philosophy in Management under the Faculty of Management is based on the research work carried out me. No degree or diploma has been conferred upon me before, either by this or by any other University.

(PARMOD CHANDER SEHGAL)

STATEMENT-III

The title of my subject is: "A COMPARATIVE ANALYSIS of MOTIVATION AND JOB SATISFACTION LEVEL OF EMPLOYEES OF DIFFERENT DEPARTMENTS IN INDIAN RAILWAYS (SPECIAL REFERENCE TO RAJKOT DIVISION OF WESTERN RAILWAY)". The study is based on secondary data available about motivation level of railway employees. The main source of data is questionnaire filled up by the railway employees posted in Okha-Viramgam section of Rajkot division, Indian Railways Year Book 2002-03 and Annual Report Accounts 2002-03 of Indian Railways.

(PARMOD CHANDER SEHGAL)

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PREFACE

1.0 The Indian Railways is a principal service provider in the transport sector in the country. It has already crossed 150 years of its existence. The first train was introduced in India on 16th April, 1853 between Boribandar (Mumbai V.T.) and Thane. The Indian Railways has successfully adopted itself to the changing needs of travel and transport in the country. It has also absorbed various advancements in the field of railway technology and kept itself equipped continually to meet the growing requirements of passenger and freight traffic. In the year 2003-04, the Indian Railways carried about 13 million passengers per day and lifted more than 1.56 million tonnes of freight traffic daily on a rail network spread over 63,122 route kilometers, covering 6,835 railway stations.

2.0 During the last 50 years, many new sophisticated technologies connected with transport system have been introduced on the Indian Railways. The Indian Railways has kept itself in tune with the latest technologies available world over.

2.1 The Indian Railways is having a mammoth work force of 15.5 lakhs employees. A disturbing factor has been that the average emoluments drawn by per employee per year have increased from Rs. 1,253 in the year 1951 to Rs. 1,33,967 now. About 55 to 60% of the total expenditure of the Indian Railways is spent in arranging payments for the working employees as well as retired employees. There is an urgent need to reduce the expenditure on man power. This can be achieved only when the staff strength is reduced and the staff are motivated enough to improve their productivity and efficiency.

2.2 Due to globalization and opening of Indian economy, at present, in India 6 to 7% economic growth is being achieved. This economic growth will put an additional burden on the Indian Railways to move large volumes of freight and passengers traffic with lesser staff.

2.3 Many serious problems like overageing of assets, saturation of important heavily utilized routes, severe competition from road and coastal shipping, cross-subsidization of passenger services by freight traffic, and impending financial crisis are being faced by the Indian Railways. The Railways will be able to meet the future challenges successfully provided it has motivated and satisfied the staff at its disposal. In order to achieve this objective, it will be essential to improve the present motivation and job satisfaction levels of the railway employees.

3.0 Keeping the above objective in view, a comparative study of the motivation and the job satisfaction level of the employees of different departments and categories of the Rajkot division of the Western Railway was undertaken under the able guidance of Dr Pratapsinh Chauhan, Professor & Head, Department of Business Management, Saurashtra University, Rajkot. 789 railway employees of different departments of the Rajkot division posted between Okha-Viramgam section were selected at random to record their answers against 63 questions included in the questionnaire. Each question had five options and the employee selected was expected to choose the answer as per his opinion.

4.0 The data was successfully collected from all the targeted railway employees and I am thankful to the officers, supervisors and staff of the Rajkot division for sparing their valuable time in getting the response to the questionnaire collected from the targeted employees. For preparation of this research thesis, the necessary assistance provided by Shri Satish Kumar, Chief Electrical Engineer, South Central Railway, Secunderabad; Shri C Devadas, Secy to Chief Electrical Engineer, West Central Railway, Jabalpur; Shri Brajesh Kant Chakrawarty, PA to Chief Electrical Engineer, West Central Railway, Jabalpur; Shri M Vijayakumar, Chief Electrical Traction Engineer, West Central Railway, Jabalpur; Shri Asutosh Rankawat, Sr. Divisional Engineer/W' Rly, Rajkot, Shri Manish Viredia, Office Superintendent to Divisional Railway Manager, Rajkot;

Shri Vishwanathan, Ex-PA to DRM/Rajkot; Shri Rajesh Gandhi, Senior Divisional Signal & Telecommunication Engineer/Rajkot and other Personal Assistants to the divisional officers of the Rajkot division is highly acknowledged. I also express my gratitude to Dr Mrs Daxa G Gohil, Faculty Member, Department of Commerce and Business Management of Saurashtra University and Dr Sanjay J Bhayani, Reader, Saurashtra University for helping me to identify the various statistical methods for undertaking statistical analysis of the data collected. I am thankful to my guide Dr Pratapsinh Chauhan, Professor & Head, Department of Business Management, Saurashtra University, Rajkot for rendering his valuable guidance at every step right from collection of data, analyzing the data and finalising the findings and recommendations. Without the active support of Dr Pratapsinh Chauhan, it would have been impossible for me complete this research work considered necessary for the award of Degree of Doctorate of Philosophy in Management.

5.0 I am also grateful to Shri Nikhil Joshi, Divisional Secretary, Western Railway Employees Union, Shri Naresh Katwani, Divisional Secretary, Western Railway Employees Union, Rajkot, Shri Berwa, President, SC/ST Association, Rajkot, Shri Anil Sharma, Chief Security Commissioner, West Central Railway, Jabalpur, Shri Manoj Pande, Chief Personnel Officer, West Central Railway, Jabalpur for giving useful suggestions for improving the motivation level of railway employees.

6.0 I would once again express my sincere thanks and gratitude to all concerned, especially officers, senior supervisors and staff of the Rajkot division who came forward and equipped me with necessary data and extended the required help willingly by sparing their valuable time. I also express my gratitude to Swami Jitatananda, Head of Shri Ramakrishna Ashrama, Rajkot for continuously encouraging me to pursue higher studies when I came in contact with him during my posting as Divisional Railway Manager, Rajkot from June 2001 to June 2003.

CHAPTER 1

AN OVERVIEW OF THE INDIAN RAILWAYS

1.1 Introduction:

The Indian Railways is a principal service provider in the transport sector in the country. It has already crossed 150 years of its existence. The first train was introduced in India on 16th April, 1853 between Boribandar (Mumbai V.T.) and Thane. The Indian Railways has successfully adapted itself to the changing needs of travel and transport in the country. It has also absorbed various advancements in the field of railway technology and kept itself equipped continually to meet the growing requirements of passenger and freight traffic. In the year 2003-04, the Indian Railways carried about 13 million passengers per day and lifted more than 1.56 million tonnes of freight traffic daily on a rail network spread over 63,122 route kilometres, covering 6,835 railway stations.

1.2 Network:

The rail network consists of broad gauge, metre gauge and narrow gauge, totaling 108,706 track kilometres. The latest gauge-wise break up is given in Table 1.1.

Table 1.1: Details of network of the Indian Railways

Gauge	Route km	Running track km	Total track km
Broad Gauge (1676 mm)	45,622	64,461	87,889
Metre Gauge (1000 mm)	14,364	14,859	17,848
Narrow Gauge (762 mm/610 mm)	3,136	3,172	3,484
Total	63,122	82,492	1,09,221

1.3 Apex Organisation:

There is a separate Railway Ministry, as the apex body, for the management of the Indian Railways. The Ministry functions under the guidance of the Minister of Railways who is assisted by two Ministers of State for Railways. The organizational structure of the Railways is given in Table 1.2.

1.4 Functions:

The management and formulation of policy are entrusted with the Railway Board comprising the Chairman, Financial Commissioner and five other functional Members who look after the individual departments, namely Electrical, Mechanical, Engineering, Traffic and Personnel. The Board is vested with wide managerial and financial powers to supervise, maintain and control effectively the railway assets and operations through the various zonal and divisional organisations.

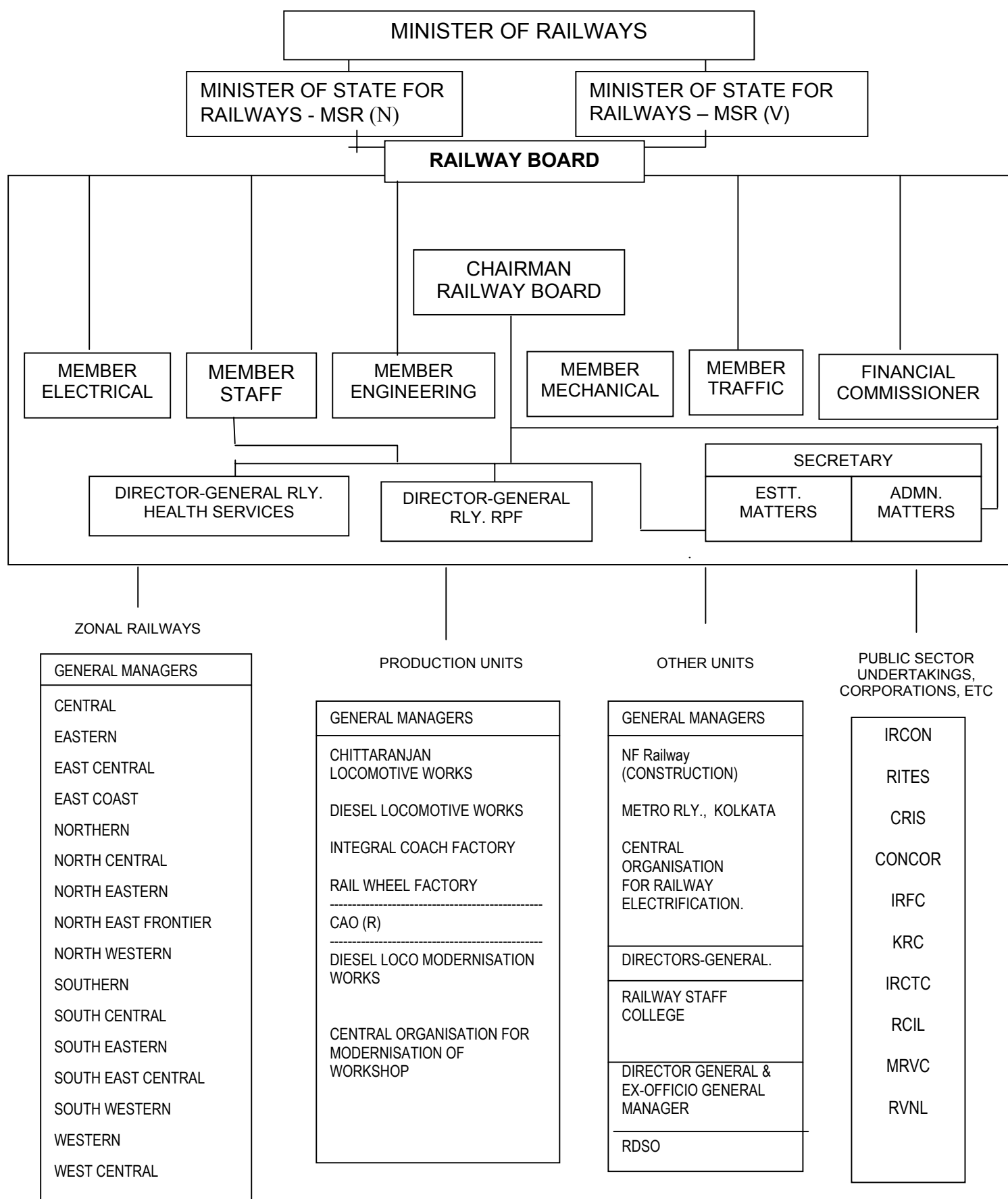
1.5 Zonal and Divisional Organisations:

The railway operations are intricate in nature with lots of emphasis for proper maintenance of assets and customer care. For operational convenience, the railway network has been split into 16 zones and the 16 zones have further been split into 67 divisions. Each zone has a head quarter office and a few divisions under its control. Each zonal head quarter office and the divisions under its control constitute a Zonal Railway. Each Zonal Railway is headed by a General Manager, whereas each division is headed by a Divisional Railway Manager.

1.5.1 There are the following departments to look after the railway operations:

- ⇒ Accounts
- ⇒ Audit
- ⇒ Commercial
- ⇒ Engineering
- ⇒ Electrical
- ⇒ Mechanical

Table 1.2: Organisational Structure of the Indian Railways



- ⇒ Medical
- ⇒ Personnel
- ⇒ Traffic
- ⇒ Signaling & Telecommunication
- ⇒ Security
- ⇒ Stores

In the Divisions, each department is headed by a Senior Divisional Officer who is assisted by Divisional and Assistant Officers. In the zonal headquarter office, each department is headed by a Principal Head of the Department who is assisted by other officers. At present, the following 16 zones are there on the Indian Railways:

<u>Zone</u>	<u>Headquarter</u>
⇒ Central Railway	Mumbai
⇒ Eastern Railway	Kolkata
⇒ East Central	Hajipur
⇒ Northern	New Delhi
⇒ Northern Eastern	Gorakhpur
⇒ Northeast Frontier	Maligaon (Guwahati)
⇒ North Western	Jaipur
⇒ Southern	Chennai
⇒ South Central	Secunderabad
⇒ South Eastern	Kolkata
⇒ Western	Mumbai
⇒ East Cost	Bhubaneswar
⇒ North Central	Allahabad
⇒ South East Central	Bilaspur
⇒ South Western	Hubli
⇒ West Central	Jabalpur

1.6 There has been phenomenal increase in the assets during the last 50 years. The details are furnished in Table 1.3:

Table 1.3: Details of Assets and Performance

As on 31st March	1950-51	2002-03
Assets		
Capital-at-charge (Rs. in crores)	827.0	51,099.09
Total Investment (Rs. in crores)	855.2	77,915.78
Running Route kilometre		
Electrified	388	16,272
Total	53,596	63,122
Running Track kilometre		
Electrified	937	29,974
Total	59,315	82,492
Number of stations	5,976	6,906
Rolling stock (in units)		
Locomotives		
Steam	8,120	52
Diesel	17	4,699
Electric	72	2,930
Coaching stock		
Passenger carriages	13,022	34,871
Electric Multiple Unit coaches	460	4,957
Rail Cars	87	24
Other coaching vehicles	6,059	4,904
Wagons	205,596	214,760
Personnel		
Number of employees (in thousands)	914	1,472
Wage Bill (Rs. in crores)	113.8	19,914.8
Average wage per employee (in Rs)	1,253	133,967
Transportation Output		
Train km (excl. depts) (in millions)		

Passenger and proportion of mixed	163.4	498.3
Goods and proportion of mixed	111.5	274.2
Vehicle and wagon km (excl. depts. and brake vans) (in millions)		
Vehicle km	2,802	13,504
Wagon km	4,370	29,584
NTKM/Wagon day (BG) (4-wheelers)	710	2,468
Volume of Traffic		
Passenger traffic		
No. of passengers originating (in millions)	1,284	4,971
Passenger km (in millions)	66,517	515,044
Passenger earnings (Rs. in crores)	98.2	12,540.8
Average lead (in km)	51.8	103.6
Average rake per passenger km (in paise)	1.48	24.35
Freight traffic		
Tonnes originating (in millions)		
Revenue earning traffic	73.2	518.7
Total traffic	93.0	542.7
<u>NET TONNE KM (IN MILLIONS)</u>		
Revenue earning traffic	37,565	3,53,194
Total traffic	44,117	3,56,027
Earnings from freight carried excl. wharfage & demurrage charges (Rs. in crores)	139.3	26,231.45
Average lead- Total traffic (in km)	470	656
Average rate per tonne km (in paise)	3.16	74.27
Quantity of fuel consumed by locomotives		
Coal (in thousand tonnes)	9,504	3
Diesel oil (in kilolitres)	N.A.	2,007,993
Electricity (Million kWh)	N.A.	9,013.39
Stores purchase (Rs. in crores)		
Indigenous	63.2	11,134.9

Total	81.6	11,598.3
Operating Revenue and expenditure (Rs. in crores)		
Gross revenue receipts	263.30	42,741.48
Working expenses incl. depreciation etc. and miscellaneous expenses.	215.74	38,911.24
Net revenue receipts	47.56	3,830.23
Percentage of net revenue receipts to the capital-at-charge	5.75	7.50
Operating ratio (per cent)	81.00	92.34
Dividend to General Revenues and payment to States in lieu of tax on passenger fares	32.51	2,714.83
Excess (+)/shortfall (-)	(+)15.05	(+)1,115.40
Out-put Cost (BG)		
Cost/Vehicle km (Rs)	NA	14.72
Cost/wagon km (Rs)	NA	7.75

Source: Annual Report Accounts 2002-03

1.6.1 From the above table, it could be safely concluded that during the last 50 years, large investments have been made for creating railway assets and for electrification of important routes. The number of diesel and electric locomotives has increased considerably. The capacity for carrying passenger and freight has increased, and the volume of traffic and transportation output have increased manifolds. The only disturbing factor that could be seen from the above table is that the average wage per employee per year has increased from Rs. 1263/- in the year 1950-51 to 1.34 lakhs per year now. The costs per vehicle km and per wagon km have also increased substantially. The pensionary liability on the Indian Railways is also increasing year by year. Approximately 55% of the total working expenditure is on staff and this is one of the serious problems, which the Railway is facing at present.

1.7 Planning- Outlays in Five Year Plans

The Indian Railways draws up its development plans within the framework of national Five Year Plans. The Plan outlays for the IR and the transport sector as a whole are given in table 1.4 below:

Table 1.4: Plan Outlays

(Rs. in crores)

Sectors/Units	Up to Fourth Plan 1950-74	Fifth Plan 1974-78	Sixth Plan 1980-85	Seventh Plan 1985-90	Eighth Plan 1992-97	Ninth Plan 1997-02	Tenth Plan 2002-07
Railways	3,200	1,523	6,555	16,549	27,202	45,413	60,600
Transport Sector	6,039	4,078	13,841	29,548	53,966	121,037	893,183
Total Plan Outlay	30,988	28,991	109,292	218,729	434,100	859,200	859,200
Transport Sector as %age of Total Plan	19.5	14.1	12.7	13.5	12.4	14.1	16.5
Railways as %age of Total Plan	10.3	5.3	6.0	7.6	6.3	5.3	6.8

Source: Indian Railways Year Book 2002-03

From the above, it could be seen that the Railway's share as percentage of total Plan has come down from 10.3% in the year 1950 to 6.8% now.

1.8 Productivity:

There has been an all round improvement in wagon capacity and passenger coach capacity and tractive effort of locos as compared to 1950-51. The details are given in Table 1.5 & Table 1.6 below:

Table 1.5: Traffic Output Indices

Year	Traffic out put indices	
	Freight Traffic NTKMs) (Rev.+Non-rev.)	Passenger Traffic (Non-suburban passenger km)
1950-51	100	100
1960-61	199	110
1970-71	289	159
1980-81	359	279
1990-91	550	394
2000-01	715	614
2002-03	807	708

Source: Indian Railways Year Book 2002-03

Table 1.6: Investment Input Indices

Year	Wagon capacity	Passenger coaches	Route km	Running track km	Tractive effort of locos
1950-51	100	100	100	100	100
1960-61	152	154	105	107	144
1970-71	226	188	112	121	178
1980-81	269	210	114	128	201
1990-91	278	219	116	133	192
2000-01	244	254	118	138	233
2002-03	241	266	118	118	239

Source: Indian Railways Year Book 2002-03

1.9 Tracks:

1.9.1 Due to increase in traffic and throughput on line, the tracks are being extensively utilized. It has been decided to have a concept of uni-gauge system and every year 400-500 km of tracks are getting converted from MG to BG. Gauge conversion work on 48 sections involving a route length of 8800 km is in progress. The critical single line sections are also being converted into double line sections. The old tracks are being replaced. Now every year approx. Rs.2500 crores are being spent on track renewal works. The details are given in Table – 1.7 below:

Table 1.7: Expenditure on Track Renewal Works

Sl.No	Year	Gross expenditure (Rs. in crores)	Renewal done (in km)
1	1997-98	1,805.23	2,950
2	1998-99	1,802.57	2,967
3	1999-00	2,042.00	3,006
4	2000-01	2,244.00	3,250
5	2001-02	2,475.32	3,620
6	2002-03	3,297.69	4,776
Total		10,369.12	15,793

Source: Annual Report Accounts 2002-03

1.9.2 The Railway Safety Review Committee in their Report (August, 1999) had recommended that, in the interest of railway safety, the Central Government should provide a one time grant to the Railways so that the arrears in the renewal of track, bridges, rolling stock and signaling gears are wiped out within the time span of 7 years. This recommendation has since been accepted and non-lapsable special Railway Safety Fund (SRSF) amounting to Rs.17,000 crores for liquidating arrears of replacement of assets has been set up in 2001-02.

1.9.3 Pre-stressed concrete sleepers are replacing wooden, cast iron and steel sleepers for economy, safety and riding comfort. They are economical and technically best suited for high speed and heavy density traffic. The manufacturing capacity of concrete sleepers has been developed indigenously to meet the complete requirements of IR. During 2002-03, total 82.85 lakh concrete line sleepers and 2,741 sets of concrete turnout sleepers were produced. The intake of wooden sleepers for main line track has been stopped completely. Emphasis is also being laid on using more and more concrete sleepers on turnouts.

1.10 Bridges:

The Indian Railways is having 1,20,000 bridges out of which 565 are important and 9792 are major. The remaining bridges are minor. Bridges are being rehabilitated. From safety considerations, all the major important bridges are being given special attention.

1.11 Level Crossings:

As on March 2003, 37,423 level crossings exist on the Indian Railways, out of which 16,741 are manned. A programme has been made to man 4500 unmanned level crossings considered as hazardous because of visibility problems or density of traffic. The existing level crossings having heavy traffic density are being replaced in a phased manner with road over or under bridges. 283 such bridges are under construction.

Funds for replacement of level crossings with ROBs are arranged from Central Road Fund (CRF). The State Governments have been asked to sponsor proposals for

replacement of level crossings having traffic density of one lakh or more Train Vehicle Units (TVUs) on sharing basis. The State Governments have also been permitted to collect funds by imposing toll tax or utilizing the space, under the road over bridges beyond the railway limits, commercially to meet their share of cost even for works taken on cost sharing basis irrespective of the fact that they are also getting funds from CRF for development of roads, etc. Close co-ordination is being maintained with the Ministry of Road Transport and Highways to expedite the works of ROB's being constructed on the National Highways. Monthly meetings at Ministries' level and on Railways' level with their counterparts in the Ministry of Road Transport and Highways are held regularly for removing bottlenecks in execution of these works.

1.12 Electrification:

1.12.1 Importance:

Electric traction reduces nation's dependence on largely imported diesel oil as it is capable of using indigenously available alternative sources of energy, like coal of any grade, hydel power, surplus liquefied petroleum gas, nuclear power, etc. It is a pollution-free and energy efficient mode of transport.

Electrification was first introduced on IR in 1925 with 1500 Volts DC and subsequently extended by installing 3000 Volts DC system. In 1957, IR decided to adopt 25 kV AC traction and thus selected main lines and high-density routes were taken up for tenderisation in a planned manner. At present, out of the seven major trunk routes connecting Mumbai, Kolkata, New Delhi and Chennai, five are fully electrified and works are in progress on the other two routes viz. Kolkata-Chennai and Mumbai-Chennai.

1.12.2 Progress of Electrification:

Over the years, the electrification of IR has progressed as given in table 1.8.

Table 1.8: Progress of Electrification

Period	Route km electrified
Up to 7 th Five Year Plan 1990)	9,252

Annual Plans (1990-92)	1,557
8 th Five Year Plan (1992-97)	2,708
9 th Five Year Plan (up to 2001-02)	2,484
10 th Five Year Plan Ist year (2002-03)	4,55
Total (as on March 31,2003)	16,456

Source: Annual Report Accounts 2002-03

1.13 Signal & Telecommunication:

1.13.1 Signaling:

For enhancing efficiency and safety in train operations, modern signaling plays a very vital role. Induction of Multi Aspect Colour Light Signaling (MACLS), Panel Interlocking (PI), Route Relay Interlocking (RRI), Solid State Interlocking (SSI), Automatic Block Signaling, Block proving by Axle counter, enhancement of safety at level crossings by interlocking of level crossings and provision of telephones at manned level crossings have improved safety levels in train operations on the Indian Railways.

1.13.2 Telecommunication:

A reliable telecom network is essential for efficient functioning of the Railways as it plays an important role in train control, operation, safety and during emergencies. The Indian Railways started building up its dedicated telecom network since 1960's. To expedite the modernization of old and worn out telecom network, the Ministry of Railways has set up RailTel Corporation of India Limited in 2000-01. RailTel is in the process of evolving a nationwide broadband telecom network along the railway track, connecting metropolitan and other important cities and the rural, remote and backward areas en route.

1.13.3 Emergency Communication:

For establishing communication in case of accident/emergency, it has been decided to provide satellite phones in each zonal and divisional headquarters. This will help in quick communication link from the site to collect information regarding the assistance needed, relief measures to be taken, etc.

1.13.4 Mobile Communication:

Walkie-talkie sets have been provided to drivers and guards of all trains for mutual communication between them. Further, stations on double line and multiple line sections on B.G. have been provided with 25W VHF sets. This will facilitate communication between train crew and the nearest station also.

1.13.5 Replacement of old Assets:

The Railways are gradually replacing old exchanges with electronic exchanges, analogue microwave with digital microwave and overhead alignment with underground copper cable. During the year, a total of 1,398 subscribers were connected to digital electronic exchanges bringing the total to 2,21,060, which is about 96.5% of the total installed capacity. As a step towards modernization of long haul communication system and to improve its reliability and efficiency, 668 route km of digital microwave links was added during the year bringing the total network to 6,352 route km.

1.13.6 Passenger Amenities:

In order to provide improved passenger amenities, microprocessor based public address system, having synthesized voice for better audibility, has been provided at 117 stations. Electronic train indicator boards to display the train running information have been provided at 4 stations. In addition, interactive voice response system for giving information, without human interface, regarding train arrival/departure and reservation status was provided at 28 stations during the year.

1.14 Safety Measures:

Some of the steps taken to avoid accidents are given below: -

- A non-lapsable Special Railway Safety Fund of Rs.17,000 crores has been set up for renewal of over-aged assets and for safety enhancement works.
- Fouling Mark to Fouling Mark (FM to FM) track-circuiting on entire 'A', 'B', 'C', 'D' and 'D' special routes, where speed is more than 75 kmph, have been completed. Remaining work is in progress.

- Extended field trials of Anti Collision Device (ACD) have been started on Northern Railway. After successful completion of field trials, a decision would be taken for its application on other routes of IR.
- State-of-the-art technology of Digital Mobile Train Radio Communication has been sanctioned on some important sections for providing duplex radio communication between driver/guard and control.
- Walkie-Talkie sets have been provided to drivers and guards of all trains for faster and better means of communication.
- There has been progressive increase in the use of tie tamping and ballast cleaning machines for track maintenance. Track renewal trains are also being used.
- For monitoring track geometry and running characteristics of the track, sophisticated track recording cars, oscillograph cars and portable accelerometers are being progressively used.
- For detection of rail fractures/weld failures, adequate numbers of double rail Ultrasonic Flaw Detectors have been procured. Self-propelled Ultrasonic Rail Testing Cars are also being procured.
- Maintenance facilities for coaches and wagons have been modernized and upgraded at many depots.
- Routine Over-Hauling (ROH) depots have been equipped with ultrasonic testing equipment for detection of flaws in the axles so as to prevent cases of cold breakage of axles.
- Periodic Safety Audit by inter-disciplinary teams from Zonal Headquarters has been introduced.
- Performance of the staff connected with train operation is being constantly monitored and those found deficient are sent for crash training courses also.
- Safety drives and publicity campaigns have been launched to educate road users.
- Stringent penalty to the extent of dismissal/removal from service is being imposed on officials held responsible for serious accidents.
- Simulators are being utilized for imparting training to drivers.

- Block proving by axle counters is being progressively installed as an aid to station staff for verification of status of block sections.

1.15 Rolling stock:

1.15.1 Locomotives:

The Indian Railway's fleet as on 31st March, 2003 consisted 52 steams, 4699 diesel and 2930 electric locomotives. The Table 1.9 given below shows the distribution of locomotives traction-wise along with their average tractive effort:

Table 1.9: Details of loco fleets

Year	Number of locomotives				Tractive effort per loco (in kg)	
	Steam	Diesel	Electric	Total	BG	MG
1950-51	8120	17	72	8209	12801	7497
1960-61	10312	181	131	10624	14733	8201
1970-71	9387	1169	602	11158	17303	9607
1980-81	7469	2403	1036	10908	19848	10429
1990-91	2915	3759	1743	8417	24088	12438
1996-97	85	4363	2527	6975	27600	18186
1997-98	64	4496	2646	7206	28417	18262
1998-99	58	4586	2785	7429	28558	18416
1999-00	56	4651	2810	7517	29002	18455
2000-01	54	4702	2810	7566	29203	18537
2001-02	53	4,815	2,871	7,739	*29,274	18,577
2002-03	52	4,699	2,930	7,681	29,289	18,531

* revised

Source: Indian Railways Year Book 2002-03

1.15.2 Coaching vehicles:

The Passenger Carrying Vehicle (PCV) fleet has not grown commensurate with traffic demand due to financial constraints and limited capacity to manufacture them. A new coach factory at Kapurthala was set up to meet the additional requirement/demand of coaches. Efforts have also been made to absorb growing traffic

demands by improving the design of the existing stock. Coaches with better layout and more seating capacity are being manufactured now.

Two-tier and 3-tier A.C. coaches have replaced First Class coaches of lower capacity in most trains. In order to improve capacity and to provide more comfort to passengers, 24 state-of-the-art coaches, having speed potential of 160 kmph, have been procured from M/s. ALSTOM, LHB, Germany with arrangement for 'Transfer of Technology' to enable manufacture of new design coaches at Rail Coach Factory (RCF), Kapurthala and Integral Coach Factory (ICF), Chennai. Twenty seven coaches of LHB design were planned for production during 2001-02.

The Passenger Carrying Vehicles (PVCs) with aggregate seating capacity in different years and availability of other Coaching Vehicles (OCVs) are shown in Table 1.10 below:

Table 1.10: Details of Passenger Coaches

Year	Passenger coaches				
	EMU coaches		Conventional coaches		Other coaching vehicles (number)
	Number	Seating capacity	Number	Seating capacity	
1950-51	460	87986	13109	854678	6059
1960-61	846	150854	20178	1280797	7415
1970-71	1750	340541	24676	1505047	8719
1980-81	2625	500607	27478	1695127	8230
1990-91	3142	609042	28701	1864136	6668
2000-01	4580	864801	33260	2367932	4730
2001-02	4,636	882,259	*34,363	*2,454,872	4,827
2002-03	4,696	905,771	34,895	2,506,699	4,904

* revised

Source: Indian Railways Year Book 2002-03

1.15.3 Wagons:

As on 31st March 2003, the Indian Railways' wagon fleet consisted of 2,14,760 units comprising 68,467 covered, 91,091 open high-sided, 7160 open low-sided, 37650

other types and 10718 brake van/departmental wagons. The following Table-1.11 indicates the holding of different types of wagons:

Table 1.11: Details of Wagons

Year	Total wagons on line (in units)	Covered	Percentage of total number of wagons				
			Open high sided	Open low sided	Other types	Departmental	Total
1950-51	205596	589	255	34	72	50	100
1960-61	307907	573	255	25	106	41	100
1970-71	383990	534	256	18	130	42	100
1980-81	400946	533	283	32	118	34	100
1990-91	346102	491	296	36	114	33	100
2000-01	222147	341	410	36	175	38	100
2001-02	216,717	33.2	41.7	3.5	17.2	4.4	100
2002-03	214,760	31.9	42.3	3.3	17.5	5.0	100

Source: Indian Railways Year Book 2002-03

1.16 **Asset Utilization:**

The statistics and appraisal of utilization of assets for some selected years are furnished in Tables 1.12 to 1.20.

1.16.1 **Engine kilometres per day per engine in use:**

Table 1.12 Goods- Engine kilometres per day per engine in use

Year	Broad Gauge		
	Steam	Diesel	Electric
1950-51	150	-	191
1960-61	155	300	156
1970-71	121	347	316
1980-81	89	303	274
1990-91	52	445	398
2000-01	-	398	450
2001-02	-	399	469
2002-03	-	381	474

Source: Indian Railways Year Book 2002-03

Table 1.13 Passenger- Engine kilometres per day per engine in use

Year	Broad Gauge			Metre Gauge		
	Steam	Diesel	Electric	Steam	Diesel	Electric
1950-51	249	-	397	211	-	130
1960-61	274	250	363	220	274	177
1970-71	250	669	437	228	383	376
1980-81	210	610	453	199	541	405
1990-91	189	673	482	185	569	382
2000-01	-	577	542	36	447	385
2001-02	-	565	558	33	435	379
2002-03	-	570	567	32	426	393

Source: Indian Railways Year Book 2002-03

With the introduction of diesel and electric tractions, the steam locomotives have been relegated to inferior services. This has brought about improvement in output in terms of gross tonne km per kg of tractive effort.

1.16.2 GTKM (excluding weight of engine and departmental traffic) per kg of tractive effort:

Table 1.14: GTKM per kg of tractive effort

Year	Broad Gauge	Metre Gauge
1950-51	1525	1191
1960-61	1864	1444
1970-71	2147	1714
1980-81	2372	1708
1990-91	3873	2263
2000-01	4498	1628
2001-02	4,614*	1,624
2002-03	4,790	1,784

* revised

Source: Indian Railways Year Book 2002-03

1.16.3 Track Utilization:

The density of traffic in terms of NTKMs, PKMs and GTKMs per route km is given below:

Table 1.15: Track Utilisation (in Millions)

Year	Net tonne km per route km.		Passenger km per route km.		Gross tonne km per route km.	
	BG	MG	BG	MG	BG	MG
1950-51	1.50	0.25	1.77	0.85	5.24	1.20
1960-61	2.76	0.54	2.03	0.89	8.32	2.18
1970-71	3.61	0.81	2.88	1.25	10.38	2.87
1980-81	4.34	0.80	5.15	1.72	12.55	2.76
1990-91	6.30	0.97	7.12	1.97	18.13	3.17
2000-01	6.96	0.24	9.49	2.08	21.92	1.79
2001-02	7.38	0.24	10.13*	2.27	23.11*	1.83
2002-03	7.74	0.19	10.52	2.40	23.80	1.83

* revised

Source: Indian Railways Year Book 2002-03

1.16.4 Average freight train speed:

In 2002-03 the average speed of goods train was 24.7 kmph on BG and 18.2 kmph on MG.

Table 1.16: Average freight train speed (km/hour)

Year	Diesel	Broad Gauge Electric	All Traction	Meter Gauge All traction
1950-51	-	20.8	17.4	15.0
1960-61	22.2	19.5	16.1	13.7
1970-71	22.9	25.2	17.9	14.7
1980-81	21.3	22.8	19.7	15.1
1990-91	22.6	23.1	22.7	17.6
2000-01	22.4	25.4	24.1	19.6
2001-02	22.6	25.8	24.4	18.4
2002-03	22.8	26.2	24.7	18.2

Source: Indian Railways Year Book 2002-03

1.16.5 Average freight train load:

The average net load per train in 2002-03 was 1,327 tonnes on BG. The average gross load per train was 2,636 tonnes on B.G. and 719 tonnes on MG.

Table - 1.17 Average freight train load

Year	Net Load		Gross load (including weight of engine)	
	BG	MG	BG	MG
1950-51	489	185	1068	435
1960-61	656	298	1354	648
1970-71	737	378	1507	753
1980-81	884	487	1721	871
1990-91	1079	562	2122	962
2000-01	1233	414	2533	806
2001-02	1,280	393	2,604	784
2002-03	1,327	315	2,636	719

Source: Indian Railways Year Book 2002-03

Note: These figures are worked out taking into account both loaded and empty trains.

1.16.6 Net tonne km per engine hour and goods train hour:

During 2002-03, 32,841 NTKMs per goods train hour were generated on BG and 6,083 on MG. NTKMs per engine hour stood at 14,086 for BG and 3,008 for MG.

The table 1.18 below shows the unit output measured by these indices in selected years:

Table 1.18: Net tonne km per engine hour and goods train hour

Year	Net tonne km per engine hour		Net tonne km per goods train hour	
	BG	MG	BG	MG
1950-51	3283	1238	8590	2884
1960-61	4170	1766	10808	7232

1970-71	4904	2525	13492	5824
1980-81	6295	3345	17677	7562
1990-91	10393	5027	246787	10551
2000-01	12850	3774	29752	8540
2001-02	13,842	3,713	31,271*	7,636
2002-03	14,086	3,008	32,841	6,083

* revised

Source: Indian Railways Year Book 2002-03

1.16.7 Wagon Utilization:

On an average, a wagon moved 204.6 km per day on BG and 52.6 km on MG. NTKMs per wagon per day on BG was 2,468.

In 2002-03, 'NTKMs per annum per tonne of wagon capacity' on BG and MG were 40,251 and 7,790 respectively. Different indices of wagon utilization are given in table 1.19 below:

Table 1.19: Indices of wagon utilization

(In terms of 4-wheelers)

Year	Net tonne km per tonne of wagon capacity per annum		Wagon km per wagon per day		Net tonne km per wagon per day	
	BG	MG	BG	MG	BG	MG
1950-51	11833	9021	62.3	50.2	710	304
1960-61	16558	10125	76.9	51.6	998	405
1970-71	15117	12583	73.4	58.4	908	524
1980-81	16285	11013	73.4	47.3	986	522
1990-91	23418	18629	110.5	69.7	1407	810
2000-01	33438	9326	179.0	43.8	2042	394
2001-02	36,239	8,933	191.6*	51.7	2,223	441
2002-03	40,251	7,790	204.6	52.6	2,468	369

* revised

Source: Indian Railways Year Book 2002-03

A comparison of wagon utilization on IR with prominent railway systems of the world is given below:

Table 1.20: Comparison with other railways

Railway System	Wagon km per wagon day	NTKMs per wagon per day	NTKMs per tonne of wagon capacity.
French National Railways (SNCF)	72.25	1482.55	10919
German Federal Railways (DBAG)	69.15	1008.08	9049
Italian State Railways (FS)	46.63	774.85	6636
Japanese National Railways (JR)	252.04	3476.08	36829
Indian Railways (BG)			
1990	177.4	2027	33061
2000-01	179.0	2042	33438
2001-02	191.6*	2,223	36,239
2002-03	204.6	2,468	40,251

* revised

Source: Indian Railways Year Book 2002-03

(Source of foreign Railways' figures: 'International Railway Statistics 2000)

1.17 Research and Development:

The Research, Design and Standards Organization (RDSO) is the sole R&D wing of IR, functioning as the technical advisor and consultant to the Ministry, Zonal Railways and Production Units. Its multifarious activities of R&D for modernization of IR have attracted the attention of several organizations in India and abroad.

RDSO, an ISO 9001 certified organization, is continuously engaged in evolving new designs and adopting new technologies to cater to various needs of I.R.

Some of the important projects undertaken/completed during the year are as follows:

1.17.1 Design Development (Safety):

- Development of design of indigenous Wheel Flat Detector (WFD):
Whenever flat wheel passes the instrumented rail, causing impact loading beyond certain limits, this computerized system gives audio-visual signals.
- Development of Level crossings gate communication and monitoring System:
This system will record events like timing of ring, number of the called gate, status of ring back tone and the directions of trains ensuring safe working of trains and eliminating communication gap between the ASMs and Gatemen. The recorded data will be available for at least 24 hours.
- Development of triangular beam scheme for locomotive headlight: The new head-light is equipped with 35W Xenon (Automobile) lamp in a bigger single beam with glass reflector along with provision of single beam halogen lamp auxiliary lights by the side of marker lights. This will increase illumination on track by over 50%.
- Development of specification for the fire retardant upholstery and fire retardant curtains to increase fire safety of coaches.
- Development of modified design of coach ends for preventing propagation of fires by providing fire barriers.
- As a part of the project on Rail Defect Management by UIC, RDSO had been entrusted with lab testing of rail samples from various World Railways under simulated loading conditions. Facility of testing was upgraded in the track lab of RDSO and samples from various railway systems of the world tested and report submitted to UIC.
- Development of heat resistant, high axle load wheel for locomotive: New design has shown 50% less thermal stress and 15% less mechanical stress, thereby increasing safety in operation.

- Ergonomical modification of cab of WAP class locomotives: This modification will make it safe and comfortable for driving high speed passenger trains without undue fatigue of drivers.

1.17.2 Design Development (Higher Speed & Better Amenities):

- Development of modular toilets for passenger coaches to improve aesthetics and hygiene: These toilets are lightweight, corrosion resistant and easily maintainable.
- Development of 25kVA 3-phase under-slung inverter for RMPU (Roof Mounted Package Unit): The new design will improve the efficiency, reliability and also provide room for additional berths and for storing linen in AC coaches.
- Increase in maximum speed of Mainline Electrical Multiple Units (MEMU) from 90 kmph to 105 kmph resulting in reduced running time and improvement in line capacity/throughput.

1.17.3 Design-Development (Infrastructure):

- Design and development of WDM-3C Locomotive: The general arrangement of 3300 HP, 19.5t axle load WDM-3C locomotive having speed potential of 120 kmph has been finalized.
- Design and development of locomotives for export: Following designs have been developed during the year:
 - 3100 HP standard gauge diesel electric locomotive.
 - 2300 HP, 16t axle load yard gauge diesel electric locomotive for Columbian Railways.
 - Bogie for cape gauge locomotive with interface to existing car body design of YDM-4 locomotive.
 - Bogie for locomotive for Sri Lankan Railways.
 - 2300 HP MG diesel electric locomotive.

- Design and development of low platform container flag wagons with increased length suitable for carrying either one 45 ft long container or two 22 ft long containers, maintaining its compatibility for ISO containers.
- Upgradation of speed potential of freight stock to 100 kmph from the existing 75 kmph.
- Design of light weight BOX'N' wagon (BOX'N' LW) using rolled sections in place of fabricated members for reducing tare weight and increase the payload to achieve higher throughput: The tare weight of this wagon is 20.6t against 22.47t of BOX 'N's resulting in increase in throughput by 3.2%.
- Design of 'BOST' open wagon (BOX type) for steel loading: The wagon would be equipped with air brakes, Casnub type bogie, lower side walls than BOX and strengthened under frame to sustain point loading of steel consignment. The payload of steel and coal consignments would remain same as in BOX wagon. Speed potential will be 100 kmph.
- Design of new wagon for transportation of long rail panels: On successful trial of BRH wagon with foldable head at 85 kmph for movement of 10 rail panels, speed certificate for operation at 75 kmph has been issued.
- Development of Bogie Mounted Brake Equipment with 'K' type Brake Blocks (BMBS) for freight stock: By mounting brake system over bogie, empty space between two bogies could be effectively utilized for carrying more load.
- Development of Universal Fail Safe Block Interface (UFSBI): The new Block Interface equipment will enable existing block instrument to work on optic fibre cable. This development will avoid laying of additional copper cable solely for block working.
- Development of Indian variants of LHB coaches: The variants of LHB, similar to various types of coaches in service on IR, have been developed and their manufacture has been started at RCF, Kapurthala.
- Development of 350 HP MG DMU for operation on branch line MG sections of IR.
- Development of Fibre Reinforced Plastic (FRP) sleeper as an alternative to wooden sleepers on girder bridges: After lab evaluation, field trials were

carried out on 4 girder bridges for a period of one year. The field trial has been successful. FRP sleepers have longer life and reduce use of wooden sleepers.

- Design and standardization of Low Loss Dry Type Reactor: The use of low loss (5 kW) dry type series reactor in place of high loss (18 kW) series reactor in shunt capacitor bay at traction sub-stations would give a saving of Rs.35 lakhs per reactor over a service life of 20 years of reactor.
- Design and development of 50 kVA oil filled 25 kV/240 V single phase auxiliary transformers for supply of power to signaling and other essential requirements.
- Development of insulated catenary to avoid parting of overhead equipment under foot/road over-bridge and to reduce number of trippings of circuit breakers.
- Development of microprocessor based control system for locos: This is a major achievement for IR as this is an advanced system being provided for the first time and will considerably improve the reliability of the locomotives.

1.17.4 Quality Audit & Inspection:

- Metallurgical items, rubber and plastic products, lubricants and chemicals worth Rs.27.21 crores, in addition to signaling equipment worth about Rs.300 cores, were inspected during the year.
- Around 50,000 insulators costing around Rs.8 crores were inspected with an objective to improve reliability of insulators.
- Workshops/Production Units were audited with a view to ensuring proper quality of welding consumables supplied by different manufacturers.
- Stage inspections of 47 construction projects were carried out and corrective actions to ensure proper quality of earthwork have been suggested to concerned Railways. Based on the observations made during inspections and scrutiny of the quality records of the Railways, 15 quality certificates for formation have been issued covering a total length of 174.68 km.

- 2,505t of open web girders and 256t of welded girders were inspected and cleared during the year.
- Inspections of 38 hydraulic track lifting cum slewing devices and 3 hydraulic rail tensor (70t capacity), 5 double action weld trimmer (power pack version), 4 rail cutting machine (saw type) and one rail drilling machine were conducted.

1.17.5 Consultancy

Following consultancies were rendered during the year:

- Study for identifying reasons for development of cracks in steel channel sleepers laid on Gorakhpur-Lucknow section (BG) of N.E. Railway.
- Rebuilding of Bridge No.93 across river Kopili of N.F. Railway.
- Instrumentation of Balawali Bridge to study problem of lateral movement of girder.
- Rehabilitation of distressed Bankim Setu and road over bridge at Howrah of Eastern Railway.
- Rehabilitation of unstable formation between:
 - Itikayala-Kurnool Town station, Hyderabad Division, S.C. Railway
 - Sirhind-Jakhal Section, Ambala Division, Northern Railway
 - Panskura and Haldia Section of Kharagpur Division, S.E. Railway
 - Tandur – Mantatti station, Secunderabad Divisio, S.C. Railway.
 - Use of fly ash of Barauni Thermal Power Plant in earthwork for construction of new BG line, Eastern Railway
- Consultancy to BHEL, Haridwar for designing 28 axle special wagon for 660 MW TGS.
- Study and examination for providing consultancy to Mumbai Rail Vikhas Corporation for the introduction of the state-of-the-art EMU services in Mumbai area.
- Study and examination for providing consultancy to Delhi Metro Rail Corporation on technical and Safety clearance.

1.17.6 Test and Trials:

- 34 oscillation and other field trials of different rolling stock were conducted during the year.
- 34 stationary/laboratory tests were conducted during the year.

1.17.7 Mobile Testing/ Scanning:

- During the year, about 1.47 lakh km of track recording, against the target of 1.17 lakh km, has been achieved.
- During the year, about 6,700 track km has been tested which is 85% more than the average progress during the last 5 years.
- During the year, around 9,000 km OHE recording was done on Central, Eastern, Northern, South Eastern and Western Railways using NETRA (Network of Electrification, Testing, Recording Apparatus) Car resulting in reduced requirement of power blocks and improved reliability of OHE.

1.18 Personnel:

1.18.1 Industrial Relations:

The industrial relations on IR remained very cordial during 2001-02. There has been free and frank exchange of views between the organized labour and the management at all levels to ensure greater transparency in the decision making process. Besides participating in the meetings of PREM (Participation of Railway Employees in Management) Group at the Apex, Zonal and Divisional levels, leaders of both the recognized Federations also participated in General Managers' and Chief Personnel Officers' Conferences held at the Railway Board level. Participation of the recognized Unions in Principal/Divisional Officers' Meetings had also been ensured at the Zonal/Divisional levels, resulting in effective and meaningful involvement of staff in achieving the corporate objectives.

1.18.2 Number of personnel:

The group-wise and department-wise break up of the railway employees as on 31.3.2002 vis-à-vis 31.3.2001 is given in table 1.21 & 1.22 below:

Table 1.21: Group-wise staff strength

Group-wise breakup	As on 31.3.2001	As on 31.3.2003
Group 'A'	7,862	7,326
Group 'B'	6,970	6,295
Group 'C'		
Workshop & Artisan.	3,30,129	3,18,923
Running	84,671	84,633
Others	4,85,518	4,66,411
Group 'D'		
Workshop & Artisan	1,68,166	1,57,415
Others	4,61,992	4,30,849
Total	15,45,308	14,71,850

Table 1.22: Department-wise staff strength

Department-wise break up	As on 31.3.2001	As on 31.3.2003
Administration	49237	46,773
Accounts	30342	28,464
Engineering	404554	3,80,411
Signal & Telecom	76327	72,371
Transportation	176988	1,72,872
Commercial	113672	1,08,607
Mechanical Engineering	368078	3,45,032
Stores	34361	32,182
Electrical	166590	1,65,633
Medical	52400	51,875
RPF	55683	53,177

Railway Board/other Railway offices, including RPSF	17076	14,453
Total	1545308	14,71,850

Source: Indian Railways Annual Report & Accounts 2002-03

1.18.3 Wage Bill:

The wage bill including pension etc. increased by Rs.195.83 crores touching Rs.19,037.22 crores – a rise of 1.04% over the previous year. The average wage per employee was up by 6.18% from Rs.1,26,650 per annum in 2001-02 to Rs. 1,33,967 in 2002-03.

The total number of personnel as on 31st March and the average annual wage per employee for the last two years are given in the table 1.23 below:

Table 1.23: Total strength and wages

	2000-01	2001-02	2002-03
Total number of personnel (in thousands)	1,545	1,511	1,472
Average annual wage per employee (Rs.)	1,21,281	1,26,167*	1,33,967

*Revised Source: Indian Railways Annual Report & Accounts 2002-03

1.18.4 Representation of Scheduled Castes (SCs) and Scheduled Tribes (STs)

The Ministry of Railways have ensured that the safeguards and protection are extended to the SC/ST and OBC employees as per constitutional scheme and as per law laid down by the Supreme Court. Special cells exist at the levels of Ministry/Railway Headquarters/Divisions/Production Units, etc. to ensure appropriate implementation of reservation policies as well as speedy redressal of the grievances. Special Recruitment Drives were undertaken to fill up the backlog vacancies. During the year, 2,637 SC/ST candidates were recruited out of a backlog of 5,516 posts identified vacant in Group 'C' and 'D' categories. Efforts are on to fill up the remaining vacant posts.

The comparative position of representation of SC & ST employees on IR (including MTPs) as on March 31,2002 vis-a-vis March 31, 2001, is given in table - 1.24 below:

Table 1.24: Representation of SC & ST employees on IR

	No. of SC employees		No. of ST employees	
	As on 31.3.2002	As on 31.3.2003	As on 31.3.2002	As on 31.3.2003
Group A	1,236 (15.95%)	1,284 (17.35%)	500 (6.45%)	555 (7.50%)
Group B	1,042 (15.59%)	1,104 (17.27%)	352 (5.27%)	391 (6.12%)
Group C	1,32,713 (14.86%)	1,39,904 (16.03%)	54,283 (6.08%)	56,740 (6.50%)
Group D (excluding Safaiwalas)	86,222 (15.61%)	79,194 (15.04%)	41,502 (7.52%)	38,055 (7.23%)
Group D (Safaiwalas)	35,205 (63.74%)	31,136 (49.57%)	2,522 (4.57%)	2,383 (3.79%)
Total (excluding Safaiwalas)	2,21,213 (15.16%)	2,21,486 (15.67%)	99,159 (6.55%)	98,124 (6.65%)
Grand Total (including Safaiwalas)	253959 (16.39%)	256418 (16.96%)	100582 (6.49%)	99159 (6.55%)

Source: Indian Railways Annual Report & Accounts 2002-03

(Figures in brackets indicate %ages to the total staff in the respective Groups)

1.18.5 Railway Recruitment Boards:

During 2001-02, the 19 Railway Recruitment Boards recommended 7,457 Group C candidates for appointment as against 8,111 recommended during 2000-01.

1.18.6 Service Matters

All Group B (non-gazetted), C and D Railway employees (excluding RPF/RPSF Personnel) were sanctioned productivity linked Bonus equivalent to 59 days' wages for 2002-03. This benefited about 14.4 lakh employees. RPF/RPSF Group C and D personnel were sanctioned ad hoc bonus equivalent to 30 days' wages for the year.

1.18.7 Human Resource Development (HRD) and Manpower Planning:

Human Resource Development strategies on IR have been reoriented towards enhancing competitiveness in the context of internal and external changes taking place to meet the challenges being faced by IR. In addition to in-house training facilities, railway men are being provided specialized training in the institutions in India and abroad. Railway employees are also encouraged to improve their knowledge and skills by acquiring higher educational qualifications in the specified areas relevant to their work by granting incentives to them. Efforts are being made to improve the basic infrastructure for training to provide structured training programme for better learning, regulate manpower intake with reference to emerging business needs and financial viability of the system.

The following 6 centralised Training Institutes (CTIs) cater to be training needs of railway officers:

- Railway Staff College, Vadodara
- Indian Railways Institute of Civil Engineering, Pune
- Indian Railways Institute of Signal Engineering and Telecommunications, Secunderabad.
- Indian Railways Institute of Mechanical & Electrical Engineering, Jamalpur
- Indian Railways Institute of Electrical Engineering, Nasik.
- Indian Railways Institute of Transport Management, Lucknow.

Apart from probationary training, the CTIs also cater to the specialized training needs of serving officers. The Railway Staff College imparts training in General Management, Strategic Management and function related areas for serving railway officers. Other CTIs conduct specialized technical training courses in respective functional areas. Training programmes on Information and Technology are also being conducted by the CTIs to provide solutions for information management and decision support requirements. Need based special courses conducted by CTIs and facilities offered by them for trainees from abroad and non-Railway organizations in India have

been well appreciated. The training programmes emphasize on learning with a purpose and professional approach. In addition to in-house faculty, faculties having diverse experience in business, industry and government are utilized to relate academic concepts to practical problems to meet the changing needs arising out of technological development and socio-economic transformation.

Training needs of non-gazetted staff are being taken care of by over 177 training centres located across the railway system. Training has been made mandatory at different stages for staff belonging to some of the safety categories. In fact, some categories of staff who are overdue for refresher training are taken off duty till completion of the said training.

During 2001-02, a total of 5,130 officers and 2,16,518 non-gazetted staff underwent different types of training programmes.

1.18.8 Railway Health Services:

Comprehensive Health Care Services are provided to about 80 lakh railway employees/beneficiaries through a network of 584 health units, 124 hospitals including 5 super-speciality hospitals and 9 apex referral Hospitals. There are 13,758 in-patient beds in this network. Budgetary allocation during the year for railway health services was Rs.611.08 crores. Close liaison and collaboration is maintained with Central, State and local administrative authorities for implementation of various national health programmes on the Railways.

Highlights of performance in health care are given below:

➤ Number of O.P.D. patients attended during the year	3,03,83,563
➤ Number of patients admitted for treatment	4,40,468
➤ Major surgical procedures conducted	32,329
➤ Bed occupancy ratio	62.76
➤ Average length of stay (ALS)	6.68 days
➤ Average Hospital mortality rate among total admissions	1.96%

➤ Man days lost due to sickness	1.86%
➤ No. of tests conducted for HIV	51,864
➤ Pool Size of HIV positive persons as on 31.3.2002	2413
➤ Crude birth rate population	9.82/1000

1.18.9 Staff welfare:

IR's welfare schemes cover a wide spectrum of activities in areas of education, medicare, housing, sports, recreation and catering.

Staff Benefit Fund is an important channel for providing additional facilities to railway employees and their families in the spheres of education, recreation, medicare, sports, scouting and cultural activities. Dispensaries under the indigenous systems of medicine, viz. Ayurvedic and Homeopathic, are also run with the help of this fund.

Over 44% staff have been provided with railway quarters. 2,235 additional staff quarters were electrified during 2001-02.

253 canteens served subsidized meals and refreshments to employees during the year at their work places all over IR.

Co-operative societies of various types are also encouraged as a part of welfare programme for employees. Besides a large number of Thrift and Credit Societies, 330 registered Railwaymen's consumer Co-operative Societies, 20 Railwaymen's Co-operative Housing Societies and 34 Labour Contract Co-operative Societies functioned on IR during 2001-02.

IR attaches due importance to recreation for their employees and provides excellent facilities through Institutes/Clubs for sports, libraries, etc. IR runs Holiday Homes to enable the employees and their families to enjoy holidays at nominal expenses.

1.18.10 Pension Adalats:

The long-standing disputes or delays in the settlement of dues of superannuated employees are decided on the spot in Pension Adalats organized at Zonal and Divisional Headquarters level. 6,219 cases were decided in the Pension Adalats held during the year.

1.18.11 Railway Minister's Welfare and Relief Fund:

The fund provides financial assistance and relief to railway employees and their families in times of distress. The voluntary contributions from the employees and Railway Women's Welfare Organizations constitute the primary source of the Fund. In 2001-02, a sum of Rs.12.30 lakhs was sanctioned from the Fund as relief to the railway employees.

1.18.12 Outstanding Achievements in Sports:

IR is a dominant force on the National Sport scene and has produced outstanding sportspersons for the Indian Teams in the International Meets in various disciplines.

IR sports persons won 19 national titles during 2001-02. The titles in Men's section were for Athletics, Ball Badminton, Power lifting, Wrestling (FS), Wrestling (GR), Cricket, Gymnastics, Volleyball, Cross Country (4 km), Cycling Track) and Table Tennis. In Women's section, the titles won were for Athletics, Basketball, Cross country (4 km), Cross country (8 km), Cricket, Hockey, Kabaddi and Volleyball. IR's Men Cricket Team won the Ranji Trophy Championship for the first time in the history of the Railways. The Athletics Team won the World Railways Championship in Men's section and stood runners up in Women's section. 3 Railways' Cricketers viz. Sanjay Banger, Harvinder Singh and Murali Kartik represented the country in Tests and One Day Internationals. 8 Railway Sportspersons viz. K.M. Beenamol (Athletics), Yadavendra Vashishta (Athletics), Sebastian Xavier (Swimming), T Chanu (Hockey), Madhu Yadav (Hockey), Naresh Kumar (Wrestling), Kirpa Shankar Patel (Wrestling) and P.V. Ramanna (Volleyball) were honoured with Arjuna Award during the year.

1.19 Summary:

From the data given in this chapter, it is seen that on the Indian Railways substantial progress has been made to improve the throughput on the railway system during the last 50 years. The summary of achievements made on the Indian Railways is as under.

Even though the volume of both passenger and traffic has increased substantially, yet, the number of manpower has been reduced systematically over the years. There have been large scale technological inputs also, viz. introduction of Computerized Passenger Reservation System, introduction of modern state-of-art three phase technology Locomotives, replacement of steam locomotives by diesel and electric locomotives, improvement in the coach and wagon designs, and improvements in the signalling and telecommunicating system to ensure safety. These were introduced without rendering any staff surplus. The staffs have been suitably trained to take up the new assignments. After 1974, there has not been any strike on the railway system, which really speaks high about the organization. The Railways have taken the following actions to improve the satisfaction and motivation level of the staff:

- Improvement in the housing availability
Nearly 50 to 60% employees are housed in the railway colonies.
- Assured career progress in group C: The non-gazetted staff can get at least four to six promotions during their working career span of 30 to 35 years. To achieve this objective, the restructuring of the cadre is done on a regular basis. During the early 90's, the cadre restructuring was done in 1994 and now it has been undertaken in the year 2003 so that the staff stagnating in various grades can get further promotions. The staff are assured promotions in 12 years of service.
- Systematic training to absorb new technology and to acquire new competencies and Skills
- Staff Welfare Activities:
 - Many staff welfare schemes have been introduced like provision of stadiums for staff recreation, free rail travel facilities, educational

allowance for children, provision of institutes for recreation purposes, provision of holiday homes at the important hill stations and other historical important stations etc.

- On the death of railway employee, one of the dependant members is given appointment on compassionate ground.
- The post retirement benefits are handed over to the staff on the last day of the service.

All the above actions taken have been responsible to satisfy the staff and staff have been motivated to give better outputs. These are the practical aspects. However, to understand the concept of motivation, theoretical material on motivation authored by key authors has been discussed in the chapter III.

The Indian Railways are also facing certain problems recently and the working of the organization has to be suitably changed so that the railway organization is in a position to adopt itself to the changing environment and to face the competition with road and waterways effectively. In achieving the above objectives, it is essential that the Railways must have suitable, trained, motivated and satisfied labour so that with their dedicated output, the challenges that the Indian Railways are facing now can be suitably met.

CHAPTER 2

KEY ISSUES AND PROBLEMS BEING FACED BY INDIAN RAILWAYS

2.1 The Indian Railways- Back ground:

The Indian Railways (IR) has been playing a crucial role in the social, political and economic life of the country. IR's transportation network has helped greatly in weaving India into a nation. This network has not only integrated markets but also people across the length and breadth of this huge country. IR's role in times of war or natural calamities has also been commendable. It has always risen to the occasion and transported men and materials in large numbers at short notice. It is because of all these reasons that IR is one of the foremost institutions of the country today.

2.2 Competitive Environment:

As the growth of the country's economy accelerates, the supply of all transportation services will also have to accelerate accordingly. With an increasingly competitive environment in the world, the cost incurred in transportation will also have to be increasingly competitive with similar services provided elsewhere, with competitiveness being measured in terms of both cost and quality of services. India having a large continental economy, the role of the Indian Railways in providing such competitive services will be a critical part of the solution to Indian's infrastructure needs.

2.2.1 Infrastructure services have long been seen as the domain of the public sector mainly in view of the general characteristics of many segments of infrastructure services. It is useful to distinguish different infrastructure services according to their characteristics and the nature of their usage:

- Open Access Services: Those services from which people cannot be easily excluded such as public lighting, intra city roads, public water supply and the likes.
- Limited Access Services: These are typically services that can be provided on an exclusive basis. Such services can be provided for users who pay principal so that those who cannot pay can be excluded. Such services can, in principle, be self-financing through the provision of user charges. Should there be overwhelming social and other reasons for providing these services at less cost to specific classes of consumers, this could always be done on a transparent subsidy basis.

2.2.2 Subsidy to Passenger traffic by freight segment:

The Railways clearly fall in the latter category of services. Unlike the usage of roads, it is easy to exclude both freight users and passengers from the usage of railway services without adequate payment in return. However, a tradition has been built up to see the Railways as a part of essential public service, the usage of which should not be denied to even those who are unable to pay fully. The freight users have been seen as those classes of users who can easily pay more for the railway services they consume. Similarly, the passengers using higher classes of services are also seen as those who can pay adequately and even more. It is the users of lower class passenger services who are seen to have inadequate ability to pay and are therefore charged inadequate tariffs. Consequently, freight services subsidize passenger services as a whole and upper class passengers subsidize others.

2.3 Difficult financial Scenario:

These tendencies got accentuated in the 1990's and the economics of IR are now extremely vulnerable. For the first time in 17 years, in 2000-01, IR was not able to pay a dividend to the government on its past investment. This situation has continued in 2001-02, and it is a financial crisis. Its ability to invest adequately in providing efficient and cost competitive services in the future is seriously in question. Thus IR is in a

watershed period in its history today and therefore drastic action needs to be taken in different areas to make the proud organization the country's pride once again.

2.4 New competitive pressures:

Apart from the internal difficulties that IR suffers today, the economic reforms of the 1990's have also subjected it to great external pressures. With the opening up of the economy in 1991, and trade and tariff reforms accompanied by different measures of internal deregulation, the Indian firms have become more and more conscious of all their cost elements. In an open economy framework, the internal prices of goods have to, more or less, follow global prices except as mediated by the existing level of customary tariffs. With the drop in international transport cost, the natural protection enjoyed by the domestic industries has also fallen. The consequence is that, for the domestic firms to be competitive in their works, the cost of infrastructure has to be more competitive as compared to those in other countries.

2.5 Drop in Railways' Share of Traffic:

2.5.1 The competition has been increasing across all sectors of the economy and the transportation business is no different. Over the years, the Railways has faced stiff competition from the roadways. After trucking was deregulated in the 1980's, the road transportation has grown rapidly and that has affected the Railways' market share. The features like greater customer orientation, and flexibility and lower cost for short leads are increasing the share of roadways even in bulk commodities that have traditionally been a stronghold of the Railways.

2.5.2 The companies that used a "cost plus" approach to pricing are finding that their bottom-lines are under pressure. The public sector undertakings that purchase transport services have to find means of reducing their costs or become un-competitive. The private sectors have become even more cost conscious than before.

2.5.3 Over the last decade, the proportion of the total production of bulk commodities that was transported by rail has gone down in almost all commodities. IR has seen a slowdown in the rate of growth of freight cargo transportation. The annual growth

rate, measured in 'net tonne kilometre', averaged 5.33 % between 1984 to 1991, but dropped to 1.86 % in the next eight years 1992-99.

2.5.4 The road dominance is likely to increase even further with the measures the Government has already set in motion for the road sector like the four-laning of the "Golden quadrilateral" and the development of new expressway stretches. The increasing use of pipelines for the transportation of POL products is likely to further reduce the demand for transportation of POL products by rail in the future.

2.5.5 Coastal Shipping;

The coastal shipping and inland waterways enjoy advantages in terms of a ready-made infrastructure, favourable levels of energy efficiency, and support through Government policy for their growth. In the recent times, the coal and cement have started moving in significant volumes through coastal shipping.

One of the reasons for the decline in the Railways' market share, particularly in the freight business, has been the pricing of its services. The ratio of average passenger fare to the average freight tariff for the Indian Railways is amongst the lowest in the world.

The Railways therefore have to invest and reorganize itself in significant fashion over the next 5 to 10 years in order to meet these new challenges.

The quality and cost of infrastructure of freight transport are especially of critical importance for a country seeking foreign investments. They influence trans-national corporations in their decisions as to where new investments should be located. Cost reductions and increased speed of freight movements over the past few decades have increasingly been based on multi-modal transport involving containerization, which requires interactive coordination between shippers, rail, port, air and road freight agencies. These developments call for a basis change in IR's approach to freight transportation.

2.6 Impending financial crisis:

2.6.1 The Indian Railways is at present in a financial crisis. Its ability to invest adequately in providing efficient and cost competitive services in the future is seriously in question.

2.6.2 Since independence, the investment in IR has been controlled in a manner similar to all other public investments through the central planning process. It has been financed through a combination of internal generation, budgetary support from the Government and market borrowings. The availability of government finance has varied over time depending on the state of public finance in the country and changing relative priorities. There is a large backlog of investment that IR needs in order to finance major modernization and capacity expansion requirements.

2.6.3 The internal generation of funds has come under severe pressure after the implementation of the recommendations of the Fifth Central Pay Commission. The share of the budgetary support in the Plan Outlay has been coming down over the years from 75 per cent during the Fifth five year plan to 23 per cent during the Eight five year plan.

2.6.4 Financial Situation of the Government: In recent years the financial pressures on the Government have increased. In order to understand the current fiscal predicament of the Central Government, it is necessary to examine the pattern of Central Government expenditure and revenues over the last 20 years at least. As already mentioned above, the key threat to sustainable economic growth and to economic security is the substantial decline in investment expenditures made by the Government.

2.6.5 The total expenditure of the Central Government increased from an average of 16.8 per cent of GDP in 1980-85 to about 20.5 per cent in 1985-90 and has then declined to between 16 to 17.5 per cent in the late 1990's. At the same time non-plan expenditure has increased substantially from about 10 per cent in the early 1980's to about 13 per cent of GDP now. What is most notable is the very significant increase in expenditure

that occurred in the second half of the 1980's. These increases took place in almost all categories of non-plan expenditure such as interest payments, defence expenditure, subsidies, pensions, and loans to States. During this period other non-plan expenditures, which consist mostly of salary payments to government servants, remained roughly stationary at about 2.25 per cent of GDP. Plan expenditures were kept at about 6.5 per cent of GDP throughout the 1980's. Correspondingly capital expenditures of central government were sustained at levels of 6 per cent to 7 per cent of GDP. However, both plan expenditures and capital expenditures of the central government have fallen to levels of about 4 per cent of GDP or less now. With the increase in non-plan expenditure, particularly that in interest payments, the government simply has no money to invest in productive activities such as the Railways.

2.6.5 The debt service burden of the Government would not rise as a proportion of total expenditure if the investments made by the Government from borrowings yield adequate returns either through the generation of non-tax revenues or through tax revenues. As the Government borrows resources from the public to invest in new assets, the tax revenues should rise through additions to public good assets. Improvement in public infrastructure should lead to improvement in efficiency and in aiding new private investment, and hence to buoyancy in tax revenues. Similarly, non-tax revenues should rise through increasing dividends from public enterprise investment in infrastructure and other activities. If, however, resources are borrowed for investment in activities that do not yield adequate returns, debt service payments will rise continuously as a proportion of total revenues. This is what seems to have happened in India in general over the last 20 years and in the Railways in particular over the last 10 years. The return on net worth in central public sector enterprises, excluding the petroleum companies, is not significantly different from zero. Thus investments made in infrastructure or other activities through public sector enterprises have not yielded pecuniary returns to the Government. Wrong pricing policies, inefficient public enterprise operations, and other difficulties have all contributed to this situation of low returns. With the Government running a revenue deficit since the early 1980's, all government and public sector investments have come from resources

borrowed by the Government. In the absence of any returns from such investments, debt service payments are bound to become an increasing burden.

2.7 Quality and Cost of Railway Investment:

2.7.1 Every rupee of investment such as that in the Railways comes from sources borrowed at market interest rates in the capital market. The capital-at-charge committed by the Central Government in the Railways is at 7 per cent dividend rate, and therefore results in further loss to the Central Government. Hence, although the Indian Railways may have a justifiable claim on the Central Government for resources for investment in the public interest, the fiscal situation of the Central Government is such that it may be simply incapable of providing the volume of resources required by IR to be competitive in the future. It has to be much more careful in the investment it makes so that it obtains returns at least equivalent to the cost of funds in the market regardless of whether they are raised directly by the Railways or through intermediation of the Central Government.

2.7.2 Today IR is on the verge of a financial crisis. The loss of market share in the profitable freight business, lack of flexibility in pricing, high cost of internally sourced products and services together with investments in unremunerative projects have meant that the rate of growth in revenues has been outstripped by the rate of increase in costs. The revenues have grown at the rate of 13 per cent per annum over the last ten years. The costs too have grown at the rate of 13 per cent per annum during this period. However, in the last five years, the costs have grown faster than revenues.

2.7.3 Investment in unremunerative projects has escalated during the 1990's. First the adoption of the uni-gauge project that has involved large investments during this period has been particularly harmful to the finances of IR. Whereas, it is possible that economic returns from this project may be felt over the long term, though many experts even dispute this, it is clear that there have been short-term impacts. Second, the temptation to begin a myriad of new lines for political reasons has been much greater during the politically fractured 1990's. Although the progress in actual investment in

these new lines is minuscule, this activity does divert engineering and managerial resources to a significant extent, detracting from other serious tasks.

2.7.4 Revenue growth has also probably suffered from the saturation of freight traffic on trunk routes, particularly on the golden quadrilateral. This is partly due to the large differential in speed between passenger and freight trains, which severely constrains the freight carrying capacity of trunk routes. Thus expansion of traffic on these routes requires both managerial action and investments on new technology to raise the speed of freight trains significantly.

2.7.5 These problems have essentially resulted from the wrong structure of IR that devalues accountability at every level. Rising employee costs, poor productivity and declining budgetary support have compounded the problem. Staff costs, which account for about 50 percent of the costs, have been growing the fastest. This percentage is likely to increase even faster with the implementation of the recommendations of the 5th Pay Commission. The relatively low levels of employee productivity in the Indian Railways compound the problem of having large workforce.

2.7.6 The proportion of expenditure on repairs and maintenance has been declining steadily over the years. The strain on the Railways' resources has also prevented adequate investment in track renewals and other safety related areas. This is another consequence of the uni-gauge project. Consequently the arrears of track renewals have grown from 3,548 km to 12,260 km over the last ten years. Though the overall number of accidents and the number per million train kilometers have shown a declining trend, the absolute numbers are still high with scope for improvement.

2.7.7 In addition to the requirements for new investment for modernization and remunerative capacity expansion, IR now has considerable backlog of investment for track maintenance and repair. The existing managerial, financial and accounting systems are such that these new financial requirements cannot be met in a business situation with usual scenario.

2.7.8 To arrest the steep-decline in share and to improve the quality of its services, the Railways need to increase investments in infrastructure. However, if the existing trends of increase in costs, uneconomical tariff setting and investments in unremunerative projects were to continue, it would be impossible for the Railways to generate funds internally for these investments. An “As is” scenario, constructed by assuming that there are no significant changes in the performance, projects that by 2003 the Railways would have an operating deficit of Rs. 3700 crores. The recent trends indicate budgetary support is unlikely to account for more than 25 per cent of the plan outlay. In this situation the Railways’ dependence on borrowings is likely to increase substantially and lease payments are expected to grow from Rs. 1974 crore per annum in 1998 to Rs. 5000 crore per annum by 2003. Clearly continuing the current system of railway operations into the future is not a feasible option.

2.8 World Trends- Need for Restructuring:

2.8.1 After a relatively stable period experienced by the railway systems around the world since the Second World War, there has been widespread reforms in most railways over the last twenty years. On line with the changes that have taken place in India’s economic environment, IR also has to undergo major structural change in its organization if it is to serve the emerging needs of the country; this is the considered view of the Expert Group.

2.8.2 When infrastructure facilities are developed by the State or State agencies, there is typically little connection between cost of funds and the returns from the investment. Efficiency of investment has assumed new importance in the context of fiscal stringency. Ironically, as the state of public finance has become more difficult in India in the 1990’s, the efficiency of investment in the Railways has declined particularly during this period.

2.9 Issues facing Indian Railways:

2.9.1 Customer Needs and Expectations:

The customers of freight transport service typically want higher reliability of service, flexible solutions that make the right kind of capacity available at the right place at the right time, 'one stop shopping' with intelligible and simple documentation, customer-friendly interface and competitive and stable prices.

Imports and exports can be expected to increase their share in an economy where the opening to trade is still incomplete. The quality of service and cost will have to be particularly competitive in this traffic segment.

Passenger services can be segmented into long distance, inter-city and suburban transport. They can also be clubbed under two heads, value and premium, depending on the quality of services provided. The business traveler segment is relatively price insensitive and is willing to accept a fairly high price for good service and flexible reservation conditions. With increasing incomes, the demand for leisure travel can be expected to increase for the indefinite future. Given the long distances in the country, those who are not able to afford air travel will find the Railways the most convenient form of travel.

India's urban population growth is projected to accelerate further. This implies that growth in suburban railway traffic will continue in the medium term. Demand for inter-city travel will also increase, particularly in the premium segments. Thus the rationalization of passenger fares is crucial for IR's survival, both suburban as well as intercity.

The urban commuter expects fast, reliable and regular suburban and intra-urban services at concessional season ticket rates. The inevitable growth in urbanization and the generally greater level of awareness of the urban commuter will only add to the problem.

Urban commuters are receiving a heavy subsidy due to the excessive concessional season ticket rates. The rationalization of these fares will also be critical.

The lack of customer focus is characteristic of the “government department” attitude of IR. Competing modes of transport (primarily road transport) are far more responsive to market requirements. National Highway Development Projects linking the four metro cities are likely to provide the biggest threat to the Indian Railways’ freight and passenger shares. Frequent air-conditioned bus services will increase tremendously with the availability of fast, quality four lane highways.

2.9.2 Lack of clarity Regarding purpose:

IR suffers from a split personality. On the one hand, at least since the separation of accounts in 1924, the Government sees the IR by itself as a commercial organization. It should therefore be financially self-sufficient. On the other hand, as a department of the Government, the Government sees it as social organization that must be subservient to fulfilling the social needs as deemed fit. It is now essential for IR’s commercial and social roles to be clarified. The social role requires distinct resources and efforts, for which the accounting system must be enabled to reflect through costs adequately.

Since the objectives for commercial activities are different from those for social activities, separate parameters to assess performance need to be identified. Commonly accepted financial parameters like revenues, profits, return on capital employed, etc. could be used to assess performance of all commercial projects. For social projects, operational parameters such as improvement in connectivity, increase in the traffic, etc. could be used.

2.9.3 Outdated Business Structure:

A contemporary business structure that is aligned with the organizational strategy is a pre-requisite for success. The structure should allow the organization to focus on its core strengths/businesses. It should also empower employees to take quick decisions with the objective of enhancing customer satisfaction. Measured against these

criteria, the Railways businesses structure requires changes. These are basically due to two reasons:

- **Functioning as a Government Department:** IR currently functions as a Government department. This has limited its flexibility to respond to changes in the market place. The inability to change prices in response to increase in costs or the market scenario highlights the various compulsions under which the Railways operates. In comparison, competing modes of transport (primarily road transport) are far more responsive to market requirements. In an economic scenario where transporters are increasingly competing on customer service, the lack of market focus and flexibility is a serious drawback for the Indian Railways.
- **High Degree of Vertical Integration:** The high degree of vertical integration has resulted in its diversification from its core business of transportation to other activities. IR also runs manufacturing facilities for its coaches and locomotives, catering facilities for its passengers, and educational and medical facilities for its employees. While it was perfectly necessary to adopt an integrated model in the past, the structure has its limitations in the current context. In the new context, it is necessary to examine the necessity of each of these activities critically. The presence in a variety of peripheral businesses also takes up management time and reduces focus on the core transportation business.

Today, there exist capable suppliers for many of the products and services that the IR currently generates in-house. By being vertically integrated IR has reduced its cost competitiveness and is finding it difficult to keep pace with technology in select areas.

2.9.4 Lack of Autonomy- Political Control:

Although the Railway Board is currently provided considerable autonomy within the existing framework, the organization has historically been subject to significant political pressures. As a result, the Railways have often found it difficult to

take decisions that may be beneficial from a commercial viewpoint but are perceived to be politically unpopular particularly in the area of pricing of passenger services. Other infrastructure sectors in India (Power, Telecom) have made considerable headway in finding institutional solutions to conflicts of interest of this type.

2.10 Indian Railways- Purpose:

The Indian Railways is at a watershed. As has been brought out clearly, IR faces a serious threat due to its inability to adapt to the changing external environment. If IR is to continue its vital role in the future development of the nation, it has to rethink its very purpose of existence.

2.11 Importance of purpose of Statement:

To effectively discharge its numerous responsibilities, it is important that the entire IR organization work in concord towards a common stated purpose. A good purpose statement should address the four basic questions:

- What do we do?
- For whom do we do this?
- What should we aim at?
- How does it help the society?

To meaningfully address its role as an engine of national growth, the Railways needs to offer compelling values to its target segments. Profitable growth would be met through a combination of clear strategy that focuses on customer orientation and allows the best value to be delivered to the customer, and financial discipline to continuously reduce costs.

These concerns as also the over-riding objectives of playing a central role in India's overall economic growth and helping to integrate the country through phased and sustainable expansion plans figure in the draft purpose statement for IR that has been proposed by the Expert Group. The purpose statement is aimed to help the

management to respond to a dynamic environment, help guide the Indian Railways out of the present crisis and put it on a path of sustained growth and profitability.

2.12 Summary: It is quite clear that, even though during the last 50 years the Indian Railways have made substantial progress in different areas, it is now saddled with the following serious problems:

- Overaging assets
- Saturation of routes
- Severe competition from road and costal shipping, there by reducing its percentage share substantially.
- Cross subsidization of passenger services by freight traffic
- Impending financial crisis
- Quality and cost of railway investment
- Need for active role for human resource development. The staffs have to be continuously trained to absorb the latest technology.
- The manpower has to be reduced so that with the right sizing of the manpower the staff costs can be reduced.
- Staff have to be motivated through suitable training to take care of its customers and become customer friendly.
- The staff have to be suitably motivated to improve productivity.

From the above discussions, it is quite evident that the manpower of the Railways has to play a challenging role in the continuously changing external environment in which the railway system works. It will be the responsibility of the higher management of the Railways to ensure that by suitably motivating the staff, the Railways are wriggled out of the difficult situation in which they are operating now. If the railway administration fails to take care of the changing needs of its manpower, then it will be an impossible task for the Indian Railways to sustain its operations and take a leading role in the overall development of the country.

CHAPTER 3

MOTIVATION THEORY

3. **Introduction:** Abraham H. Maslow, father of motivation theory, presented 15 propositions that must be kept in view while tackling any problem dealing with the motivation level in an organization. The brief details of these propositions are discussed in this chapter.

3.1 Holistic Approach:

The first proposition states that the individual is an integrated, organized whole. That it is an experimental reality. In motivation theory, this proposition means many specific things. For instance, it means the whole individual is motivated rather than just a part. There is no such entity as a need of the stomach or mouth, or a genital need. There is only a need of the individual.

Dealing with hunger as a function merely of the gastrointestinal tract has made experimenters neglect the fact that when individuals are hungry they change not only in their gastrointestinal functions, but in many, perhaps, even in most other functions of which they are capable. Perceptions change; memories change; emotions change i.e. the content of thinking changes. This can be extended to almost every other faculty, capacity, or function, both physiological and psychic. In other words, when people are hungry, they are hungry all over; they are different as individuals from what they are at other times.

3.2 Paradigm for Motivational States:

The choice of hunger as a paradigm for all other motivational states is both theoretically and practically unwise and unsound. It can be seen upon closer analysis that the hunger drive is more a special case of motivation than a general one. It is more isolated than other motivations; it is less common than other motivations and finally, it is different from other motivations in that it has a known somatic base, which is unusual for motivational states.

The common assumption has been that all drives will follow the example set by the physiological drives. It is fair to predict now that this will never be. Most drives are not isolable, nor can they be localized somatically, nor can they be considered as if they were the only things happening in the organism at the time. The typical drive or need or desire is not and probably never will be related to a specific, isolated, localized somatic base. The typical desire is much more obviously a need of the whole person. It would be far better to take as a model for research such a drive, let us say, as the desire for money rather than the sheer hunger drive, or even better, rather than any partial goal, a more fundamental one, like the desire for love. Considering all the evidence now in hand it is probably true that we could never understand fully the need for love no matter how much we might know about the hunger drive. Indeed a stronger assessment is possible, namely that from a full knowledge of the need for love we can learn more about general human motivation than we could from a thorough study of the hunger drive.

3.3 Means and Ends:

If we examine carefully the average desires that we have in daily life, we find that they have at least one important characteristic that they are usually means to an end rather than ends in themselves. We want money so that we can have an automobile. In turn we want an automobile because the neighbors have one and we do not wish to feel inferior to them, so we can retain our own self-respect, and so we can be loved and respected by other. The particular desires that pass through our consciousness dozens of times a day are not in themselves so important as what they stand for, where they lead, what they ultimately mean upon deeper analysis.

It is characteristic of this deeper analysis that it will always lead ultimately to certain goals or needs behind which we cannot go, that is, to certain need satisfactions that seem to be ends in themselves and seem not to need any further justification or demonstration. These needs have the particular quality in the average person of not being seen directly very often but of being more often a kind of conceptual derivation

from the multiplicity of specific conscious desires. In other words, then, the study of motivation must be in part the study of the ultimate human goals or desires or needs.

3.4 Unconscious Motivation:

These facts imply another necessity for sound motivation theory. Since these goals are not often seen directly in consciousness, we are at once forced into the necessity of dealing with the whole problem of unconscious motivation. Careful study of the conscious motivational life alone will often leave out much that is as important or even more important than what can be seen in consciousness. Psychoanalysis has often demonstrated that the relationship between a conscious desire and the ultimate unconscious aim that underlies it need not be at all direct. Indeed the relationship may actually be a negative one, as in reaction formations. We may then assert that sound motivation theory cannot possibly afford to neglect the unconscious life.

3.5 Commonality of Human Desires:

There is now sufficient anthropological evidence to indicate that the fundamental or ultimate desires of all human beings do not differ nearly as much as do their conscious everyday desires. The main reason for this is that two different cultures may provide two completely different ways of satisfying a particular desire, let us say, for self-esteem. In one society, one obtains self-esteem by being a good hunter; in another society being a great healer or a bold warrior, or a very unemotional person and so on. If we think of ultimates, the one individual desire to be a good hunter has the same dynamics and the same fundamental aim as the desire of the other individual to be a good healer. We may then assert that it would be more useful to combine these two seemingly disparate conscious desires into the same category than to put them into different categories on purely behavioral grounds. Apparently ends in themselves are far more universal than the roads taken to achieve those ends, for these roads are determined locally in the specific culture. Human beings are more alike than one would think at first.

3.6 Multiple Motivations:

A conscious desire or a motivated behavior may serve as a kind of channel through which other purposes may express themselves. There are several ways of showing this. For instance, it is well known that sexual behaviour and conscious sexual desires may be tremendously complex in their underlying, unconscious purposes. In one individual sexual desire may actually mean the desire to assure himself of his masculinity. It may in other individuals represent fundamentally a desire to impress or a desire for closeness, friendliness, for safety, for love, or for any combination of these. Consciously the sexual desire in all these individuals may have the same content, and probably all of them would make the mistake of thinking that they seek only sexual gratification. But we now know that this is not correct, and that it is useful to deal in understanding these individuals with what the sexual desire and behavior represent fundamentally rather than what the individual consciously thinks they represent.

3.7 Motivating States:

In a certain sense almost any state of affairs of an organism whatsoever is in itself also a motivating state. Current conceptions of motivation seem to proceed on the assumption that a motivating state is a special, peculiar state, sharply marked off from the other happenings in the organism. Sound motivational theory should, on the contrary, assume that motivation is constant, never ending, fluctuating, and complex, and that it is an almost universal characteristic or practically every state of affairs of an organism.

3.8 Satisfactions Generate New Motivations:

The human being is a wanting animal and rarely reaches a state of complete satisfaction except for a short time. As one desire is satisfied, another pops up to take its place. When this is satisfied, still another comes into the foreground, and so on. It is a characteristic of human beings throughout their whole lives that they practically always desire something new. We are faced then with the necessity for studying the relationships of all the motivations to each other and we are concomitantly faced with

the necessity of giving up the motivational units in isolation if we are to achieve the broad understanding that we seek.

3.9 Impossibility of Listing Drives:

We should give up the attempt once for all to make automatic lists of drives or needs. For several different reasons such lists are theoretically unsound. First of all, they imply an equality of the various drives that are listed, an equality of potency and probability of appearance. This is incorrect because the probability of any one desire emerging into consciousness depends on the state of satisfaction or dissatisfaction of other prepotent desires. There are great differences in probability of appearance of the various particular drives.

Second, such a listing implies an isolatedness of each of these drives from each of the others. Of course they are not isolated in any such fashion.

Third, such a listing of drives, since it is usually made on a behavioral basis, neglects completely all that we know about the dynamic nature of drives, for example, that their conscious and unconscious aspects may be different and that a particular desire may actually be a channel through which several other desires express themselves.

3.10 Classifying Motivation according to Fundamental Goals:

The weight of evidence now available seems to indicate that the only sound and fundamental basis on which any classification of motivational life may be constructed is that of the fundamental goals or needs, rather than any listing of drives in the ordinary sense of instigation. It is only the fundamental goals that remain constant through all the flux that a dynamic approach forces upon psychological theorizing.

Certainly motivated behavior is not a good basis for classification; since we have seen that it may express many things. The specific goal object is not a good basis for classification for the same reason. A human being having a desire for food, behaving in the proper fashion to get it, and then chewing and eating it, may actually be seeking

safety rather than food. An individual going through the whole process of sexual desire, courting behavior, and consummately love making, may actually be seeking self-esteem rather than sexual gratification. The drive as it appears introspectively in consciousness, the motivated behavior, and even the explicitly apparent goal objects or effects sought for are none of them a sound foundation on which to base a dynamic classification of the motivational life of the human being. If only by the process of logical exclusion along we are finally left with the largely unconscious fundamental goals or needs as the only sound foundations for classification in motivation theory.

3.11 Inadequacy of Animal Data:

Academic psychologists have relied largely on animal experimentation in working in the field of motivation. It is a truism to say that a white rat is not human being, but unfortunately it is necessary to say it again, since too often the results of animal experiments are considered the basic data on which we must base our theorizing of human nature. Animal data certainly can be of great use, but only when they are used cautiously and wisely.

There are certain further considerations that are pertinent to the contention that motivation theory must be anthropocentric rather than animalcentric. First let us discuss the concept of instinct, which we can define rigidly as a motivational unit in which the drive, motivated behavior and the goal object or the goal effect are all appreciably determined by heredity.

As we go up the phyletic scale there is a steady trend toward disappearance of the instincts so defined. For instance, in the white rat it is fair to say that, by our definition, there are found the hunger instinct, the sex instinct, and the maternal instinct. In the monkey the sexual instinct has definitely disappeared, the hunger instinct has clearly been modified in various ways, and only the maternal instinct is undoubtedly present. In the human being, by our definition, they have all three disappeared, leaving in their place conglomerations of hereditary reflexes, hereditary drives, autogenous learning, and cultural learning in the motivated behaviour and the choice of goal objects. Thus if we examine the sexual life of the human being we find

that sheer drive itself is given by heredity but that the choice of object and the choice of behaviour must be acquired or learned in the course of the life history.

3.12 Environment:

So far we have spoken only of the nature of the organism itself. It is now necessary to say at least a word about the situation or environment in which the organism finds itself. We must certainly grant at once that human motivation rarely actualizes itself in behavior except in relation to the situation and to other people. Motivation must of course take account of this fact by including the role of cultural determination in both the environment and the organism itself.

3.13 Integrated Action:

Any motivation theory must take account not only of the fact that the organism behaves ordinarily as an integrated whole, but also of the fact that sometimes it does not. There are specific isolated conditionings and habits to account for segmental responses of various kinds, and a host of phenomena of dissociation and lack of integration that we know about. The organism furthermore can even react in non-unitary fashion in daily life as and when we do many things at the same time.

Apparently the organism is not unified in its integration when it is successfully facing a great joy or creative moment or else a major problem or a threat or emergency. But when the threat is overwhelming or when the organism is too weak or helpless to manage it, it tends to disintegrate. On the whole, when life is easy and successful the organism can simultaneously do many things and turn in many directions.

3.14 Unmotivated Behaviors:

Not all behaviors or reactions are motivated, at least not in the ordinary sense of seeking need gratifications, i.e. seeking for what is lacked or needed. The phenomena of maturation, of expression, and of growth or self-actualization are all instances of exceptions to the rule of universal motivation, and had much better be considered expression rather than coping.

3.15 Possibility of Attainment:

Dewey and Thorndike have stressed one important aspect of motivation that has been completely neglected by most psychologists, namely, possibility. On the whole, we yearn consciously for that which might conceivably be actually attained.

As their income increases people find themselves actively wishing for and striving for things that they never dreamed of a few years before. The average Americans yearn for automobiles, refrigerators, and television sets because there are real possibilities; they do not yearn for yachts or planes because these are in fact not within the reach of the average Americans. It is quite probable that they do not long for them unconsciously either.

Attention to this factor of possibility of attainment is crucial for understanding the differences in motivations among various classes and castes within a given population and among different countries and of cultures.

3.16 From the above discussions, it is clear that: -

- Motivation is holistic.
- There are paradigms for motivational states.
- Average desires are means to an end rather than ends in themselves.
- The motivation level of human being is also affected by the unconscious desires.
- The conscious desires depend upon culture. Thus culture also play an important role in motivating human beings.
- To undertake a particular work, there may be multi-motivational failure.
- Motivating state is sharply marked off from the other happenings in the organism.
- Satisfactions generate new motivations.
- All motivating drives cannot be listed.
- Motivation levels can be classified according to fundamental goals.

- In deciding about the motivation level, the data generated by the animal experimentation is inadequate.
- Environment plays an important role in motivating human beings.
- The organisms may behave both as integrated as well as un-integrated model.
- There may be behaviours of human beings at times, which are not related to motivation.
- Possibility of attainment is also an important factor in determining the motivation level of employees.

CHAPTER 4

MOTIVATIONAL DYNAMICS

"THE CONCEPT OF MOTIVATION"

4.1 Managing People at Work:

4.1.1 Organizations are social systems. If one wishes either to work in them or to manage them, it is necessary to understand how they operate. The modern society depends on organizations for its survival and progress. Socio-economic development takes place when people work together in organizations. The achievement of organizational goals depends on dynamic active management. Peter F. Drucker has rightly said, "Management is the mover and development is the consequence."

4.1.2 To Harod Koontz, "Management is the art of getting things done through and with informally organized group". To manage, management should understand people's behaviors at work. But the human behavior in organizations is rather unpredictable, because it arises from deep-seated needs and motives.

4.1.3 People differ in the expectations they bring to their jobs and the satisfactions they derive from them. Management can work effectively with people if it is prepared to think about them in human terms. According to Keith Davis, the key elements in organizational behaviors are the people, structure, technology and external social system. The people constitute the internal social system, the structure defines the role relationships of people, the technology provides the physical and economic conditions within which the people work, and the social system provides the external environment within which an organization operates. It is the responsibility of the management to integrate the technical and human systems.

4.2 Role of Motivation in Organisations:

4.2.1 The topic of motivation at work has received considerably increased attention in recent years among both practicing managers and organizational researchers. Managers

and organizational researchers have recently begun to direct more attention toward the behavioral requirements of an organization. In addition to the need for financial and physical resources, every organization requires people in order to function. Membership in organizations is a central part of the lives of most people. It is the people who with their skills and talents can help meet organizational needs. The problem of handling human resources is quite different from that of physical, material and financial resources. Psychologists have found that people vary considerably in their ability to behave in certain way. Katz and Kahn have brought out that:

- People must be attracted not only to join the organization but also to remain in it.
- People must perform the task for which they are hired.
- People must give dependable, creative and innovative output.

For an organization to be effective, it must come to grips with motivational problems of stimulating both the decision to participate and the decision to produce at work.

4.2.2 A second and related reason behind the increased attention being directed towards motivation centers on the pervasive nature of the concept itself. Motivation as a concept represents a highly complex phenomenon that affects and is affected by a multitude of factors in the organization. A comprehensive understanding of the way in which organizations function requires that at least some attention be directed towards the question of why people behave as they do on the job.

4.2.3 Third, given the ever-tight constraints placed on organizations by unions, governmental agencies, increased foreign and domestic competition, citizen's lobbies, and the likes, the management has had to look for new mechanisms to increase - and in some cases just to maintain - its level of organizational effectiveness and efficiency. Thus organizational effectiveness becomes to some degree a question of management's ability to motivate its employees to direct at least a reasonable effort towards the goals of the organization.

4.2.4 A fourth reason can be found in the nature of present and future technology required for production. While mastery of the technological and mechanical aspects of aerospace engineering was requisite for placing a man on the moon or for developing Skylab, a second and equally important ingredient was the ability of an organization to bring together thousands of employees who would work at peak capacity to apply the technology required for success.

4.2.5 Finally, many organizations are now beginning to pay increasing attention to developing their employees as future resources upon which they can draw as they grow and develop.

In summary there appear to be several reasons why the topic of motivation is receiving greater attention by both those who study organizations and those who manage them. This is revealed by the fact that out of a total 456 papers on organizational behavior over the period 1970-79, as many as 126 were on motivation alone. The old simplistic, prescriptive guidelines concerning 'economic men' are simply no longer sufficient as a basis for understanding human behaviors at work. New approaches and greater understanding are called for to deal with the complexities of contemporary organizations.

4.3 Motivation Defined:

The term motivation refers to motives in action. The major concept associated with instinct theories is that of unconscious motivation. The instinct theory of motivation was fairly widely accepted during the first quarter of this century.

It may be further noted that individual motivational tensions are not merely biological, but also psychological, social as well as economic in their origin. (Scot 1926)

The mechanism of motivation begins with need and ends with need satisfaction. A need is lack or deficit of some thing within a system or organism. When an individual feels a need, it leads to a chain of activities. These activities are always directed towards a goal.

4.4 Motivation of Behaviour:

4.4.1 The process by which purposive, goal directed behaviors is set in motion is called motivation. Motivation may be conscious or unconscious and most behaviour is determined by more than one motive. Although a few human activities occur without motivation, nearly all conscious behaviors are motivated or caused. In the present study the term motivation includes only the behaviors that are under central or voluntary control.

4.4.2 The problem of motivation at work assumes that management mainly deals with men, and modern business consists of about 85 per cent men, 10 per cent material and 5 per cent money.

4.4.3 The relationship between man and his work has long attracted the attention of behavioral scientists. Since all behavior is motivated and since motives themselves are not immediately observable, it might seem reasonable to infer motives from their resultant behavior. The same behavior may be the result of a number of different motives.

4.4.4 An important point is that both the need and incentive must be present initially to arouse behavior. Most of man's motivated behavior is guided by anticipated incentives some times called motives. The same motive may elicit many different type of behavior. Behaviour patterns associated with certain motives vary from person to person and from culture to culture. Individual teaming experiences, family and group standards, and culture influence human behaviour. These factors may also influence human motivation. Probably they determine the strength of motivation. Multiple aspects determine most behaviour. Rarely is a given behaviour the result of only one motive. Among the diverse forces that influence the behaviour, the needs of an individual are most important.

4.5 The Motivational Process - Basic Considerations:

The basic building blocks of a generalized model of motivation are:

- needs or expectations
- behaviour
- goals and
- some form of feedback.

4.5.1 Emergence of need, desire or expectation generally creates a state of disequilibria within the individuals, which they will try to reduce, hence the energetic component of our definition above. Second the presence of such needs, desires or expectations is associated with an anticipation or belief that certain action will lead to the reduction of the disequilibria, the goal oriented component of our definition.

4.5.2 The initiation of this action then sets up a series of cues, either within the individuals or from their external environment, which feeds information back to the individuals concerning the impact of their behavior. Such cues may lead them to modify their present behaviour or they may reassure them that their present course of action is correct.

4.5.3 At least two types of human behaviour can be identified as they relate to motivational process: instrumental and consolatory. Instrumental behaviour concerns acts that are directed towards the means to certain ends, while consolatory behaviour concerns acts that are directed towards the ends themselves.

4.6 Early Psychological Approaches to Motivation:

Most psychological theories of motivation, both early and contemporary, have their roots in principle of hedonism. This principle briefly defined states that individuals tend to seek pleasure and avoid pain. In theory, people rationally consider the behavioral alternatives available to them and act to maximize positive results and minimize negative results.

4.7 Instinct Theories:

4.7.1 Psychologists like James, Freud and McDougal argued that two additional variables were crucial to our understanding of behaviour: instinct and unconscious motivation. Instead of seeing behaviour as being highly rational, these are resulting from instincts. James (1890) included following instincts in his list: -

- Locomotion
- Curiosity
- Sociability
- Love
- Fear
- Jealousy and sympathy.

The above instincts were thought to be the prime determinants of behaviour.

4.7.2 The second major concept associated with instinct theories is that of unconscious motivation. The instinct theory of motivation was fairly widely accepted during the first quarter of this century. Freud argued that individuals were not always aware of all of their desires and needs.

4.8 Drive Theories:

4.8.1 Researchers who have been associated with drive theories typically base their work on the influence that learning has on subsequent behaviour. Where past actions led to positive consequences, individuals would tend to repeat such actions; where past actions led to negative consequences or punishment individuals would tend to avoid repeating them. Thorndike first elaborated this position in his law of effect.

With the introduction of concept of drive, it now became possible for psychologists to predict in advance at least in theory not only what goals an individual would strive toward but also the strength of the motivation towards such goals.

4.9 Cognitive Theories:

4.9.1 Whereas Drive theories viewed motivation largely as a function of past satisfactions (habits), cognitive theories saw it as a sort of 'hedonism of the future'. The basic tenet of this theory is that a major determinant of human behaviors is the beliefs; expectations and anticipations individuals have concerning future events. Behaviors are thus seen as a purposeful and goal directed and based on conscious intentions.

4.9.2 Cognitive theories or expectancy/valence theories as they later become known, view motivational force as a multiplicative function of two key variables: expectancies and valences. Expectancies were seen by Lewin (1983) and Tohman (1959) as beliefs individuals had that particular actions of their part would lead to certain outcomes. Valence denoted the amount of positive or negative value placed on the outcomes by an individual. Individuals are viewed as engaging in some form of choice behaviour, where they first determined the potential outcomes of various acts of behavior and the value they attached to each of these outcomes. Individuals select the mode of behaviour, which maximized their potential benefits.

CHAPTER 5

EARLY MANAGERIAL APPROACHES TO MOTIVATION AT WORK

5.1 Introduction: Despite the fact that large scale complex organizations have existed for several hundreds of years, managerial attention to the role of motivation in such organizations is a most recent phenomenon. Before the Industrial Revolution, the major form of motivation took the form of fear of punishment – physical, financial or social. As manufacturing processes became more complex, large scale factories emerged which destroyed many of the social and existing relationships.

5.1.2 Increased capital investment, degree of impersonalisation between superior-subordinate relationships brought social revolution in the factory system. These new social forces brought about the need for a fairly well defined philosophy of management. Many of the more intrinsic motivational factors of the home industry system were replaced by more extrinsic factors. The end result of that was the traditional model of motivation.

5.2 Traditional Model:

5.2.1 This model is best characterized by the writings of Fredrick 'W' Taylor. This approach to motivation rested on several very contemporary assumptions about the nature of human beings. Specifically, workers were viewed as being typically lazy, often dishonest, aimless, dull and most of all mercenary. The manager's major task was thus seen as closely supervising to ensure that they met their production quotas and adhered to Company rules.

5.2.2 As this model became increasingly applied in organizations, several problems began to arise. While jobs were made more and more routine and specialized, management began putting severe constraints on the incentive system, thereby limiting worker income. Fear of job security arose. Unionism began to rise, and the unparalleled growth and efficiency that had occurred under scientific management began to subside.

5.2.3 In an effort to overcome such problems some organizations began to reexamine the simplicity of their motivational assumptions about employees, and to look for new methods to increase production and maintain a steady workforce. Once such revisionist approach to motivation at work is the human relation model.

5.3 Human Relations Model:

5.3.1 Beginning in the late 1920's, initial efforts were begun to discover why the traditional model was inadequate for motivating people. The new assumptions concerning the best method of motivating workers were characterized by a strong social emphasis. It was argued here that management had a responsibility to make employees feel useful and important on the job, to provide recognition, and generally to facilitate the satisfaction of workers' social needs. Attention was shifted away from the study of man-machine relations and toward a more thorough understanding of interpersonal and group relations at work.

5.3.2 The motivational strategies that emerged from such assumptions were several. Management felt it had a new responsibility to make workers feel important. Many organizations attempted to open up vertical communication channels so that employees would know more about the organization and would have greater opportunity to have their opinions heard by management. Workers were increasingly allowed to make routine decisions concerning their own jobs. Greater attention was paid to employing group in systems. The basic goal of management remained at securing employee compliance with managerial authority.

5.4 Human Resources Models:

5.4.1 More recently, the assumptions of the human relations model have been challenged, not only for being an oversimplified and incomplete statement of human behavior at work, but also for being as manipulative as traditional model. New models have been proposed under various titles including McGregor theory, Linkerts system, Scheins complex man and Miles human resource model.

Human resource models generally view human beings as motivated by a complex set of interrelated factors. It is assumed that different employees often seek quite different goals in a job and have a diversity of talent to offer. Under this model, employees are looked upon as reservoirs of potential talent and management's responsibility is to learn how best to tap such resources.

5.4.2 It is assumed that people who want to contribute on their job does not necessarily have to be distasteful. Many of the current efforts at job enrichment and job redesign are aimed at increasing the potential meaningfulness of work by adding greater amounts of task variety, autonomy, responsibility and so on. It is assumed that this increased self-control and direction allowed on the job, and the completion of more meaningful tasks, can in a large measure determine the level of satisfaction on the job. In other words, it is generally assumed that good and meaningful performance leads to job satisfaction and not the reverse, as is assumed in the human relations model. Such a philosophy implies a great degree of participation by employees in relevant decision-making activities, as well as increased autonomy over task accomplishment. Management's task is seen not so much as one of manipulating employees to accept managerial authority, but it is for developing a partnership or family of employees, with each member contributing according to his or her abilities and interests towards the organization's goal.

5.4.3 In conclusion, it should be pointed out that the human resource approach to motivation has only recently begun to be adopted. Several organizations have ongoing experiments in enriching the nature of the job. In fact, when one looks across organizations it becomes readily apparent that all three models have their staunch advocates, and empirical evidence supportive of each approach can be offered. Each model has its rightful place, depending upon the nature of the organization, its technology, its people, and most of all, its goals and priorities for the future.

5.5 Multivariate Conceptual Approach:

5.5.1 If motivation is concerned with those factors which energize, direct and sustain human behaviour, it would appear that a comprehensive theory of motivation at work

must address itself to at least three important sets of variables that constitute the work situation. First some consideration must be given to the characteristics of the individual, second some thought should be direct toward the behavioral implications of the required job tasks, and third some concern should be shown for the impact of larger organizational environment.

5.6 Characteristics of the Individual:

Considerable research has demonstrated that difference in individuals can at times account for a good deal of the variance in effort and performance on a job. At least three major categories of individual difference characteristics have been shown to affect the motivational process:

- interest
- attitudes
- needs.

5.6.1 Interests refer to the direction of one's attention. It appears likely that the nature of an employee's interest would affect both manner and the extent to which external stimuli would affect his behaviors. Several studies have shown that an employee's motivation to participate is to a large extent determined by the degree of fit between his or her vocational interests and realities of the job. Thus interest may be considered one factor that individuals generally bring to the organization that, at least to some extent, can effect how they behave at work.

5.6.2 In addition to interests, an employee's attitudes or beliefs may also play an important role in their motivation to perform. Individuals, who are very dissatisfied with their jobs or with their supervisor, or any number of other things, may have little desire to put forth much effort. Individuals attempt to behave in a fashion consistent with their own self-image. Two important points can be made here. First, various attitudes can play an important role in motivational force to perform. Second there is a specific implied managerial strategy to improve employee's effort. The manager should attempt to modify the employees' self-image. If the employees were proud to work for

the company and if they saw themselves as effective contributors to the company's goals, they would, in theory, be more likely to perform at a higher level.

5.6.3 The individual characteristic that has received the most widespread attention in terms of motivation theory and research is the concept of 'needs'. A need may be defined as an internal state of disequilibrium that caused individuals to pursue certain course of action in an effort to regain internal equilibrium. For example, individuals who have a high need for achievement might be motivated to engage in competitive acts with others so they can 'win' thereby satisfying this need.

5.7 Characteristics of the Job:

A second set of variables to be considered when viewing the motivational process, involves those factors relating to the attributes of an individual's job. We are concerned here with what an employee does at work. How much feedback is provided? Does the work offer intrinsic rewards? Our conceptual framework points to the nature of job characteristics as a major concern that must be taken into account when developing a comprehensive theory of motivation at work. Herzberg's (1959) "dual factor" theory of motivation also has its roots in the nature of the task as it affects performance.

5.8 Characteristics of Work Environment:

5.8.1 Work environment factors can be divided into two major categories, one associated with the immediate work environment and the other associated with the larger problem of organization-wide actions.

There are at least two major factors in the immediate work environment that can affect work behavior. The first is the quality of peer group interactions. Peer-group influence can significantly influence an employee's effort. Such influence can occur at both ends of the productivity of the 'rate-buster'. Supervisors have considerable influence over the ability or freedom of employees to pursue their own personal goals on the job.

5.8.2 The second major category of work environment variables are concerned with several factors which are common throughout the organization and are largely determined by the organization itself. Factors such as openness of communication, perceived relative emphasis on rewards versus punishment, degree of interdepartmental cooperation and so forth, may at times influence individual's decision to produce on the job.

5.9 Interactive Effects:

5.9.1 Based on the foregoing discussion, it becomes apparent that a multitude of variables throughout the organization can be important inputs into the motivational force equation. Such a conclusion forces us to take a broad perspective when we attempt to understand or explain why employees behave as they do at work. However, this simple enumeration of motivationally relevant factors fails to recognize how these variables may interact with one another within a system type of framework to determine work behaviour. We must consider motivational models from a dynamic perspective. An individual may have a strong desire to perform well on the job, but he or she may lack a clear understanding of his or her proper role. The employees may thus waste or misdirect effort and thereby fail to receive expected rewards. Similarly an employee may truly want to perform at a high level, but simply lack the necessary ability for good performance on his or her particular job. The important point here is that, when viewing various approaches to motivation, it becomes clear that one must be aware of the interactive dynamics between major sets of variables that may influence resulting effort and performance.

5.9.2 Most theories of motivation look to some extent at the relationships between certain variables. Two theories have recently emerged which incorporate a system's framework and use the concept of interactive effects as the basic unit of analysis. The first of these is the equity theory. This is primarily concerned with the dynamic relationship between individuals and the particular actions taken by the organization.

5.10 Motivation and Job Satisfaction:

Elton Mayo and his coworkers by Hawthorne experiment became convinced that factors of a social nature were affecting satisfaction with job and productivity. The implicit assumption was, of course, that the satisfied worker produces more.

The traditional model of job satisfaction is that it consists of the total body of feelings that an individual has about his job. The total body of feelings involves, in effect, weighing up the sum total of influences on the job, the nature of the job itself, the pay, promotion prospectus, the nature of supervision, and so on.

5.11 Motivation and Productivity:

The object of management is to get the maximum performance from employees. Management policies must satisfy the needs of employees to attain the optimum performance.

The productivity of Indian worker is very low in comparison to the Western and Eastern industrialized workman. In India the problem is to raise the level of performance of employees so that the whole national income can be raised and the living standard of society can be improved. Management is in search of right measures that can increase the morale of employees and their productivity.

If the employees are skilled in the organization, it does not imply that they will present best performance. To utilize their skills the management has to raise the factors that impel to put forward them to best efforts and minimize the factors that hold them back from their best performance. Prof R. S. Davar has given a formula to show the relationship between motivation and productivity:

$$P = M (A + K)$$

where, P = Performance, M = Motivation, A = Abilities,
K = Knowledge.

CHAPTER 6

CONTENT THEORIES OF WORK MOTIVATION

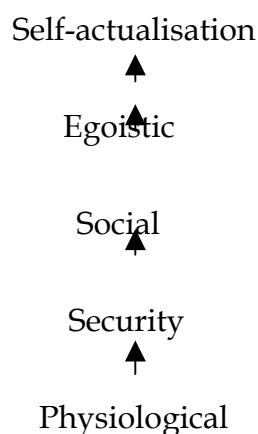
6.1 Need Hierarchy Theory:

6.1.1 One of the most popular theories of motivation today is certainly Maslow's Hierarchy Theory. From the time of its introduction in the mid 1940's until the late 1950's, this theory remained primarily in the realm of clinical psychology.

6.1.2 The Maslow's model consists of two fundamental premises. To begin with the human being is viewed largely as a 'wanting' animal, motivated by a desire to satisfy certain specific types of needs. Maslow posited that most individuals pursue with varying intensities the following needs:

- Physiological
- Safety
- Belongingness
- Esteem
- Self-actualisation.

Maslow argues that once the lower needs are satisfied, the individual moves up the hierarchy one level at a time and attempts to satisfy the next higher need.



Five Levels of Maslow's Hierarchy Theory

6.1.3 The Physiological Needs:

The needs that are usually taken as the starting point for motivation theory are the so-called physiological needs. The physiological needs are the most predominant of all the needs. The needs of hunger, thirst, sleep and sex are examples. If all the physiological needs are not satisfied, then the organism is dominated by the physiological needs; all other needs may become simply dormant or be pushed into the background.

6.1.4 The Safety Needs:

If the physiological needs are relatively well gratified, then there emerges a new set of needs that we may categorize as the safety needs. Maslow stressed emotional as well as physical safety. The whole organism may become a safety seeking mechanism. Once the safety needs are satisfied, they no longer motivate us.

6.1.5 The Love Needs:

If both the physiological and the safety needs are fairly well gratified, then there emerges the love, affection and belongingness needs. The person will hunger for affectionate relations with people in general, namely for a place in his group, and he will drive with great intensity to achieve this goal. Practically all theorists of psychopathology have stressed thwarting of the love needs as the basic reason in the picture of maladjustment. Love is not synonymous with sex. Sex may be treated as a purely physiological need.

6.1.6 The Esteem Needs:

All people in our society have need or desire for a stable firmly based high evaluation of themselves, for self-respect, or self-esteem, and for the esteem of others. These needs may be classified into two subsidiary sets. These are first the desire for strength, for achievement, for adequacy, for confidence and for independence and freedom. The second set has what we may call the desire for reputation or prestige, recognition, attention, importance and appreciation. The satisfaction of the self-esteem

needs leads to feelings of self-confidence, worth, strength, capability and adequacy of being useful and necessary in the world. But, the thwarting of these needs produces feelings of inferiority, of weakness, and of helplessness.

6.1.7 The Need of Self-Actualization:

This level represents the culmination of all the lower, intermediate and higher needs of humans. This tendency might be phrased as the desire to become more and more what one is, and to become everything that one is capable of becoming. The clear emergence of these needs rests upon the prior satisfaction of the physiological, safety, love and esteem needs.

6.2 Herzberg's Two-factor Theory of Motivation:

This model was presented by Dr. Frederick Herzberg. This model is known as the two- factor theory, the dual factor theory and the motivation-hygiene theory. This theory is based on the fact that the growth or motivating factors that are intrinsic to the job are achievement, recognition for achievement, the work itself, responsibility and growth or advancement. The hygiene factors that are extrinsic to the job include company policy and administration, supervision, interpersonal relationships, working conditions, salary, status and security.

Dr. Frederick Herzberg included the following factors in his Motivation-Hygiene Theory:

THE MOTIVATION-HYGIENE THEORY:

<u>PRESENCE = "SATISFIERS"</u>	-Achievement
	-Recognition
	-Value of works
	-Growth
	-Advancement
	-Benefits
	-Salary

<u>ABSENCE = "DIS-SATISFIERS"</u>	--Working conditions
	--Company policy
	-Interpersonal relations
	-Security.

6.2.1 **Job Content:**

The job content means job enlargement. Herzberg in his paper had advocated job enrichment rather than job enlargement. If the job content is to be a source of motivation, then the job must allow for meaningful feedback, test the individual valued abilities and allow a great amount of self-control by the holder. The job must be enlarged on both the vertical and horizontal dimensions.

6.2.2 **Job Context:**

The job context includes the environmental factors of the job. The context is the Herzberg's hygiene factor. According to Herzberg, the factors like salary, company policy, interpersonal relationship, supervision, and working conditions contribute more to dis-satisfaction rather than any motivation, and conversely each principal motivator contributes more to job satisfaction than any hygiene. The hypothesis suggests that the factors involved in producing job satisfaction are separate and distinct from the factors that lead to job dis-satisfaction.

6.3 **Achievement Motivation Theory:**

In addition to Maslow's need-based theory of motivation, there is a second theory that uses the concept of human needs as the basic unit of analysis. This theory, that has alternatively been termed as "need achievement theory" and "achievement motivation theory", posits that a major portion of an individual's will to perform can be explained or predicted by the intensity of his or her need for achievement. This model has its origin in the early works of Henry A. Murray and his associates at the Harvard psychological clinic during the 1930's. Based on several years of clinical observations, he postulated that there are around 10% of people in any country who have strong

achievement motive, but of course this will vary in the working situation according to the type of work being undertaken. The self-motivated achievers can be recognized as those who exhibit three characteristics that McClelland has described:

- Such people need to set their own goal and enjoy striving to achieve them.
- The goals that these workers set are those that are attainable.
- The goals that are chosen provide a quick feed-back of progress.

6.4 Need for Achievement:

If a man spends his time thinking about doing his job better, accomplish something unusual and important, or advancing his career, the psychologists say he has a high need for achievement and derives considerable satisfaction from striving for achievement. A man with a strong need for achievement thinks not only about the achievement goals, but also about how he can attain them, what obstacles or blocks he might encounter, and how he will feel if he succeeds or fails.

Years of careful empirical research shows that a man with a strong need for achievement likes situations in which he takes personal responsibility for finding solutions to problems. He sets moderate achievement goals and takes calculated risks. He wants concrete feedback about how well he is doing. The people with high need for achievement prefer a situation where there is a challenge, where there is some real risk of not succeeding but where that risk is not so great that they might not overcome it by their own efforts. When an individual with a high need for achievement does involve himself in a professional situation, he does like to make money. Yet, when he has money, he does not spend it ostentatiously, and neither does he hoard it. Money seems to be significant to him primarily as a measurement, as a way of gauging his progress and of comparing his achievements with other people's rather than as a status symbol or as a source of economic security.

6.5 Need for Power:

If a man spends his time, thinking about the influence and control he has over others, and how he can use this influence, say, to win an argument, to change other

people's behaviors, or to gain a position of authority and status, then the psychologists say he has a high need for power, often written as n/power. He derives satisfaction from controlling the means of influence over others.

The men with a strong need for power will usually attempt to influence others directly by making suggestions, by giving them opinions and evaluations, and by trying to talk into other things. The men with strong need for power prefer positions that allow the exercise of power. They enjoy roles requiring persuasion.

6.6 Need for Affiliation:

If a man spends his time thinking about the warm, friendly, compassionate relationships he has or would like to have, the psychologists say he has a need for affiliation, often written n/aff. The thoughts about restoring close relationships that have been disrupted, and consoling or helping someone or participating in friendly compassionate activities are regarded as evidence of affiliation motivation. In practice, managers show a very high need for power and achievement but low for affiliation. The need for affiliation is essential for co-ordination function of management.

6.7 McGREGOR's Theory 'X' & 'Y':

McGregor has given several assumptions about human behaviour and labeled them as the Theory X and Theory Y.

Theory 'X':

It presents the traditional view of direction and control. The assumptions of theory 'X' are:

- i) The average man dislikes and avoids work.
- ii) Most people are not ambitious, have little desire for responsibility, and prefer to be directed.
- iii) Most people have little capacity for creativity in solving organizational problems.

- iv) Motivation occurs only at the physiological and safety levels.
- v) Most people must be closely controlled and often coerced to achieve organizational objectives.

Theory 'Y':

If refers to the integration of individual and organizational goals. The assumptions of theory 'Y' are:

- i) Work is as natural as play if the conditions are favourable.
- ii) Self-control is often indispensable in achieving organizational goals.
- iii) The capacity for creativity in solving organizational problems is widely distributed in the population.
- iv) Motivation occurs at the social, esteem, and self-actualisation levels, as well as physiological and security levels.
- v) People can be self-directed and creative at work if properly motivated.

The theory 'X' gives importance only to the factors surrounding the job and conveniently ignores the nature of the work itself or job contents. The theory 'Y' conclusions are based on job contents, challenging work, achievement, recognition and advancement.

6.8 Chris Argyris's Theory:

Chris Argyris of Harvard Business School is known for his prime contribution of Immaturity-maturity theory. Chris Argyris says that seven changes should take place in the personality of an individual if he is to develop into a mature person over the years. First, an individual moves from a passive state as an infant to a state of increasing activity as an adult. Second, an individual develops from a state of dependency upon others as an infant to a state of relative independence as an adult. Third, an individual behaves in only a few ways as an infant but as an adult he is capable of behaving in many ways. Fourth, an individual has erratic and shallow interests as an infant but develops deeper and stronger interests as an adult. Fifth, a child's time perspective is very short, involving only the present, but as he matures his time perspective increases

to include the past and the future. Sixth, an individual as an infant is subordinate to everyone, but he moves to equal or superior position with others as an adult. Seventh, as a child, an individual is lack of awareness of a 'self' but as an adult, he is not only aware of but he is able to control 'self'. Argyris postulates that these changes reside on a continuum and that the healthy personality develops along the continuum from immaturity to maturity.

Immaturity-Maturity Continuum

Immaturity	Maturity
Passive	Active
Dependence	Independence
Behave in a few ways	Capable of behaving in many ways.
Erratic shallow interests	Deeper and stronger interests
Short time perspective	Long time perspective (past and future).
Subordinate position	Equal or superior position
Lack of awareness of self	Awareness and control over self.

6.9 Alderfer's 'ERG' Theory:

A more recent extension of the Herzberg and, especially, Maslow's content theories of work motivation comes from the work of Clayton Alderfer. He formulated a need category model that was more in line with the existing empirical evidence. Similar to Maslow and Herzberg, he does feel that there is value in categorizing needs and that there is a basic distinction between lower-order needs and higher order needs.

Alderfer identified three groups of core needs: existence, relatedness and growth (ERG theory). The existence needs are concerned with survival (physiological well being). The relatedness needs stress the importance of interpersonal and social relationships. The growth needs are concerned with the individual's intrinsic desire for personal development. These groups of needs are related to the Maslow and Herzberg categories. Obviously, they are very close, but the ERG needs do not have strict lines of demarcation.

Alderfer's existence needs are related with Maslow's physiological and safety needs. The relatedness needs are same as Maslow's love or belongingness needs, and the growth needs are same as Maslow's esteem and self-actualisation needs. The existence and some part of relatedness needs are same as Herzberg's hygiene factors, and some part of relatedness and growth needs are related with motivators.

6.10 Summary of Observations:

The above discussions bring out the following ideas:

- (i) The key elements in organizational behaviour are people, structure, technology and external social system. It is the management's responsibility to integrate the technical and human systems.
- (ii) More attention must be paid to the behavioural requirements of an organization.
- (iii) In an organisation:
 - People must be attracted not only to join the organisation but also to remain in.
 - People must perform the task for which they are hired.
 - The people must give dependable, creative and innovative output.
- (iv) The management must motivate its employees to direct at least a reasonable effort towards the goals of the organisation.
- (v) The organisation must be capable of bringing together thousands of employees and making them work at peak capacity by applying the technology required for the success.
- (vi) The organisation must develop its employees as resources for future requirements.
- (vii) The term motivation means motives in action.

(viii) Both need and incentive must be present initially to arouse behaviour. Most of the man's motivated behaviour is guided by the anticipated incentives called motives.

(ix) Binding blocks of motivation are

- Needs
- Behaviour
- Goals
- Some forms of feedback.

(x) The employees are looked upon as resources of potential talent and the management's responsibility is to learn how best to tap such resources.

(xi) The human resource approach is getting adopted recently. The job relations and job enrichments are given due importance now.

(xii) The individual characteristics viz. interest, attitudes and needs affect the motivational process.

(xiii) The characteristics of the work environment, and the supervisor's influence also affect the motivational level of the staff.

(xiv) The job satisfaction and job enrichment have a direct effect on the motivation.

(xv) Motivation affects productivity.

(xvi) Most individuals pursue with varying intensives the following needs in sequential order:

Physiological Safety → Belongingness → Self Esteem → Self actualization.

6.11 Conclusions and Action Plan:

6.11.1 From the discussions contained in Chapter 2, it would be quite clear that during the last fifty years, substantial progress has been made on the Indian Railways in different operational areas. Not only the throughput on railway lines has increased substantially but also the safety has been enhanced appreciably. The modernization of the saturated railway tracks is being undertaken by electrifying the sections.

6.11.2 Due to the overall financial crunch being faced in the country, the Railways is not getting enough assistance from the Central Government and the investments on the transport sector are getting reduced year by year as a percentage of GDP. Due to the implementation of the Fifth Pay Commission, the Wage Bill has assumed a enormous proportion. Approximately, 55% of the total working expanses on the Indian Railways is accounted for by the staff costs. The pension liabilities are also increasing year by year and, now every year, the Railways has to earmark Rs. 6,000 crores for this purpose.

6.11.3 In the present scenario, the Indian Railways is saddled with serious problems like overaged assets, saturation of routes, severe competition from road and coastal shipping- thereby reducing its percentage share of the total traffic, substantial cross-subsidization of passenger services by freight segment, impending financial crunch, and reduction in the quality and cost of railway investment. The development of human resources, rightsizing of manpower to reduce staff costs, and the need to continuously motivate the staff to take care of their customers and to improve their productivity are to be given proper importance on the Indian Railways.

6.11.4 From the above discussions, it is quite evident that, in the near future, the railway operations to a great extent will depend on the performance of its employees, for which the motivation level of the railway employees will play a very prime and important role.

6.12. In view of the various factors discussed above, in this research paper, a systematic study was undertaken to find out the overall motivation level of the railway

employees of the Rajkot division so that the desired action plan is suggested to face the serious challenges in the future successfully.

6.13 The following hypotheses have been used in this study for determining the motivation level of the railway employees of the Rajkot division and to identify the areas where concrete actions are needed to be taken to improve the overall motivation level of the railway employees:

6.13.1 Null hypothesis: There is no significant difference between the mean scores of motivation level of employees belonging to different departments, viz. RPF, Accounts, Personnel, Commercial, S&T, Engineering, Administration, Electrical, Mechanical, Medical, Operations, Unions, etc.

$$\text{Null hypothesis, } H(o): \mu_{\text{RPF}} = \mu_{\text{Acc}} = \mu_{\text{Pers}} = \mu_{\text{Comm.}} = \mu_{\text{S\&T}} = \mu_{\text{Engg}} = \mu_{\text{Admn}} = \mu_{\text{Elect}} = \mu_{\text{Mech}} = \mu_{\text{Opt.}} = \mu_{\text{Medical}} = \mu_{\text{Unions}}$$

Alternate hypothesis: There exists significant difference between the mean scores of motivation level of employees belonging to different departments, viz. RPF, Accounts, Personnel, Commercial, S&T, Engineering, Administration, Electrical, Mechanical, Medical, Operations, Unions, etc.

$$\text{Alternate hypothesis, } H(a): \mu_{\text{RPF}} \neq \mu_{\text{Acc}} \neq \mu_{\text{Pers}} \neq \mu_{\text{Comm.}} \neq \mu_{\text{S\&T}} \neq \mu_{\text{Engg}} \neq \mu_{\text{Admn}} \neq \mu_{\text{Elect}} \neq \mu_{\text{Mech}} \neq \mu_{\text{Opt.}} \neq \mu_{\text{Medical}} \neq \mu_{\text{Unions}}$$

6.13.2 Null hypothesis: There is no significant difference between the mean scores of motivation level of married and unmarried employees.

$$\text{Null hypothesis, } H(o): \mu_{\text{Married}} = \mu_{\text{Unmarried}}$$

Alternate hypothesis: There exists significant difference between the mean scores of motivation level of married and unmarried employees.

$$\text{Alternate hypothesis, } H(a): \mu_{\text{Married}} \neq \mu_{\text{Unmarried}}$$

6.13.3 Null hypothesis: There is no significant difference between the mean scores of motivation level of the railway employees of different departments having different educational background.

Null hypothesis, $H(o)$: $\mu_{\text{Graduate}} = \mu_{\text{Matric}} = \mu_{\text{Middle}}$

Alternate hypothesis: There exists significant difference between the mean scores of motivation level of the railway employees of different departments having different educational background.

Alternate hypothesis, $H(a)$: $\mu_{\text{Graduate}} \neq \mu_{\text{Matric}} \neq \mu_{\text{Middle}}$

6.13.4 Null hypothesis: There is no significant difference between the mean scores of motivation level of employees posted in urban, semi-urban and rural areas.

Null hypothesis, $H(o)$: $\mu_{\text{Urban}} = \mu_{\text{semi-urban}} = \mu_{\text{Rural}}$

Alternate hypothesis: There exists significant difference between the mean scores of motivation level of employees posted in urban, semi-urban and rural areas.

Alternate hypothesis, $H(a)$: $\mu_{\text{Urban}} \neq \mu_{\text{semi-urban}} \neq \mu_{\text{Rural}}$

6.13.5 Null hypothesis: There is no significant difference in the mean scores of motivation level of employees of different departments having different designations.

Null hypothesis, $H(o)$: $\mu_{\text{Officer/Sr.Supervisors}} = \mu_{\text{Artisan}} = \mu_{\text{Helper}}$

Alternate hypothesis: There exists significant difference between the mean scores of motivation level of employees of different departments having different designations.

Alternate hypothesis, $H(a)$: $\mu_{\text{Officer/Sr.Supervisors}} \neq \mu_{\text{Artisan}} \neq \mu_{\text{Helper}}$

6.14 The main purpose of the study is to identify the reasons for the variations between the motivation levels of the employees belonging to different departments of the Railways and to suggest measures to improve the overall motivation level of the employees of various departments having less motivation level as compared to the employees of the other departments having satisfactory motivation level.

CHAPTER 7

SURVEY OF MOTIVATION LEVELS OF RAILWAY EMPLOYEES

7. General Profile of Sampled Railway employees of Rajkot Division:

7.1 In India, there is a total of 60,000 km of railway track and the different States are interconnected through this vast network of the Indian Railways. For the safe movement of trains, uniform rules are needed to be followed by the railway employees posted in different areas. For effective administration, the Indian Railways is further divided into sixteen zones and each zone is further divided into many divisions. There are in all 67 divisions on the Indian Railways.

7.2 Due to the continuous interactions between the various departments, zones and divisions that are required for the movement of freight and passenger trains from one area to another, it is expected that the overall motivation level of the railway employees will be more or less same in the entire country. However, there is a possibility of marginal variation of motivation level between the employees belonging to different areas and different departments. The employees of Rajkot division were selected at random to undertake the study of motivation level as I was posted in Rajkot area and I felt that the overall motivation level of the employees determined by the survey of the employees of Rajkot division will, more or less, represent the overall motivation level of other divisions as well.

7.3 The Rajkot division has a total route kilometre of 1200 and consists of the following five sections:

- (i) Okha - Viramgam section in Saurashtra area,
- (ii) Ahmedabad to Mehsana section,
- (iii) Kalol Vijapur – Ambliyasam section,
- (iv) Mehsana – Taranga Hill section, and
- (v) Kalol – Patan section

From 1st April 2003, the sections listed at serial no. (ii) to (v) have been transferred from Rajkot division to newly formed Ahmedabad division.

7.4 For undertaking the study of motivation level of staff of the Rajkot division, the staff of different departments posted between the Okha-Virangham section were selected at random. As pointed out in the research methodology, the data was collected by getting a questionnaire containing 63 questions filled from the staff belonging to different departments.

7.4.1 Efforts were made to ensure that adequate proportionate representation of the staff posted in different areas viz. urban, semi-urban and urban, and also having different designations, grades and educational backgrounds is made while selecting the staff for the survey. The copy of the questionnaire administered to the staff is attached at the end of this chapter.

7.5 A total of 8,000 staff are posted in the Okha-Virangham section. Approximately, 10% of the staff from the different departments were selected for the survey. The department-wise number of staff selected randomly for the survey is given in Table-7.1.

Table 7.1:Details of staff selected for the survey

Sl. No	Department	Number of employees involved in the survey
1	Accounts	19
2	Administration	25
3	Commercial	65
4	Electrical	53
5	Engineering	206
6	Mechanical	92
7	Medical	44
8	Operating	124

9	Personnel	33
10	RPF	38
11	S&T	50
12	Union	40
	Total	789

7.6 Area-wise Details of Employees selected for Sample Survey:

The summary indicating the number of employees selected category-wise from different areas viz. rural, semi-urban and urban is given in Table-7.2.

Table 7.2: Area-wise details of employees selected for survey

		Category			
Place of Posting	Staff Selected	A	B	C	D
Rural	179 (22.687%)	0	0	114	65
Semi-Urban	178 (22.560%)	0	1	116	61
Urban	432 (54.752%)	14	6	325	87
Total	789	14	7	555	213
% of 789		1.77	0.89	70.34	27.00

From the details given in table-7.2, it is observed that out of 789 employees, 1.77% employees are from group A category, 0.89% from group B, 70.34% from group C and remaining 27% from group D. Out of the 789 staff selected, 179 (22.68%) employees had rural backgrounds, 178 employees (22.56%) were from semi-urban areas and the remaining 432 (54.71%) employees were from urban areas.

7.7 Department-wise Break-up of Staff according to Place of Posting:

The department-wise break-up of staff according to place of posting is given in Table-7.3.

Table 7.3: Department-wise Break-up of Staff according to Place of Posting

Department	Urban	% Urban	Semi urban	%Semi Urban	Rural	% Rural	Total Staff
Account	19	100	0	0	0	0	19
Administration	25	100	0	0	0	0	25
Commercial	53	82	4	6	8	12	65
Electrical	27	51	17	32	9	17	53
Engineering	73	35	59	29	74	36	206
Mechanical	51	55	19	21	22	24	92
Medical	32	73	5	11	7	16	44
Operation	46	37	38	31	40	32	124
Personnel	33	100	0	0	0	0	33
RPF	26	68	5	13	7	18	38
S&T	23	46	20	40	7	14	50
Union	24	60	11	28	5	13	40
Total & %	432	54.75	178	22.56	179	22.68	789

7.8 The summary of the category-wise details of educational background of the employees who had participated in the survey is given in Table 7.4.

Table 7.4: Details of educational background of employees

Category	Illiterate	Middle School	Matric	Graduate	PG	Total
A	0	0	0	0	14	14
B	0	0	0	2	5	7
C	19	95	150	226	65	555
D	26	137	43	4	3	213
Total	45	232	193	232	87	789
% of 789	5.70	29.40	24.46	29.40	11.03	100.00

The table 7.4 indicates that 5.70% of the staff are illiterate, 29.40% are middle class pass, 24.21% are having matric qualification, 29.40% are graduates and 11.03% are

having post graduate qualifications. This clearly establishes that approximately 35% of the staff are having qualifications middle standards and below. In the Railways, new technologies are being introduced in different departments and to absorb the new technologies and face the challenges successfully in the future, there is an urgent need to upgrade the educational standards of the railway employees who are having qualifications below matric. This is not an easy task and this weak area can be successfully tackled by prescribing the minimum HSC/matric qualification even for group D posts.

7.9 The educational details of employees belonging to the different departments are furnished in Table 7.5.

Table 7.5: Educational details of employees of different departments

Department	PG	Graduate	Matric	Middle School	Illiterate	Total
Accounts	8	8	3	0	0	19
Administration	5	15	5	0	0	25
Commercial	12	25	13	15	0	65
Electrical	2	10	25	16	0	53
Engineering	5	58	18	82	43	206
Mechanical	17	10	29	36	0	92
Medical	18	4	15	7	0	44
Operating	12	42	24	46	0	124
Personnel	2	20	11	0	0	33
RPF	0	9	18	9	2	38
S&T	3	11	17	19	0	50
Union	3	20	15	2	0	40
Total	87	232	193	232	45	789
% of 789	11.03	29.40	24.46	29.40	5.70	100

7.9.1 From the details contained in table 7.5, it is clear that in the Engineering, Mechanical and Operating departments, the maximum number of less educated or illiterate employees are there, and there is an urgent need to upgrade the educational standards of the employees of the Engineering, Mechanical and Operating departments preferably at the recruitment stage itself.

7.10 In the divisions of the Railways, the following categories of staff exist:

- Senior Divisional Engineers, Sr DE
- Divisional Engineers, DE
- Assistant Engineers, AE
- Senior supervisors
- Supervisors
- Artisans
- Helpers

The category-wise educational details of the staff of the different grades and categories are furnished in Table 7.6.

Table 7.6: Category-wise educational details of staff of different grades and categories

Designation	PG	Graduate	Matric	Middle School	Illiterate	Total
SrDE	6	0	0	0	0	6
DE	12	1	0	0	0	13
AE	4	2	0	0	0	6
Sr Super.	15	39	11	0	0	65
Supervisor	34	118	55	14	0	221
Artisan	13	67	84	62	7	233
Helper	3	5	43	156	38	245
Total	87	232	193	232	45	789

From the details given in table 7.6, it is noticed that the maximum number of staff in artisan and helper categories are having qualifications middle class and below and there is an urgent need to improve the educational qualifications of the staff belonging to these categories preferably by specifying the minimum qualification of SSC with ITI for group D posts in technical and non-technical departments.

7.11 The details of the staff posted in different areas viz. urban, semi-urban and rural are furnished in Table 7.7.

Table 7.7: Details of staff posted in different areas

Department	Urban	Semi-Urban	Rural	Total
Accounts	19 (100%)	0	0	19
Administration	25 (100%)	0	0	25
Commercial	53 (81.5%)	4 (6.15%)	8 (12.3%)	65
Electrical	27 (50.9)	17 (32.07%)	9 (16.9%)	53
Engineering	71 (34.46%)	61 (29.61%)	74 (35.92%)	206
Mechanical	51 (55.43%)	19 (20.65%)	22 (23.91%)	92
Medical	32 (72.72%)	5 (11.36%)	7 (15.90%)	44
Operating	49 (39.51%)	35 (28.22%)	40 (32.25%)	124
Personnel	33 (100%)	0	0	33
RPF	26 (68.42%)	5 (13.15%)	7 (18.42%)	38
S&T	22 (44%)	21 (42%)	7 (14%)	50
Union	24 (60%)	11 (27.5%)	5 (12.5%)	40
Total	432	178	179	789
% of 789	54.75	22.56	22.69	100.00

From the details given in table-7.7, it is observed that approximately 30% staff of the Engineering and Operating departments are posted in rural areas and there is a need to look after these staff posted in the rural areas specifically for the medical and educational requirements for self and their dependants.

7.12 Promotional Aspects on the Railways:

The promotional aspects in any organization have a direct effect on the motivational level of its employees. Out of a representative sample of 789 employees, the details of the number of promotions that the employees belonging to the different departments obtained in the past are furnished in Table 7.8.

Table 7.8: Promotional details of Railway Employees

	Number of promotions										
Department	0	1	2	3	4	5	6	7	Staff promoted	% Staff promoted	Total Staff
Accounts	2	3	8	3	2	1	0	0	17	89.47	19
Administration	4	9	10	1	1	0	0	0	21	84.00	25
Commercial	10	15	10	12	10	4	2	2	55	84.62	65
Electrical	2	23	10	11	4	3	0	0	51	96.23	53
Engineering	41	61	60	33	9	1	1	0	165	80.10	206
Mechanical	17	13	21	12	14	8	6	1	75	81.52	92
Medical	16	16	5	4	3	0	0	0	28	63.64	44
Operating	24	28	35	23	10	4	0	0	100	80.65	124
Personnel	0	6	9	12	2	4	0	0	33	100.0	33
RPF	14	6	13	3	2	0	0	0	24	63.16	38
S&T	12	21	8	6	3	0	0	0	38	76.00	50
Union	5	9	13	10	3	0	0	0	35	87.50	40
Total	147	210	202	130	63	25	9	3	642	81.37	789
% of 789 staff	18.63	26.62	25.60	16.48	7.98	3.17	1.14	0.38	81.37		

From the details given in table-7.8, the information about the staff promotions emerges as given in Table-7.9.

Table 7.9: Analysis of staff promotional details

Sr. No.	Number of promotions obtained	Number of employees	% of employees
1	0	147	18.63
2	1	210	26.02
3	2	202	25.60
4	3	130	16.48
5	4	63	7.98
6	5	25	3.17
7	6	09	1.14
8	7	03	0.38
	Grand total	789	100

From the details given in table-7.9, it is clear that 81.37 % employees had at least got one or more promotions during their working span.

The sample survey also indicates that, on an average, the number of promotions obtained by the employees included in the survey is:

$$= \frac{0 \times 147 + 1 \times 210 + 2 \times 202 + 3 \times 130 + 4 \times 63 + 5 \times 25 + 6 \times 9 + 7 \times 3}{789}$$

$$= \frac{0 + 210 + 404 + 390 + 252 + 125 + 54 + 21}{789} = 2$$

This figure of average of two promotions for each employee is really good. In order to ensure that the railway employees get regular promotions during their service, the following measures have been taken by the railway administration:

- Under Assured Career Progression Scheme, the staff are assured to get at least one promotion once in 12 years.
- After every ten years approximately, cadre restructuring is also implemented in the Railways where the percentages of posts in the higher grades are

increased with a view to opening further avenues for promotion to the railway employees in the lower grades.

- In the non-gazetted category, the following 10 scales exist in Group C and Group D:

Designation	Pay Scale
(i) Khalasi	2550-3200 (RSRP)
(ii) Sr Khalasi	2610- 3540 (RSRP)
(iii) Tech Gr III	3050-4590 (RSRP)
(iv) Tech Gr II	4000-6000 (RSRP)
(v) Tech Gr I	4500-7000 (RSRP)
(vi) Master Craftsman	5000-8000 (RSRP)
(vii) JE-II	5000-8000 (RSRP)
(viii) JE-I	5500-9000 (RSRP)
(ix) SE	6500-10500 (RSRP)
(x) SSE	7450-11500 (RSRP)

Since, there are ten different grades in the non-gazetted category, it is felt that, on an average, 4 to 5 employees can be benefited by way of promotions on retirement of each railway employee.

7.13 In the survey, an attempt was also made to collect the data about the children that the employees of different departments are having. The survey details are given in Table 7. 10.

Table 7.10: Department-wise number of children per employee

	Number of Children											
Department	0	1	2	3	4	5	6	7	8	Total Staff	Total number of children	Avg. number of children
Accounts	4	0	9	5	1	0	0	0	0	19	37	1.95
Administration	2	6	15	1	1	0	0	0	0	25	43	1.72
Commercial	3	11	19	17	11	3	1	0	0	65	165	2.54
Electrical	5	5	25	14	3	1	0	0	0	53	114	2.15

Engineering	14	16	47	56	38	21	8	5	1	206	626	3.04
Mechanical	7	15	29	22	11	6	2	0	0	92	225	2.45
Medical	4	13	17	5	2	2	0	1	0	44	87	1.98
Operating	14	21	33	35	16	2	2	0	1	124	286	2.31
Personnel	4	7	19	2	1	0	0	0	0	33	55	1.67
RPF	3	6	8	15	3	2	1	0	0	38	95	2.50
S&T	3	12	12	13	6	2	2	0	0	50	121	2.42
Union	6	6	19	7	1	0	0	0	1	40	77	1.93
Total	69	118	252	192	94	39	16	6	3	789	1931	2.45
% of 789 staff	8.75	14.96	31.94	24.33	11.91	4.94	2.03	0.76	0.38	100.00		

From the details given in table-7.10, it is clear that each railway employee, on an average, has 2.5 children. This study clearly shows that the employees are not following the well-established norm of having 2 children per family. In order to improve the financial status and the overall living standard of the employees, there is an urgent need to give more emphasis to the family welfare activities. The departments that are identified for adoption of family planning measures are the Commercial, Engineering, Mechanical, Medical and RPF departments. The employees of these departments should be suitably encouraged to adopt family welfare activities.

7.14 In the survey, information was also collected about the details of spouses (who are working) of the railway employees. The details are given in Table 7.11.

Table 7.11: Department-wise staff with working spouse

Department	Spouse working	Spouse not working	Other activities	Total staff	% Working Spouse
Accounts	3	15	1	19	16.67
Administration	5	18	2	25	21.74
Commercial	14	47	4	65	22.95
Electrical	7	42	4	53	14.29

Engineering	21	169	16	206	11.05
Mechanical	9	77	6	92	10.47
Medical	19	22	3	44	46.34
Operating	18	102	4	124	15.00
Personnel	3	26	4	33	10.34
RPF	1	25	12	38	3.85
S&T	5	44	1	50	10.20
Union	3	34	3	40	8.11
Total	108	621	60	789	
% of 789 staff	13.69	78.71	7.60	100.00	
% of average working spouses					15.92

From the details given in table-7.11, it is clear that the spouses of 15.92% of the railway employees are working. The maximum number of working spouses of the railway employees belong to the Administration, Commercial and Medical Departments.

7.15 Department-wise Staff Residing in Railway Quarters:

The details of the railway employees staying in the railway quarters are furnished in Table 7.12.

Table 7.12: Details of railway accommodations provided

Department	Staff having their own house	Staff staying in railway accommodation	Rented accommodation	Others	Total
Accounts	8	10	0	1	19
Administration	14	8	2	1	25
Commercial	34	26	4	1	65
Electrical	15	27	10	1	53
Engineering	48	129	16	13	206

Mechanical	30	49	12	1	92
Medical	12	29	2	1	44
Operating	27	90	5	2	124
Personnel	15	16	2	0	33
RPF	7	26	2	3	38
S&T	8	31	8	3	50
Union	13	17	3	7	40
Total	231	458	66	34	789
% of 789 staff	29.28	58.05	8.37	4.31	100.00

From the details given in table-7.12, it is clear that 58.05% of the employees are staying in railway accommodation, 29.28% are having their own houses, 8.37% are staying in rented houses, and 4.31% employees are either sharing accommodation with their parents or with their relatives and friends. Since, the majority of the employees are staying in either railway accommodation or in their own houses, this factor is really a good motivating factor.

7.16 Smoking habits of Railway employees:

The smoking habits of the railway employees department-wise are given in Table-7.13.

Table 7.13: Department-wise details of employees having smoking habits

Department	No smoking	Occasionally	Often	Chain smokers	Total
Accounts	17	0	1	1	19
Administration	24	1	0	0	25
Commercial	56	7	2	0	65
Electrical	43	8	1	1	53
Engineering	150	34	19	3	206
Mechanical	61	19	10	2	92

Medical	36	7	1	0	44
Operating	107	9	8	0	124
Personnel	30	2	1	0	33
RPF	27	8	2	1	38
S&T	49	1	0	0	50
Union	36	4	0	0	40
Total	636	100	45	8	789
% of 789 staff	80.61	12.67	5.70	1.01	100.00

From the details given in table 7.13, it is seen that 80.61% of the sampled railway staff are non-smokers, 12.67% staff are occasional smokers, 5.71% are regular smokers and 01% of staff are chain smokers. The majority of smokers are from Mechanical and Engineering departments.

7.16.1 Category-wise details of smokers:

The category-wise details of the smokers are given in Table-7.14:

Table 7.14: Category-wise details of smokers

Category	No smoking	Occasional	Often	Chain smokers	Total	% Non-smoker
A	12	3	0	0	15	80
B	4	1	1		6	66.67
C	461	67	21	6	555	83.06
D	159	29	23	2	213	74.65
Total	636	100	45	8	789	
% of 789 staff	80.61	12.67	5.70	1.01	100.00	

The statistics given in table-7.14 indicate that the majority of the smokers belong to the Engineering and Mechanical departments and there is a need to suitably counsel the staff of these departments to leave the smoking habits. The main reasons of the staff

of these departments to resort to smoking habit is mainly due to the reason that the staff of these departments remain on line on duties for longer periods and they are posted in the rural areas also.

7.17 Details of employees having drinking habits:

The details of the employees having drinking habits are given in Table-7.15.

Table 7.15: Department wise Details of Employees having Drinking Habits

Department	No drinking	Occasional	Often	Regular drinking	Total
Accounts	15	2	1	1	19
Administration	23	2	0	0	25
Commercial	58	7	0	0	65
Electrical	46	4	3	0	53
Engineering	182	19	3	2	206
Mechanical	73	18	1	0	92
Medical	38	4	1	1	44
Operating	121	3	0	0	124
Personnel	30	3	0	0	33
RPF	32	5	1	0	38
S&T	49	1	0	0	50
Union	36	3	1	0	40
Total	703	71	11	4	789
% of 789 staff	89.10	9.00	1.39	0.51	100.00

The statistics given in table-7.15 indicate that 89.1% of the employees surveyed do not drink at all, and 9% occasionally drink. There are few regular drinkers. The employees belonging to the Mechanical and Engineering departments have more drinking tendencies. The employees of these departments viz. Engineering and Mechanical should be suitably counselled about the ill effects of drinking habits. The main reason of the staff of the Engineering and Mechanical departments for resorting to

drinking is that these staff remain outside their houses on line on duties for longer periods and develop this drinking habit.

7.18 Details of Employees having Habits to Chew Pan/Tobacco:

The category-wise details of the employees having the habit of chewing pan/tobacco are given in Table-7.16:

Table 7.16: Details of Employees having Habits to Chew Pan/Tobacco

Category	No habit	Occasional	Often	Others	Total	% Non-P/Tob. eaters
A	13	2	0	0	15	86.667
B	6	0	0	0	6	100.00
C	417	95	39	4	555	75.14
D	157	40	15	1	213	73.71
Total	593	137	54	5	789	75.16
% of 789 staff	75.16	17.36	6.84	0.63	100.00	

7.19 Department wise details of employees having habits of eating Pan/Tobacco:

The department wise details of the employees having the habits of eating Pan/Tobacco are given in Table-7.17:

Table 7.17: Department wise details of employees having habits of eating Pan/Tobacco

Department	No habit	Occasional	Often	Others	Total	% Non-eaters of Pan/Tobac.
Accounts	12	3	3	1	19	63.16
Administration	16	5	4	0	25	64.00
Commercial	54	6	5	0	65	83.08
Electrical	36	12	5	0	53	67.92
Engineering	161	32	11	2	206	78.16

Mechanical	50	29	13	0	92	54.35
Medical	35	6	3	0	44	79.55
Operating	106	14	4	0	124	85.48
Personnel	23	8	2	0	33	69.70
RPF	27	10	0	1	38	71.05
S&T	38	8	3	1	50	76.00
Union	35	4	1	0	40	87.50
Total	593	137	54	5	789	75.16
% of 789 staff	75.16	17.36	6.84	0.63	100.00	

The statistics given in table-7.17 indicate that 75.16% of the staff do not chew pan or tobacco. This is really a good sign. The employees belonging to the Engineering and Mechanical departments are having more tendencies to consume pan and tobacco. The staff of these departments should be suitably counselled about the ill effects of pan/tobacco. The main reason for the staff of the Engineering and Mechanical departments to have tendencies to consume pan/tobacco is that, to perform duties, the staff of these departments have to stay outside their home for longer periods of time and they develop this habit.

7.20 Details of Employees about Eating Habits:

The details of the employees eating habits are given in Table-7.18:

Table 7.18: Category wise Eating Habits of Employees

Category	Veg.	Non-Veg	Total	% Veg
A	9	6	15	60
B	4	2	6	66.67
C	401	154	555	72.25
D	125	88	213	58.69
Total	539	250	789	68.31
% of 789 staff	68.31	31.68	100.00	

7.21 Department-wise Eating Habits of various Employees:

The department-wise eating habits of the various employees are given in Table-7.19:

Table 7.19:Department-wise Eating Habits of Employees

Department	Veg	Non-veg	Total	% Veg
Accounts	14	5	19	73.68
Administration	19	6	25	76.00
Commercial	50	15	65	76.92
Electrical	38	15	53	71.70
Engineering	121	85	206	58.74
Mechanical	66	26	92	71.74
Medical	25	19	44	56.82
Operating	78	46	124	62.90
Personnel	29	4	33	87.88
RPF	31	7	38	81.58
S&T	34	16	50	68.00
Union	34	6	40	85.00
Total	539	250	789	68.31
% of 789 staff	68.31	31.68	100.00	

The statistics given in table-7.19 indicate that 68.31% of the employees are vegetarian and 31.68% are non-vegetarian. The maximum number of non-vegetarians is from the Medical department. This is due to the reason that the majority of the staff of the Medical department belong to the sanitation department and they have more tendency to consume non-vegetarian food items.

Questionnaire- Sample Survey to Determine the Motivation Levels of Railway Employees

1. S. No.
2. Department:
3. Name:
4. Designation:
5. Unit where posted:

6. Category of staff

C	D
---	---

7. Place of posting

Rural	Semi-urban	Urban
-------	------------	-------

8. Date of Birth:
9. Educational Qualifications:
10. Dale of joining the Railway:
11. Total experience on the Railway:
12. Number of promotions already obtained:
13. Date of last promotion:

14. Martial status

Married	Unmarried
---------	-----------

15. Number of children

Sons	Daughters	Total
------	-----------	-------

16. Whether spouse is working or not?

Working	Not Working
---------	-------------

17. Accommodation

Rented	Own	Railways
--------	-----	----------

18. Do you smoke?

No	Occasionally	Often
----	--------------	-------

19. Do you drink?

No	Occasionally	Often
----	--------------	-------

20. Do you take Pan/Tobacco?

No	Occasionally	Often
Veg		Non-Veg

21. Eating habits

Family Environment:

	SA	A	N	DA	SDA
1. After office hours I pass most of my time with family members					
2. After office hours I pass most of my time with my friends' circle					
3. After office hours I pass most of my time for:					
a. Religious work.					
b. Social work					
4. My family members feel my absence whenever I remain outside from home					
5. My family members do not feel my presence in the family					
6. My family members move with me in all the functions					

Motivational aspects:

A) Authority and power:

	SA	A	N	DA	SDA
1 I want to dominate people working in my organization					
2 I want to influence people					
3 I want to control people					
4 I want to exercise power					

B) Decision and goal setting:

	SA	A	N	DA	SDA
1 I want to set my own goals and work accordingly					
2 I want to make my own decision					
3 I want to direct others to the goal					
4 I want to have social contacts with people working in the organization					
5 I want companionship with others					

C) Team working:

	SA	A	N	DA	SDA
1 I seek to other's support					
2 I like to extend support to others					
3 I like to develop meaningful relationship with others					
4 I would like to have frequent interactions with others					
5 I would like to take responsibility					
6 I would like to develop skill and ability.					

D) Job satisfaction:

	SA	A	N	DA	SDA
1 I like my work					
2 My work is challenging					
3 I would like to get feedback about my performances					
4 I would like to develop skills					

E) Reward motivation:

	SA	A	N	DA	SDA
1 The award gives me a sense of achievement					
2 The award/recognition motivates me to work harder					
3 Awards elevate my status in the society					
4 The organization has recognized my services by giving me the awards					
5 Awards are strictly given on the basis of one's performance					

F. Promotion and motivation:

	SA	A	N	DA	SDA
1 Do you agree that your social status and prestige have increased due to promotion?					
2 You find your job interesting after the promotion					
3 I feel sense of achievement after the promotion					
4 Promotion has motivated me to work harder					
5 I am happy with the increase in pay after my promotion					
6 Do you agree that you have got more authority and responsibility after promotion?					
7 My promotion has increased my control over other staff					

G) Personal touch and Motivation:

	SA	A	N	DA	SDA
1 Do you agree that the head of the division takes personal interest in the welfare of the employees?					
2 The example set by my top manager encourages me to work hard					
3 Do you agree that your supervisors provide technical support to you ?					
4 Do you agree that your supervisors give personal support in times of difficulties?					
5 The top manager understands your problems and sincerely solves them					
6 I am able to approach my superior officers easily					
7 That I can express my problems to my seniors directly and seek redressal from management motivates me to work harder					
8 Sympathetic and caring attitude of top management motivates me to work harder					
9 I have full faith in my superiors					
10 The leadership which I get from superiors encourages me to put up good performance					

H) Physical working conditions:

	SA	A	N	DA	SDA
1 The improvement in physical working conditions has increased my working efficiency					

2	After improvements in the working conditions, I enjoy my work more than before					
3	Improved conditions have favourably influenced my overall attitude towards work					
4	I am able to do more work now due to improvements					
5	The improved conditions have motivated me to work hard					
6	I am satisfied with the civil maintenance being done					
	a. In office					
	b. In residence					
7	I am satisfied with the electrical maintenance being done					
	a. In office					
	b. In residence					
8	I am satisfied with the arrangements of water supply					
8a	I am satisfied with the cleanliness in					
	a. Colonies					
	b. In offices					
9	I am satisfied with the output of my dealing clerical staff					
10	I am satisfied that I am getting my due payments in time					
11	I am satisfied that I am getting my due promotions in time					

- | | | |
|--------|---|-------------------|
| 1. SA | = | Strongly agree |
| 2. A | = | Agree |
| 3. N | = | Neutral |
| 4. DA | = | Disagree |
| 5. SDA | = | Strongly disagree |

CHAPTER 8

ASSESSMENT OF MOTIVATION LEVELS **OF RAILWAY EMPLOYEES**

8. Importance of Motivation:

Rensis Likert has called motivation as the core of management. Motivation is an important aspect that every manager has to understand; one can get the desired results fully only by motivating the work force working under his control. Motivation is a tool and technique in the hands of the manager for inspiring the work force and creating confidence in them. By motivating the work force, the manager creates the will to work in his work force, which is essential for the achievement of the goals of the organisation. The aim of motivation is to motivate each and every member of the organization to work efficiently in his position to achieve the laid down targets.

As already brought out in Chapters 3 to 6, motivation is a term applied to the entire class of urges, drives, desires, needs and similar forces. This chapter deals with the survey of railway staffs conducted and the assessment (derived there from) of the motivation levels, on various motivational aspects, of the railway employees belonging to different departments like Administration, Accounts, Engineering, Mechanical, Electrical, S&T, Personnel, Stores, Commercial, Operating, Medical, RPF and Unions.

8.1 Aspects related to Motivation:

As we know, there are many factors that influence one in his work, certain factors motivating him to perform better, and certain factors having the effect of demotivation in one's work. The Indian Railways is a mammoth organisation with a very large work force of more than fifteen lakh employees. The employees are subject to frequent transfers, changes in jobs, different work environment (like workshops, loco-sheds, train-lighting/coaching depots, production units, etc.), different types of bosses, different policies at different times, and such other things. Each of these has an effect in

one way or the other at varying degrees and for varying time periods on the performance of one's official duties and responsibilities, and as such all these factors contribute to one's motivation level in the organisation and hence his quality of performance in work.

Considering all the above factors and my vast and varied practical experience on the Railways for more than twenty five years at different places and at different situations, and with different types of people of different cultures and background, I have selected the following aspects for assessing the motivation levels of the railway employees at large:

- i. Family environment
- ii. Authority & Power
- iii. Decision and goal setting
- iv. Team working
- v. Job satisfaction
- vi. Reward motivation
- vii. Promotion and motivation
- viii. Personal touch and motivation, and
- ix. Physical working conditions.

8.1.1 Therefore, in the questionnaire prepared for surveying the employees of the various departments of the Rajkot division, the 63 questions included in the questionnaire were grouped in the above nine major heads.

8.1.2 The motivation levels of the employees of the different departments were measured on a five-point scale after getting the questionnaire filled up by the staff. The summary of the overall motivation scores obtained by the employees of the various departments is given in the Table 8.1 to Table 8.12. In these tables, only the summary of the scores and the average scores obtained by the staff of each department for each of the motivation heads is given. The details of the options exercised for every question by the staff surveyed are enclosed in the Annexure-I attached to this main research work booklet.

8.2 Analysis of Motivation Levels of Employees of Different Departments:

As mentioned earlier, the motivation levels of the employees of the various departments were measured on a five-point scale after getting the questionnaire filled up by the staff. The analysis of the scores obtained by the various staff of the different departments is given below.

8.2.1 Accounts Department:

The details of the scores obtained from the data of 19 staff of the accounts department are given in Table-8.1.

Table 8.1: Scores of accounts department

Category	SA	A	N	DA	SDA	Total
1. Family Environment						
Sum of option	39	47	26	11	10	
Multiply by	5	4	3	2	1	
Total score	195	188	78	22	10	493
Average score	3.71					
2. Authority & Power						
Sum of Option	25	23	20	4	4	
Multiply by	5	4	3	2	1	
Total score	125	92	60	8	4	289
Average score	3.80					
3. Decision & Goal Setting						
Sum of option	42	46	5	2	0	
Multiply by	5	4	3	2	1	
Total score	210	184	15	4	0	413
Average score	4.35					
4. Team Working						
Sum of option	49	51	10	4	0	

Multiply by	5	4	3	2	1	
Total score	245	204	30	8	0	487
Average score	4.27					
5. Job Satisfaction						
Sum of option	49	19	6	2	0	
Multiply by	5	4	3	2	1	
Total score	245	76	18	4	0	343
Average score	4.51					
6. Reward Motivation						
Sum of option	34	32	14	10	5	
Multiply by	5	4	3	2	1	
Total score	170	128	42	20	5	365
Average score	3.84					
7. Promotion & Motivation						
Sum of option	48	43	30	9	3	
Multiply by	5	4	3	2	1	
Total score	240	172	90	18	3	523
Average score	3.93					
8. Personal Touch & Motivation						
Sum of option	57	89	33	11	0	
Multiply by	5	4	3	2	1	
Total score	285	356	99	22	0	762
Average score	4.01					
9. Physical Working Conditions						
Sum of option	67	107	58	52	1	
Multiply by	5	4	3	2	1	
Total score	335	428	174	104	1	1042
Average score	3.66					

Overall Score of Motivation Level			4717
Average Motivation Score	3.94		

8.2.2 Administration Department:

The details of the scores obtained from the data of 25 staff of the administration department are given in Table-8.2.

Table 8.2: Scores of administration department

Category	SA	A	N	DA	SDA	Total
1. Family Environment						
Sum of option	45	65	47	16	2	
Multiply by	5	4	3	2	1	
Total score	225	260	141	32	2	660
Average score	3.77					
2. Authority & Power						
Sum of option	8	21	38	27	6	
Multiply by	5	4	3	2	1	
Total score e	40	84	114	54	6	298
Average score	2.98					
3. Decision & Goal Setting						
Sum of option	39	67	15	4	0	
Multiply by	5	4	3	2	1	
Total score	195	268	45	8	0	516
Average score	4.13					
4. Team Working						
Sum of option	32	78	22	16	2	
Multiply by	5	4	3	2	1	
Total score	160	312	66	32	2	572
Average score	3.81					
5. Job Satisfaction						

Sum of option	23	65	8	2	2	
Multiply by	5	4	3	2	1	
Total score	115	260	24	4	2	405
Average score	4.05					
6. Reward Motivation						
Sum of option	11	74	28	3	9	
Multiply by	5	4	3	2	1	
Total score	55	296	84	6	9	450
Average score	3.60					
7. Promotion & Motivation						
Sum of option	28	102	27	12	6	
Multiply by	5	4	3	2	1	
Total score	140	408	81	24	6	659
Average score	3.77					
8. Personal Touch & Motivation						
Sum of option	30	119	71	23	7	
Multiply by	5	4	3	2	1	
Total score	150	476	213	46	7	892
Average score	3.57					
9. Physical Working Conditions						
Sum of option	60	181	85	11	38	
Multiply by	5	4	3	2	1	
Total score	300	724	255	22	38	1339
Average score	3.57					
Overall Score of Motivation Level					5791	
Average Motivation Score	3.68					

8.3.3 Commercial Department:

The details of the scores obtained from the data of 65 staff of the commercial department are given in Table-8.3.

Table 8.3: Scores of commercial department

Category	SA	A	N	DA	SDA	Total
1. Family Environment						
Sum of option	145	154	80	55	21	1712
Multiply by	5	4	3	2	1	
Total score	725	616	240	110	21	
Average score	3.76					
2. Authority & Power						
Sum of option	82	80	65	20	13	
Multiply by	5	4	3	2	1	
Total score	410	320	195	40	13	978
Average score	3.76					
3. Decision & Goal Setting						
Sum of option	146	110	51	10	8	
Multiply by	5	4	3	2	1	
Total score	730	440	153	20	8	1351
Average score	4.16					
4. Team Working						
Sum of option	178	138	51	17	6	
Multiply by	5	4	3	2	1	
Total score	890	552	153	34	6	1635
Average score	4.19					
5. Job Satisfaction						
Sum of option	133	96	21	5	5	
Multiply by	5	4	3	2	1	
Total score	665	384	63	10	5	1127

Average score	4.33					
6. Reward Motivation						
Sum of option	135	109	49	25	7	
Multiply by	5	4	3	2	1	
Total score	675	436	147	50	7	1315
Average score	4.05					
7. Promotion & Motivation						
Sum of option	213	174	54	13	1	
Multiply by	5	4	3	2	1	
Total score	1065	696	162	26	1	1950
Average score	4.29					
8. Personal Touch & Motivation						
Sum of option	321	237	69	20	3	
Multiply by	5	4	3	2	1	
Total score	1605	948	207	40	3	2803
Average score	4.31					
9. Physical Working Conditions						
Sum of Option	267	445	190	53	20	
Multiply by	5	4	3	2	1	
Total Score	1335	1780	570	106	20	3811
Overall Average of score	3.91					
Overall Score of Motivation Level					16682	
Average Motivation Score	4.07					

8.2.4 Electrical Department:

The details of the scores obtained from the data of 53 staff of the Electrical department are given in Table-8.4.

Table 8.4: Scores of Electrical Department

Category	SA	A	N	DA	SDA	Total
1. Family Environment						
Sum of option	88	164	61	42	16	
Multiply by	5	4	3	2	1	
Total score	440	656	183	84	16	1379
Average score	3.72					
2. Authority & Power						
Sum of option	23	109	38	40	2	
Multiply by	5	4	3	2	1	
Total score	115	436	114	80	2	747
Average score	3.52					
3. Decision & Goal Setting						
Sum of option	47	148	38	25	7	
Multiply by	5	4	3	2	1	
Total score	235	592	114	50	7	998
Average score	3.77					
4. Team Working						
Sum of option	74	208	28	7	1	
Multiply by	5	4	3	2	1	
Total score	370	832	84	14	1	1301
Average score	4.09					
5. Job Satisfaction						
Sum of option	51	122	27	12	0	
Multiply by	5	4	3	2	1	
Total score	255	488	81	24	0	848
Average score	4.00					
6. Reward Motivation						
Sum of option	63	121	49	25	7	
Multiply by	5	4	3	2	1	

Total score	315	484	147	50	7	1003
Average score	3.78					
7. Promotion & Motivation						
Sum of option	72	218	49	29	3	
Multiply by	5	4	3	2	1	
Total score	360	872	147	58	3	1440
Average score	3.88					
8. Personal Touch & Motivation						
Sum of option	165	296	60	9	0	
Multiply by	5	4	3	2	1	
Total score	825	1184	180	18	0	2207
Average score	4.16					
9. Physical Working Conditions						
Sum of option	107	467	147	53	21	
Multiply by	5	4	3	2	1	
Total score	535	1868	441	106	21	2971
Average score	3.74					
Overall Score of Motivation Level					12894	
Average Motivation Score	3.86					

8.2.4 Engineering Department:

The details of the scores obtained from the data of 206 staff of the engineering department are given in Table-8.5.

Table 8.5: Scores of engineering department

Category	SA	A	N	DA	SDA	Total
1. Family Environment						
Sum of option	438	559	267	118	60	
Multiply by	5	4	3	2	1	

Total score	2190	2236	801	236	60	5523
Average score	3.83					
2. Authority & Power						
Sum of option	243	314	181	49	37	
Multiply by	5	4	3	2	1	
Total score	1215	1256	543	98	37	3149
Average score	3.82					
3. Decision & Goal Setting						
Sum of option	316	544	150	16	4	
Multiply by	5	4	3	2	1	
Total score	1580	2176	450	32	4	4242
Average score	4.12					
4. Team Working						
Sum of option	416	612	166	23	19	
Multiply by	5	4	3	2	1	
Total score	2080	2448	498	46	19	5091
Average score	4.12					
5. Job Satisfaction						
Sum of option	357	372	79	12	4	
Multiply by	5	4	3	2	1	
Total score	1785	1488	237	24	4	3538
Average score	4.29					
6. Reward Motivation						
Sum of option	394	452	131	25	28	
Multiply by	5	4	3	2	1	
Total score	1970	1808	393	50	28	4249
Average score	4.13					
7. Promotion & Motivation						
Sum of option	489	666	229	36	22	
Multiply by	5	4	3	2	1	

Total score	2445	2664	687	72	22	5890
Average score	4.08					
8. Personal Touch & Motivation						
Sum of option	758	1003	219	56	24	
Multiply by	5	4	3	2	1	
Total score	3790	4012	657	112	24	8595
Average score	4.17					
9. Physical Working Conditions						
Sum of option	830	1478	527	173	82	
Multiply by	5	4	3	2	1	
Total score	4150	5912	1581	346	82	12071
Average score	3.91					
Overall Score of Motivation Level						52348
Average Motivation Score	4.03					

8.2.5 Mechanical Department:

The details of the scores obtained from the data of 92 staff of the mechanical department are given in Table-8.6.

Table 8.6: Scores of Mechanical Department

Category	SA	A	N	DA	SDA	Total
1. Family Environment						
Sum of option	112	326	144	53	9	
Multiply by	5	4	3	2	1	
Total score	560	1304	432	106	9	2411
Average score	3.74					
2. Authority & Power						
Sum of option	35	198	82	49	4	
Multiply by	5	4	3	2	1	

Total score	175	792	246	98	4	1315
Average score	3.57					
3. Decision & Goal Setting						
Sum of option	85	300	60	15	0	
Multiply by	5	4	3	2	1	
Total score	425	1200	180	30	0	1835
Average score	3.99					
4. Team Working						
Sum of option	103	350	48	41	10	
Multiply by	5	4	3	2	1	
Total score	515	1400	144	82	10	2151
Average score	3.90					
5. Job Satisfaction						
Sum of option	79	235	39	14	1	
Multiply by	5	4	3	2	1	
Total score	395	940	117	28	1	1481
Average score	4.02					
6. Reward Motivation						
Sum of option	46	246	95	44	29	
Multiply by	5	4	3	2	1	
Total score	230	984	285	88	29	1616
Average score	3.51					
7. Promotion & Motivation						
Sum of option	102	351	109	44	38	
Multiply by	5	4	3	2	1	
Total score	510	1404	327	88	38	2367
Average score	3.68					
8. Personal Touch & Motivation						
Sum of option	170	639	59	46	6	
Multiply by	5	4	3	2	1	

Total score	850	2556	177	92	6	3681
Average score	4.00					
9. Physical Working Conditions						
Sum of option	88	833	233	175	51	
Multiply by	5	4	3	2	1	
Total score	440	3332	699	350	51	4872
Average score	3.53					
Overall Score of Motivation Level						21729
Average Motivation Score	3.75					

8.2.6 Medical Department:

The details of the scores obtained from the data of 44 staff of the medical department are given in Table-8.7.

Table 8.7: Scores of medical department

Category	SA	A	N	DA	SDA	Total
1. Family Environment						
Sum of option	79	112	75	32	10	
Multiply by	5	4	3	2	1	
Total score	395	448	225	64	10	1142
Average score	3.71					
2. Authority & Power						
Sum of option	23	77	33	23	20	
Multiply by	5	4	3	2	1	
Total score	115	308	99	46	20	588
Average score	3.34					
3. Decision & Goal Setting						
Sum of option	72	115	27	5	1	
Multiply by	5	4	3	2	1	

Total score	360	460	81	10	1	912
Average score	4.15					
4. Team Working						
Sum of option	84	155	24	0	1	
Multiply by	5	4	3	2	1	
Total score	420	620	72	0	1	1113
Average score	4.22					
5. Job Satisfaction						
Sum of option	74	81	20	1	0	
Multiply by	5	4	3	2	1	
Total score	370	324	60	2	0	756
Average score	4.30					
6. Reward Motivation						
Sum of option	79	87	47	4	3	
Multiply by	5	4	3	2	1	
Total score	395	348	141	8	3	895
Average score	4.07					
7. Promotion & Motivation						
Sum of option	97	122	79	7	3	
Multiply by	5	4	3	2	1	
Total score	485	488	237	14	3	1227
Average score	3.98					
8. Personal Touch & Motivation						
Sum of option	119	253	61	7	0	
Multiply by	5	4	3	2	1	
Total score	595	1012	183	14	0	1804
Average score	4.10					
9. Physical Working Conditions						
Sum of option	109	313	139	70	29	
Multiply by	5	4	3	2	1	

Total score	545	1252	417	140	29	2383
Average score	3.61					
Overall Score of Motivation Level						10820
Average Motivation Score	3.90					

8.2.7 Operating Department:

The details of the scores obtained from the data of 124 staff of the operating department are given in Table-8.8.

Table 8.8: Scores of operating department

Category	SA	A	N	DA	SDA	Total
1. Family Environment						
Sum of option	186	368	202	100	12	3220
Multiply by	5	4	3	2	1	
Total score	930	1472	606	200	12	
Average score	3.71					
2. Authority & Power						
Sum of option	97	266	99	27	7	1907
Multiply by	5	4	3	2	1	
Total score	485	1064	297	54	7	
Average score	3.84					
3. Decision & Goal Setting						
Sum of option	122	387	86	25	0	2466
Multiply by	5	4	3	2	1	
Total score	610	1548	258	50	0	
Average score	3.98					
4. Team Working						
Sum of option	188	435	98	21	2	
Multiply by	5	4	3	2	1	

Total score	940	1740	294	42	2	3018
Average score	4.06					
5. Job Satisfaction						
Sum of option	178	264	43	9	2	
Multiply by	5	4	3	2	1	
Total score	890	1056	129	18	2	2095
Average score	4.22					
6. Reward Motivation						
Sum of option	190	308	85	23	14	
Multiply by	5	4	3	2	1	
Total score	950	1232	255	46	14	2497
Average score	4.03					
7. Promotion & Motivation						
Sum of option	188	459	155	44	22	
Multiply by	5	4	3	2	1	
Total score	940	1836	465	88	22	3351
Average score	3.86					
8. Personal Touch & Motivation						
Sum of option	417	608	153	57	5	
Multiply by	5	4	3	2	1	
Total score	2085	2432	459	114	5	5095
Average score	4.11					
9. Physical Working Conditions						
Sum of option	317	952	278	204	109	
Multiply by	5	4	3	2	1	
Total score	1585	3808	834	408	109	6744
Average score	3.63					
Overall Score of Motivation Level						30393
Average Motivation Score	3.89					

8.2.8 Personnel Department:

The details of the scores obtained from the data of 33 staff of the personnel department are given in Table-8.9.

Table 8.9: Scores of personnel department

Category	SA	A	N	DA	SDA	Total
1. Family Environment						
Sum of option	73	81	49	22	6	
Multiply by	5	4	3	2	1	
Total score	365	324	147	44	6	886
Average score	3.84					
2. Authority & Power						
Sum of option	12	52	29	23	16	
Multiply by	5	4	3	2	1	
Total score	60	208	87	46	16	417
Average score	3.16					
3. Decision & Goal Setting						
Sum of option	59	89	14	3	0	
Multiply by	5	4	3	2	1	
Total score	295	356	42	6	0	699
Average score	4.24					
4. Team Working						
Sum of option	70	100	19	9	0	
Multiply by	5	4	3	2	1	
Total score	350	400	57	18	0	825
Average score	4.17					
5. Job Satisfaction						
Sum of option	65	54	10	3	0	

Multiply by	5	4	3	2	1	
Total score	325	216	30	6	0	577
Average score	4.37					
6. Reward Motivation						
Sum of option	54	70	22	13	6	
Multiply by	5	4	3	2	1	
Total score	270	280	66	26	6	648
Average score	3.93					
7. Promotion & Motivation						
Sum of option	77	117	21	12	4	
Multiply by	5	4	3	2	1	
Total score	385	468	63	24	4	944
Average score	4.09					
8. Personal Touch & Motivation						
Sum of option	98	146	68	10	8	
Multiply by	5	4	3	2	1	
Total score	490	584	204	20	8	1306
Average score	3.96					
9. Physical Working Conditions						
Sum of option	86	266	87	38	18	
Multiply by	5	4	3	2	1	
Total score	430	1064	261	76	18	1849
Average score	3.74					
Overall Score of Motivation Level						8151
Average Motivation Score	3.92					

8.2.10 RPF Department:

The details of the scores obtained from the data of 83 staff of the RPF department are given in Table-8.10.

Table 8.10: Scores of RPF department

Category	SA	A	N	DA	SDA	Total
1. Family Environment						
Sum of option	87	71	74	21	13	
Multiply by	5	4	3	2	1	
Total score	435	284	222	42	13	996
Average score	3.74					
2. Authority & Power						
Sum of option	79	34	32	7	0	
Multiply by	5	4	3	2	1	
Total score	395	136	96	14	0	641
Average score	4.22					
3. Decision & Goal Setting						
Sum of option	112	38	31	9	0	
Multiply by	5	4	3	2	1	
Total score	560	152	93	18	0	823
Average score	4.33					
4. Team Working						
Sum of option	134	68	23	3	0	
Multiply by	5	4	3	2	1	
Total score	670	272	69	6	0	1017
Average score	4.46					
5. Job Satisfaction						
Sum of option	102	34	14	2	0	
Multiply by	5	4	3	2	1	
Total score	510	136	42	4	0	692
Average score	4.55					
6. Reward Motivation						
Sum of option	123	48	18	1	0	
Multiply by	5	4	3	2	1	

Total score	615	192	54	2	0	863
Average score	4.54					
7. Promotion & Motivation						
Sum of option	112	81	71	2	0	
Multiply by	5	4	3	2	1	
Total score	560	324	213	4	0	1101
Average score	4.14					
8. Personal Touch & Motivation						
Sum of option	260	76	28	16	0	
Multiply by	5	4	3	2	1	
Total score	1300	304	84	32	0	1720
Average score	4.53					
9. Physical Working conditions						
Sum of option	231	189	86	59	5	
Multiply by	5	4	3	2	1	
Total score	1155	756	258	118	5	2292
Average score	4.02					
Overall Score of Motivation Level		10145				
Average Motivation Score	4.24					

8.2.11 S&T Department:

The details of the scores obtained from the data of 50 staff of the S&T department are given in Table-8.11.

Table 8.11: Scores of S&T department

Category	SA	A	N	DA	SDA	Total
1. Family Environment						
Sum of option	105	110	90	37	8	
Multiply by	5	4	3	2	1	

Total score	525	440	270	74	8	1317
Average score	3.76					
2. Authority & Power						
Sum of option	38	103	37	17	5	
Multiply by	5	4	3	2	1	
Total score	190	412	111	34	5	752
Average score	3.76					
3. Decision & Goal Setting						
Sum of option	58	157	27	6	2	
Multiply by	5	4	3	2	1	
Total score	290	628	81	12	2	1013
Average score	4.05					
4. Team Working						
Sum of option	83	168	36	12	1	
Multiply by	5	4	3	2	1	
Total score	415	672	108	24	1	1220
Average score	4.07					
5. Job Satisfaction						
Sum of option	86	102	10	4	4	
Multiply by	5	4	3	2	1	
Total score	430	408	30	8	4	880
Average score	4.40					
6. Reward Motivation						
Sum of option	80	108	39	13	10	
Multiply by	5	4	3	2	1	
Total score	400	432	117	26	10	985
Average score	3.94					
7. Promotion & Motivation						
Sum of option	120	174	40	13	3	
Multiply by	5	4	3	2	1	

Total score	600	696	120	26	3	1445
Average score	4.13					
8. Personal Touch & Motivation						
Sum of option	129	291	54	18	8	
Multiply by	5	4	3	2	1	
Total score	645	1164	162	36	8	2015
Average score	4.03					
9. Physical Working Conditions						
Sum of option	173	337	138	58	44	
Multiply by	5	4	3	2	1	
Total score	865	1348	414	116	44	2787
Average score	3.72					
Overall Score of Motivation Level		12414				
Average Motivation Score	3.94					

8.2.12 Unions:

The details of the scores obtained from the data of 40 staff of the Unions are given in Table-8.12.

Table 8.12: Scores of Unions

Category	SA	A	N	DA	SDA	Total
1. Family Environment						
Sum of option	51	132	63	29	5	
Multiply by	5	4	3	2	1	
Total score	255	528	189	58	5	1035
Average score	3.70					
2. Authority & Power						

Sum of option	32	86	21	11	10	
Multiply by	5	4	3	2	1	
Total score	160	344	63	22	10	599
Average score	3.74					
3. Decision & Goal Setting						
Sum of option	49	124	20	5	2	
Multiply by	5	4	3	2	1	
Total score	245	496	60	10	2	813
Average score	4.07					
4. Team Working						
Sum of option	85	134	19	2	0	
Multiply by	5	4	3	2	1	
Total score	425	536	57	4	0	1022
Average score	4.26					
5. Job Satisfaction						
Sum of option	61	82	13	4	0	
Multiply by	5	4	3	2	1	
Total score	305	328	39	8	0	680
Average score	4.25					
6. Reward Motivation						
Sum of option	60	108	17	3	12	
Multiply by	5	4	3	2	1	
Total score	300	432	51	6	12	801
Average score	4.01					
7. Promotion & Motivation						
Sum of option	82	134	46	9	9	
Multiply by	5	4	3	2	1	
Total score	410	536	138	18	9	1111
Average score	3.97					
8. Personal Touch & Motivation						

Sum of option	93	235	42	8	22	
Multiply by	5	4	3	2	1	
Total score	465	940	126	16	22	1569
Average score	3.92					
9. Physical Working Conditions						
Sum of option	116	320	101	34	28	
Multiply by	5	4	3	2	1	
Total score	580	1280	303	68	28	2259
Average score	3.77					
Overall Score of Motivation Level		9889				
Average Motivation Score	3.92					

8.3 The summary of the overall motivation scores department-wise obtained on the five-point scale on each of the aspects affecting motivation is given in Table 8.13.

Table 8.13: Summary of department-wise overall motivation scores

Category of motivation	Family environment	Authority and power	Decision and goal setting	Team working	Job satisfaction	Reward motivation	Promotion	Personal touch	Physical working conditions	Total Score out of 45	Overall avg. motiv. level
A/C's	3.71	3.80	4.35	4.27	4.51	3.84	3.93	4.01	3.66	36.08	3.94
Admin	3.77	2.98	4.13	3.81	4.05	3.60	3.77	3.57	3.57	33.25	3.68
Comm	3.76	3.76	4.16	4.19	4.33	4.05	4.29	4.31	3.91	36.76	4.07
Elect	3.72	3.52	3.77	4.09	4.00	3.78	3.88	4.16	3.74	34.66	3.86
Engg	3.83	3.82	4.12	4.12	4.29	4.13	4.08	4.17	3.91	36.47	4.03
Mech	3.74	3.57	3.99	3.90	4.02	3.51	3.68	4.00	3.53	33.94	3.75
Med	3.71	3.34	4.15	4.22	4.30	4.07	3.98	4.10	3.61	35.48	3.90
Optg	3.71	3.84	3.98	4.06	4.22	4.03	3.86	4.11	3.63	35.44	3.89
Person.	3.84	3.16	4.24	4.17	4.37	3.93	4.09	3.96	3.74	35.50	3.92
S&T	3.76	3.76	4.05	4.07	4.40	3.94	4.13	4.03	3.72	35.86	3.94
RPF	3.74	4.22	4.33	4.46	4.55	4.54	4.14	4.53	4.02	38.53	4.24
Unions	3.70	3.74	4.07	4.26	4.25	4.01	3.97	3.92	3.77	35.69	3.92
AVG	3.75	3.63	4.11	4.14	4.27	3.95	3.98	4.07	3.73	35.64	3.93

8.4 The questionnaire contained 63 questions and each question carried maximum five marks; therefore, hypothetically the maximum marks that an individual employee can obtain is $(63 \times 5) = 315$. An analysis was done to find out the distribution of number

of staff over various score-ranges for the different departments and the summary of the findings is placed at Table-8.14A.

Table 8.14A : Distribution of staff over various motivation levels

Score Range	150-174	175-199	200-219	220-239	240-259	260-279	280-299	300-315	Total
Mean Score	162	187	210	230	250	270	290	308	Staff
Acco	0	1	3	4	4	4	3	0	19
Admin	0	0	8	11	6	0	0	0	25
Comm	0	2	4	11	24	12	12	0	65
Elect	0	0	8	21	13	9	2	0	53
Engg	1	6	6	44	67	58	18	6	206
Mech	0	3	14	42	25	6	2	0	92
Medi	0	3	3	11	20	4	3	0	44
Oper	1	3	11	28	51	26	4	0	124
Pers	0	1	2	12	10	6	2	0	33
RPF	1	1	1	6	7	5	8	9	38
S&T	0	0	3	14	21	11	1	0	50
Unions	0	3	0	15	11	8	3	0	40

8.5 Based on the distribution given in table-8.14A, the total score of the employees and the average score per employee of the various departments have been calculated and the details are given in Table-8.14B.

Table 8.14B: Motivation levels of employees of various departments

Score Range	150-174	175-199	200-219	220-239	240-259	260-279	280-299	300-315	Total score	Average score
Mean Score	162	187	210	230	250	270	290	308		
Acco	0	187	630	920	1000	1080	870	0	4687	247
Admin	0	0	1680	2530	1500	0	0	0	5710	228
Comm	0	374	840	2530	6000	3240	3480	0	16464	253
Elect	0	0	1680	4830	3250	2430	580	0	12770	241
Engg	162	1122	1260	10120	16750	15660	5220	1848	52142	253
Mech	0	561	2940	9660	6250	1620	580	0	21611	235
Medi	0	561	630	2530	5000	1080	870	0	10671	243
Oper	162	561	2310	6440	12750	7020	1160	0	30403	245
Pers	0	187	420	2760	2500	1620	580	0	8067	244
RPF	162	187	210	1380	1750	1350	2320	2772	10131	267
S&T	0	0	630	3220	5250	2970	290	0	12360	247
Unions	0	561	0	3450	2750	2160	870	0	9791	245
Overall average score of all the departments										247

8.5.1 From the data in tables 8.13 and 8.14B, it is observed that the overall average score obtained on the five-point scale for the Rajkot division is 3.93, and the overall average score is 247 out of 315. This score is very high, and it clearly establishes that the railway employees are highly motivated ones. This is one of the main factors for the staff satisfaction on the Railways. The fact that there has not been any major industrial dispute (apart from the general railway strike of 1974) proves this point beyond doubt. All the Railway staff posted from one corner of the country to another are seen to be generally satisfied, and only because of their dedicated efforts and initiatives, it has

been possible to move the enormous amount of passenger and freight traffic from one corner of the country to another without any hiccups.

8.5.2 The data in the tables 8.14A&B also indicates that, even though the average score obtained by the staff of the Rajkot division is 247, there is large variation in the scores obtained by the employees belonging to the different departments. The staff of RPF has got the highest score of 267, and whereas the minimum score of 228 has been obtained by the staff of Administration. The department-wise score in descending order is given in Table-8.15.

Table 8.15: Department-wise scores out of 315

Sr No.	Department	Average score obtained
i	RPF	267
ii	Commercial	253
iii	Engineering	253
iv	Accounts	247
ix	S&T	247
v	Operating	245
vi	Unions	245
vii	Personnel	244
viii	Medical	243
x	Electrical	241
xi	Mechanical	235
xii	Administration	228

8.5.3 From the data given in the table 8.15, it is observed that there is a variation of 39 points between the employees belonging to the RPF and Administration departments. The staff belonging to the Commercial, Engineering, S&T and Accounts departments have scored reasonably well. The scores obtained by the staff belonging to the Medical, Operating, and Personnel departments, and those belonging to the Unions are

marginally lower than the overall average score. The three departments, viz. Electrical, Mechanical and Administration, have been identified to have staff with low motivation level as compared to the staff of other departments.

8.6 The various aspects for the variation of 39 points in the motivation levels amongst the staff of the various departments have been studied to find out the reasons for the variations. After finding the reasons for the variations, remedial actions are required to be initiated so that the employees of the departments having relatively low motivation level are suitably motivated to improve their work performance and output.

8.6.1 To identify the reasons for the wide variations in the motivation level amongst the employees of the different departments, letters were sent to the various Union office bearers, and senior officers of the Railways requesting them specifically to identify the reasons for the variations in the motivation levels between the staff belonging to different departments. Action was also taken to undertake a sample survey of fifty staff of Electrical and fifty staff of Mechanical departments posted in Ahmedabad area where responsibility levels of the employees of these two departments are more as compared to staff of these two departments posted in Okha – Viramgam section. The graphical representations of the overall scores obtained by the employees belonging to the different departments, category-wise, education attainment-wise and place of posting-wise, etc, are given in the charts and the corresponding Tables 8.16 to 8.24.

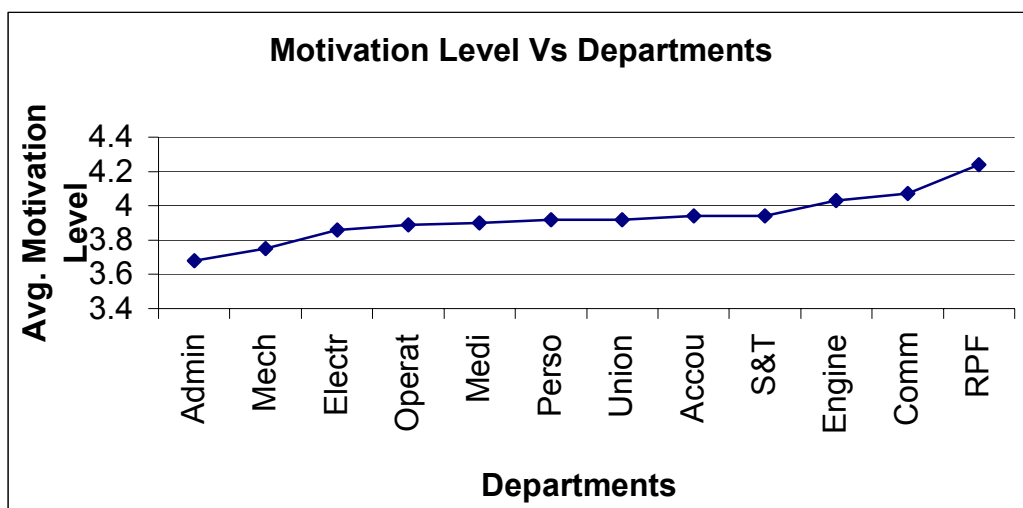
8.7 Comparison of Motivation Levels:

8.7.1 The average motivation score (on the five-point scale) of all the motivational aspects for each department is derived and its percentage score calculated; the same are furnished in Table 8.16.

Table 8.16: Assessment of % motivation levels of departments

S.No.	Department	Average motivation score	% Motivation score
1	Administration	3.68	73.60

2	Mechanical	3.75	75.00
3	Electrical	3.86	77.20
4	Operating	3.89	77.80
5	Medical	3.90	78.00
6	Personnel	3.92	78.40
7	Unions	3.92	78.40
8	Accounts	3.94	78.80
9	S&T	3.94	78.80
10	Engineering	4.03	80.60
11	Commercial	4.07	81.40
12	RPF	4.24	84.80



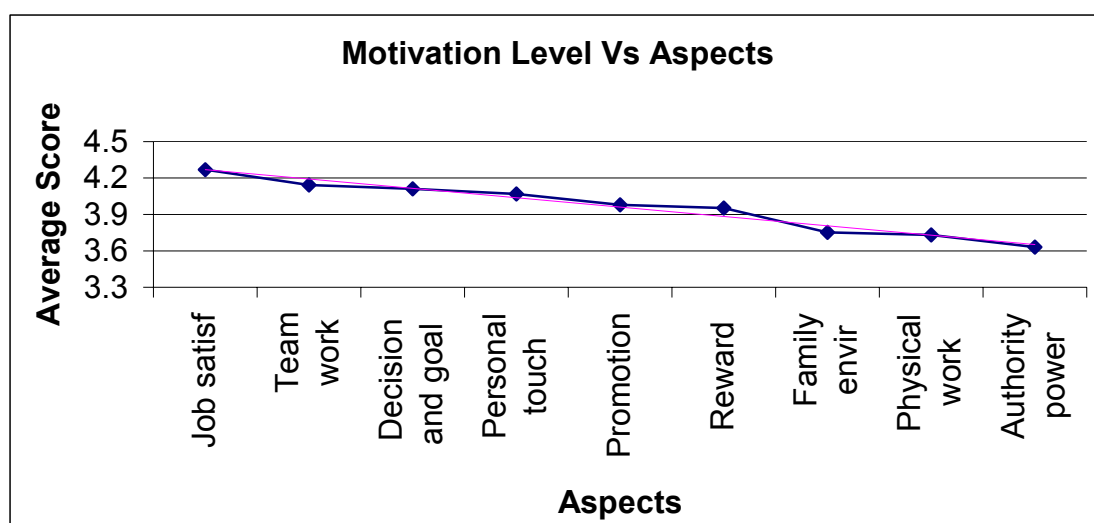
From the table 8.16 and the corresponding chart, it is noticed that the railway employees belonging to the different departments have obtained scores varying from 73.6% to 84.4%. The lowest score of 73.6% is an appreciable value, considering the facts that the present economic growth prevailing in the private and public sectors is not up to the mark, and the employers are not sure of the economic growth of their industry, and as such they cannot motivate and satisfy their employees fully. Hence, on the Indian Railways, even the minimum score of 73.6% obtained by the Administration Department is really a commendable achievement. The common principle is that, “no

one can be satisfied fully on their motivation by their employer, especially the one who works for his/her daily bread and butter”.

8.7.2 The average scores of all the departments for each of the motivational aspects were derived, on the five-point scale and also on percentage basis, and the same are tabulated in Table 8.17.

Table 8.17: Average scores for various motivational aspects

S. No.	Motivational Aspect	Avg. score of all departments	% Avg. score of all departments
1	Job satisfaction	4.27	85.40
2	Team working	4.14	82.80
3	Decision and goal setting	4.11	82.20
4	Personal touch	4.07	81.40
5	Promotion	3.98	79.60
6	Reward motivation	3.95	79.00
7	Family environment	3.75	75.00
8	Physical working conditions	3.73	74.60
9	Authority and power	3.63	72.60



In this study, nine aspects were considered as indicated in table-8.17 for determining the motivation levels of the railway employees. Among the nine, the minimum average score is 72.60% for authority and power, and the maximum score is 85.40% for job satisfaction. All other aspects have got positions between authority & power and job satisfaction.

For job satisfaction, the average score obtained is 85.40%, which clearly establishes that the railway employees are satisfied with their jobs, and therefore there has been no serious industrial dispute after the 1974 railway strike. The railway employees have secured less marks under the heading authority & power and physical working conditions. Therefore, certain actions are needed to be taken to bring improvements in these two specific areas.

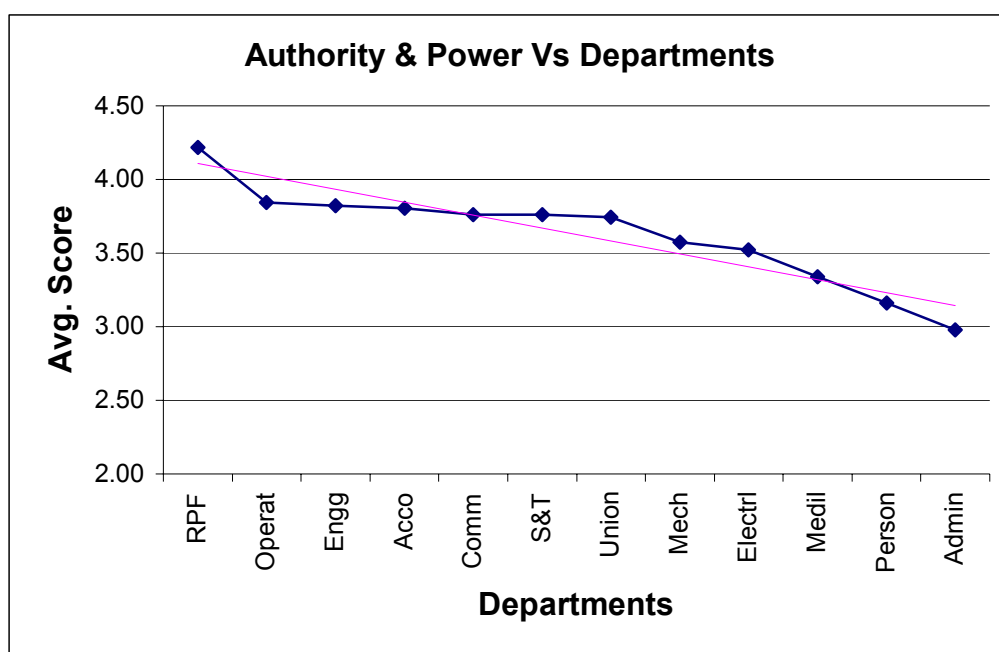
8.8 Analysis on Motivational Aspects

A detailed analysis of the motivation levels associated with each motivational aspect has been carried out. Analysis has been done department-wise, place-of-posting-wise (i.e. urban area, semi-urban area and rural area), educational-qualification-wise (i.e. graduate & above, higher secondary/ matriculation, and middle class & below), designation-wise (i.e. officers/supervisors, artisans, and helpers), and marital-status-wise (i.e. married and un-married), and the details are given below.

8.9 Authority & Power Vs Departments: The average and percentage score of the various departments for authority & power are given in Table-8.18A and the associated chart.

Table 8.18A: Departmental scores for Authority & Power

S.No.	1	2	3	4	5	6	7	8	9	10	11	12	
Department	Administration	Personnel	Medical	Electrical	Mechanical	Unions	Commercial	S&T	Accounts	Engineering	Operating	RPF	Overall average
Avg. score	2.98	3.16	3.34	3.52	3.57	3.74	3.76	3.76	3.80	3.82	3.84	4.22	3.63
% Score	59.6	63.2	66.8	70.4	71.4	74.8	75.2	75.2	76.0	76.4	76.8	84.4	72.52



The aspect of authority & power exposes the quality of the person to influence others, like whether he wants to dominate people working in his organization, or he wants to control others, or he wants to show his powers, etc.

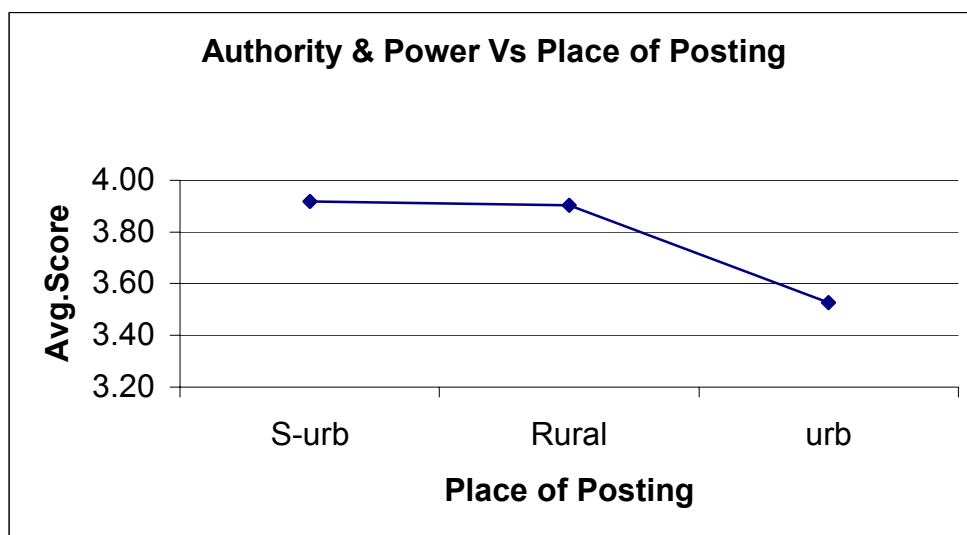
In this aspect, the Administration department has scored only 59.6%, which is the least of all departments. The Accounts department is the top scorer with a score of 84.4%. All other departments have scores between these two values as depicted in the table-8.18A and its chart.

Since, the Administration department deals with all other departments of the Railways and plays an important function, there is a need for the staff of the Administration department to effect improvement as far as the authority & power aspect of the motivation is concerned. An improvement can be brought out in this area for the staff of the Administration department by imparting them systematic training in the field of organisational behaviour and HRD.

8.9.1 Authority & Power Vs Place of Posting: The average scores of all the employees, rural, semi-urban and urban area-wise, are given in Table-8.18B along with its chart.

Table 8.18B: Scores for Authority & Power based on place of posting

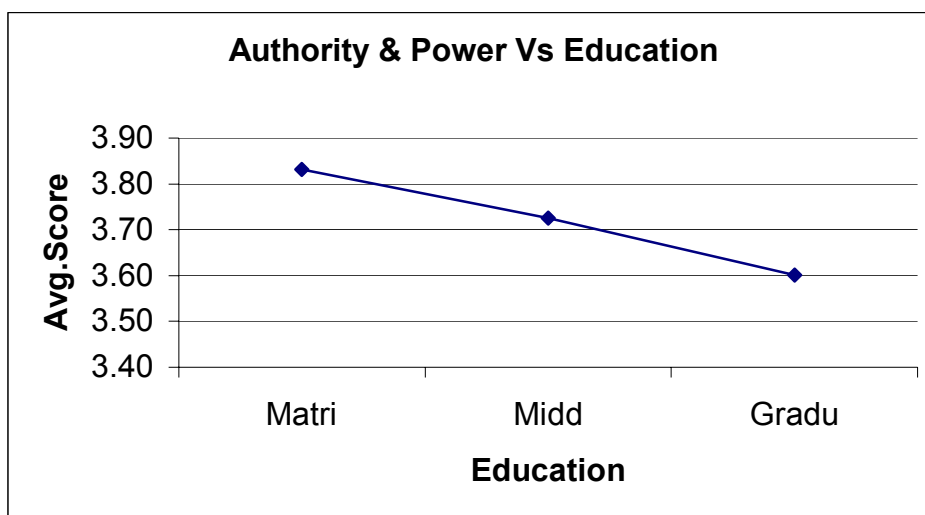
S.No.	Question	Rural 179	Rural %	SemiUrb 178	SemiUrb %	Urban 432	Urban %
1	I want to dominate people.	3.94	78.8	3.94	78.8	3.49	69.8
2	I want to influence people.	3.75	75	3.82	76.4	3.34	66.8
3	I want to control people.	3.96	79.2	3.98	79.6	3.65	73
4	I want to exercise power.	3.96	79.2	3.93	78.6	3.63	72.6
	Overall average score	3.9	78	3.92	78.4	3.53	70.6



8.9.2 Authority & Power Vs Educational Qualification: The average and percentage scores of all the employees, educational-qualification-wise, are given in Table-8.18C along with its chart.

**Table 8.18C: Scores for Authority & Power
based on educational qualification**

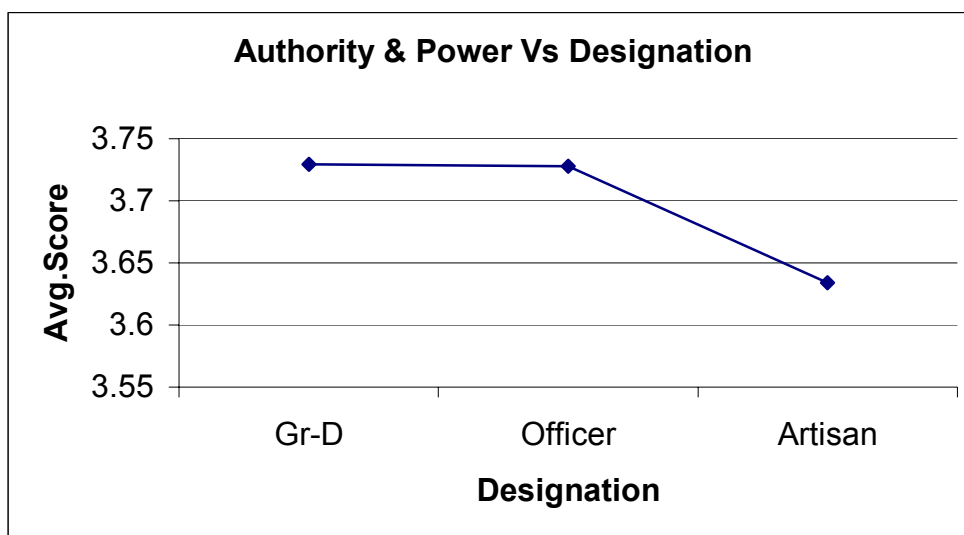
No	Question	Grad + above (318 Nos)	Grad + above % Score	HSC+ Matr (192 Nos)	HSC+ Matr % Score	Middl e & below (279 Nos)	Middl e & below % Score
1	I want to dominate people	3.54	70.8	3.92	78.4	3.72	74.4
2	I want to influence people	3.36	67.2	3.71	74.2	3.63	72.6
3	I want to control people	3.73	74.6	3.88	77.6	3.81	76.2
4	I want to exercise power	3.77	75.4	3.82	76.4	3.75	75
	Overall average score	3.6	72	3.83	76.6	3.72	74.4



8.9.3 Authority & Power Vs Designation: The average and percentage scores of all the employees, officer/supervisor, artisan and helper-wise, are given in Table-8.18D along with its chart.

Table 8.18D: Scores for Authority & Power based on designation

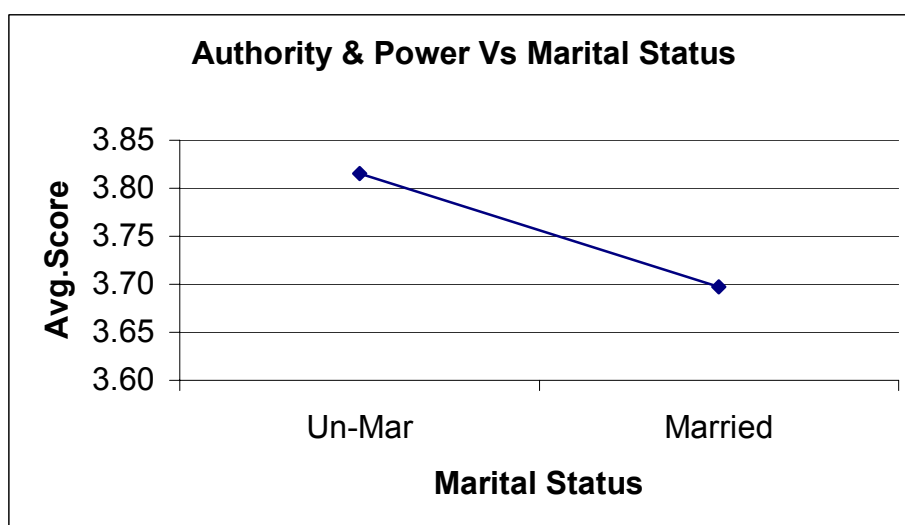
No	Question	Offr+ Super. (315 Nos)	Offr+ Super. % Score	Artisa n (231 Nos)	Artisa n % Score	Helper (243 Nos)	Helper % Score
1	I want to dominate people	3.67	73.4	3.61	72.2	3.81	76.2
2	I want to influence people	3.52	70.4	3.49	69.8	3.61	72.2
3	I want to control people	3.84	76.8	3.76	75.2	3.77	75.4
4	I want to exercise power	3.89	77.8	3.68	73.6	3.72	74.4
	Overall average score	3.73	74.6	3.63	72.6	3.73	74.6



8.9.4 Authority & Power Vs Marital Status: The average and percentage scores of all the employees, marital-status-wise, are given in Table-8.18E along with its chart.

Table 8.18E: Scores for Authority & Power based on marital status

No	Question	Married (766 Nos)	Married % Score	Unmarr (23 Nos)	Unmarr % Score
1	I want to dominate people	3.7	74.0	3.61	72.2
2	I want to influence people	3.54	70.8	3.7	74.0
3	I want to control people	3.79	75.8	4.0	80.0
4	I want to exercise power	3.77	75.4	3.96	79.2
Overall average score		3.7	74.0	3.82	76.4



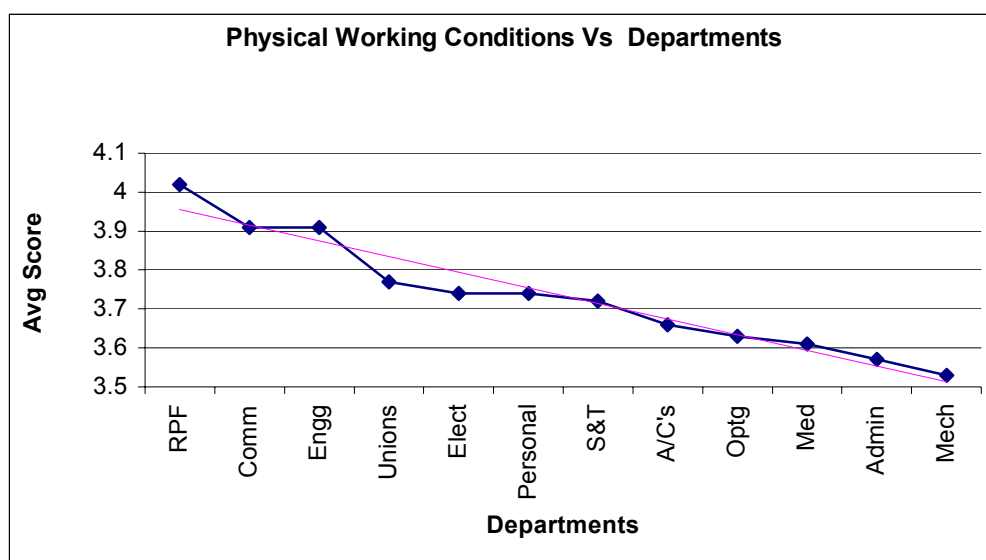
8.9.5 From the data contained in the tables 8.18A to 8.18E, it is observed that even though there is no significant variations in the motivation scores obtained by the employees of different departments posted in different areas viz. urban, rural and semi-urban and having different educational backgrounds and different standings in the organization, the following facts emerge from a careful and detailed analysis of the data:

- (i) The employees posted in the rural and semi-urban areas desire to have more authority & power as compared to the employees posted in the urban areas. This is mainly on account of the fact that the social networks and customs is so strong in India, particularly in the small towns where the population is less, that people try to show their standing & strength to others. The employees posted in the rural and semi-urban areas are therefore seen to be having more desire for authority & power so that they can feel their importance in the society and in the workplace, and display their importance to their fellow beings and their colleagues.
- (ii) It is observed that the staffs having limited educational qualifications are having more desire for authority and power. In the study conducted, the employees having graduation & above qualification are seen to be having limited urge for having authority and power as compared to the employees having less qualification of matriculation and below. This tendency seems to be there due to the fact that people generally long for something that they cannot get easily.
- (iii) The unmarried persons are seen to have more urge for having authority & power as compared to the married persons. This is perhaps due to the fact that the unmarried persons do not have any family liabilities, and can therefore spend more time on official matters. Whereas, the married persons invariably show more maturity and they have less desire for having authority and power.

8.10 Physical Working Conditions Vs Departments: The average and percentage scores of the various departments for physical working conditions are given in Table-8.19A and the associated chart.

Table 8.19A: Departmental scores for Physical Working Conditions

S.No.	1	2	3	4	5	6	7	8	9	10	11	12	
Department	RPF	Commercial	Engineering	Unions	Electrical	Personal	S&T	A/C's	Operating	Medical	Administration	Mechanical	Overall average
Avg. score	4.02	3.91	3.91	3.77	3.74	3.74	3.72	3.66	3.63	3.61	3.57	3.53	3.73
% Score	80.4	78.2	78.2	75.4	74.8	74.8	74.4	73.2	72.6	72.2	71.4	70.6	74.68



The effect of the physical working conditions on the motivation levels of the employees exposes the expectation of the staff on the working environment to perform his job better. The major items chosen for assessment of this area are improvement in the physical working conditions, enjoyment of one's works, better maintenance of

offices & residences, relationship of colleagues, arranging timely payment and promotion, and such other matters.

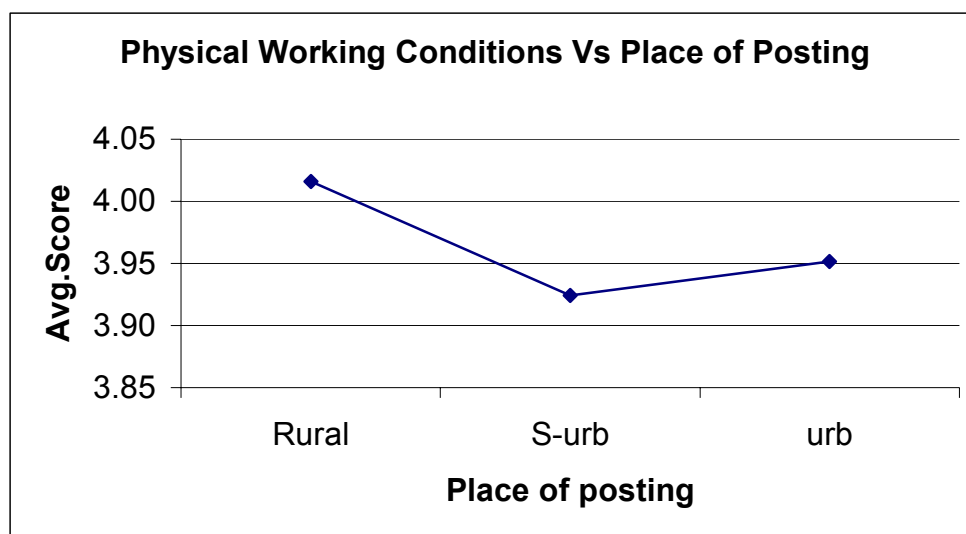
In this aspect, the Mechanical department has scored only 70.6%, which is the least of all departments. The RPF department is the top scorer with a score of 80.4%. All other departments have scores between these two values as depicted in the table-8.19A and its chart.

8.10.1 Physical Working conditions Vs Place of Posting: The average and percentage scores of all the employees, rural, semi-urban and urban area-wise, are given in Table-8.19B along with its chart.

Table 8.19B: Scores for Physical Working conditions based on place of posting

S. No.	Question	Rural (179 Nos)	Rural % Score	Semi-Urb (178 Nos)	Semi-Urb % Score	Urban (432 Nos)	Urb % Score
1	Improvement in physical working conditions improves efficiency	3.64	72.74	3.30	66.07	3.38	67.55
2	After improvement in working conditions I enjoy my work more	3.83	76.65	3.51	70.11	3.43	68.66
3	Improved conditions influenced my attitude towards work	3.85	77.09	3.68	73.60	3.74	74.86
4	Able to do more work due to improvements	4.19	83.80	4.15	83.03	4.25	85.09
5	Improved conditions have motivated me to work hard	3.35	67.04	3.23	64.61	3.39	67.73
6	I am satisfied with civil maintenance in office	3.96	79.22	3.91	78.20	4.05	80.97
7	I am satisfied with civil maintenance in residence	4.12	82.35	3.96	79.10	4.13	82.55
8	I am satisfied with electrical maintenance in office	4.22	84.36	4.07	81.46	4.01	80.19

9	I am satisfied with electrical maintenance in residence	4.23	84.58	4.09	81.80	4.03	80.60
10	I am satisfied with arrangements of water supply	4.11	82.23	4.03	80.56	4.04	80.74
11	I am satisfied with cleanliness in colonies	3.98	79.55	4.15	82.92	4.11	82.22
12	I am satisfied with cleanliness in offices	4.12	82.46	4.15	83.03	4.10	82.04
13	I am satisfied with output of my dealing clerical staff	4.10	82.01	4.20	83.93	4.16	83.24
14	I am satisfied with due payments in time	4.35	87.04	4.29	85.73	4.25	84.91
15	I am satisfied with due promotion in time	4.18	83.69	4.15	83.03	4.21	84.17
	Overall Average score	4.02	80.32	3.92	78.40	3.95	79.00

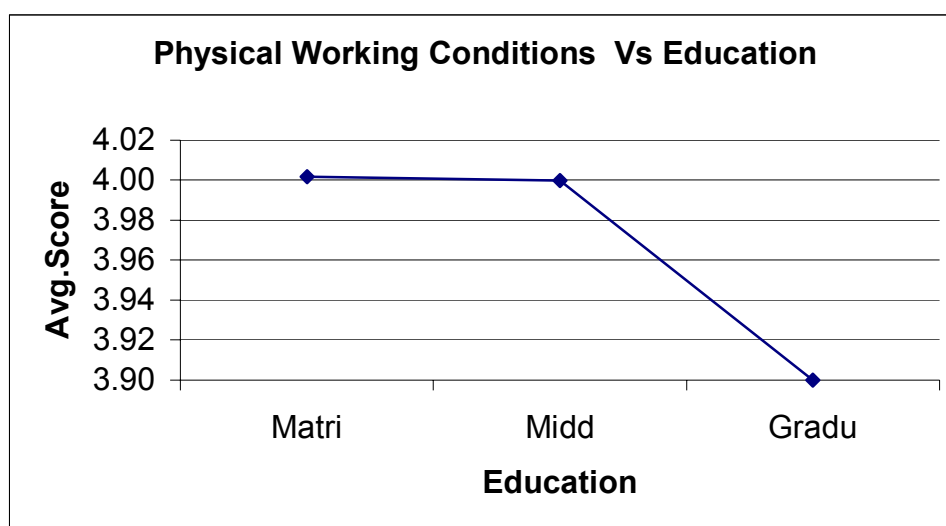


8.10.2 Physical Working Conditions Vs Educational Qualification: The average and percentage scores of all the employees, educational-qualification-wise, are given in Table-8.19C along with its chart.

**Table 8.19C: Scores for Physical Working Conditions
based on educational qualification**

S. No.	Question	Grad + above (318 Nos)	Grad + above % Score	HSC+ Matr (192 Nos)	HSC+ Matr % Score	Middle & below (279 Nos)	Middle & below % Score
1	Improvement in physical working conditions improved efficiency	3.29	65.85	3.35	66.98	3.61	72.26
2	After improvement in working conditions I enjoy my work more	3.35	67.04	3.55	70.94	3.75	74.98
3	Improved conditions influenced my attitude towards work	3.58	71.70	3.80	76.04	3.91	78.28
4	Able to do more work due to improvements	4.23	84.53	4.23	84.69	4.19	83.87
5	Improved conditions have motivated me to work hard	3.27	65.35	3.52	70.42	3.31	66.16
6	I am satisfied with civil maintenance in office	4.01	80.13	3.99	79.90	3.99	79.78
7	I am satisfied with civil maintenance in residence	4.09	81.82	4.12	82.40	4.06	81.15
8	I am satisfied with electrical maintenance in office	3.96	79.12	4.12	82.40	4.17	83.37
9	I am satisfied with electrical maintenance in residence	3.99	79.81	4.11	82.19	4.19	83.73
10	I am satisfied with arrangements of water supply	3.95	79.06	4.09	81.77	4.14	82.80
11	I am satisfied with cleanliness in colonies	4.13	82.52	4.13	82.50	4.02	80.43

12	I am satisfied with cleanliness in offices	4.10	81.95	4.22	84.48	4.07	81.36
13	I am satisfied with output of my dealing clerical staff	4.17	83.33	4.19	83.85	4.12	82.37
14	I am satisfied with due payments in time	4.22	84.34	4.32	86.46	4.32	86.38
15	I am satisfied with due promotion in time	4.17	83.46	4.28	85.52	4.15	83.01
	Overall Average score	3.90	78.00	4.00	80.00	4.00	80.00

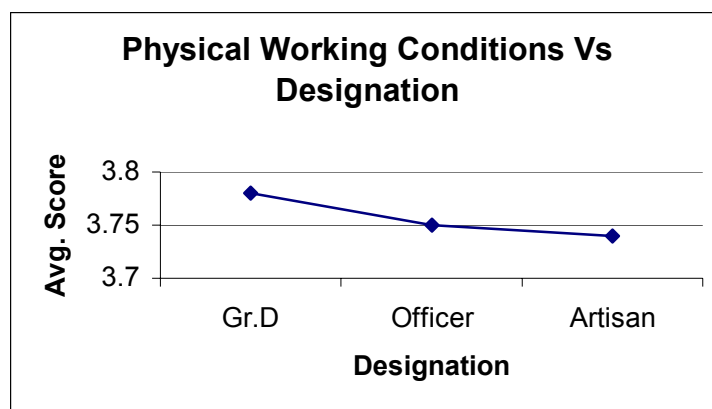


8.10.3 Physical Working Conditions Vs Designation: The average and percentage scores of all the employees, officer/supervisor, artisan and helper-wise, are given in Table-8.19D along with its chart.

Table 8.19D: Scores for Physical Working Conditions based on designation

No	Question	Offr+ Super. (315 Nos)	Offr+ Super. % Score	Artisa n (231 Nos)	Artisa n % Score	Helper (243 Nos)	Helper % Score
1	Improvement in physical working conditions improved efficiency	4.19	83.81	4.16	83.20	4.03	80.58

2	After improvement in working conditions I enjoy my work more	4.24	84.76	4.18	83.55	4.10	82.06
3	Improved conditions influenced my attitude towards work	4.01	80.25	4.03	80.61	3.91	78.27
4	Able to do more work due to improvements	4.09	81.71	4.08	81.56	4.00	80.08
5	Improved conditions have motivated me to work hard	4.11	82.29	4.09	81.73	4.02	80.49
6	I am satisfied with civil maintenance in office	3.31	66.29	3.39	67.71	3.43	68.64
7	I am satisfied with civil maintenance in residence	3.22	64.38	3.41	68.14	3.32	66.42
8	I am satisfied with electrical maintenance in office	3.76	75.11	3.59	71.77	3.81	76.30
9	I am satisfied with electrical maintenance in residence	3.71	74.29	3.58	71.52	3.70	73.91
10	I am satisfied with arrangements of water supply	3.53	70.54	3.56	71.17	3.59	71.77
11	I am satisfied with cleanliness in colonies	3.39	67.75	3.32	66.32	3.60	72.02
12	I am satisfied with cleanliness in offices	3.46	69.27	3.39	67.88	3.78	75.56
13	I am satisfied with output of my dealing clerical staff	3.57	71.30	3.83	76.62	3.93	78.52
14	I am satisfied with due payments in time	4.27	85.46	4.18	83.64	4.18	83.54
15	I am satisfied with due promotion in time	3.35	67.05	3.39	67.88	3.28	65.68
	Overall Average score	3.75	75.00	3.74	74.80	3.78	75.60

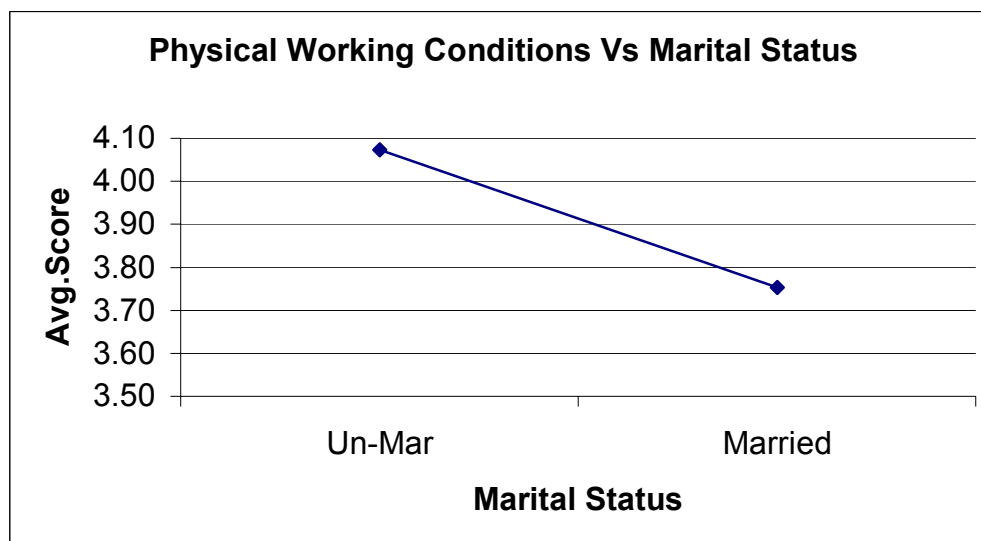


8.10.4 Physical Working Conditions Vs Marital Status: The average and percentage scores of all the employees, marital-status-wise, are given in Table-8.18E along with its chart.

**Table 8.19E: Scores for Physical Working
Conditions based on marital status**

No	Question	Married (766 Nos)	Married % Score	Unmarr (23 Nos)	Unmarr % Score
1	Improvement in physical working conditions improved efficiency	4.13	82.58	3.48	69.57
2	After improvement in working conditions I enjoy my work more	4.18	83.58	3.35	66.96
3	Improved conditions influenced my attitude towards work	3.99	79.74	3.70	73.91
4	Able to do more work due to improvements	4.06	81.23	4.39	87.83
5	Improved conditions have motivated me to work hard	4.08	81.59	3.61	72.17
6	I am satisfied with civil maintenance in office	3.37	67.34	4.30	86.09
7	I am satisfied with civil maintenance in residence	3.31	66.21	4.13	82.61
8	I am satisfied with electrical	3.72	74.36	3.91	78.26

	maintenance in office				
9	I am satisfied with electrical maintenance in residence	3.67	73.39	4.39	87.83
10	I am satisfied with arrangements of water supply	3.53	70.57	4.30	86.09
11	I am satisfied with cleanliness in colonies	3.42	68.36	4.30	86.09
12	I am satisfied with cleanliness in offices	3.55	70.91	4.43	88.70
13	I am satisfied with output of my dealing clerical staff	3.76	75.12	4.22	84.35
14	I am satisfied with due payments in time	4.21	84.23	4.30	86.09
15	I am satisfied with due promotion in time	3.34	66.71	4.26	85.22
	Overall average score	3.75	75.00	4.07	81.40



8.10.5 From the data contained in the tables 8.19A to 8.19E, it is observed that even though there is no significant variations in the motivation scores obtained by the employees of different departments posted in different areas viz. urban, rural and semi-urban and having different educational backgrounds and different standings in the

organization, the following facts emerge from a careful and detailed analysis of the data:

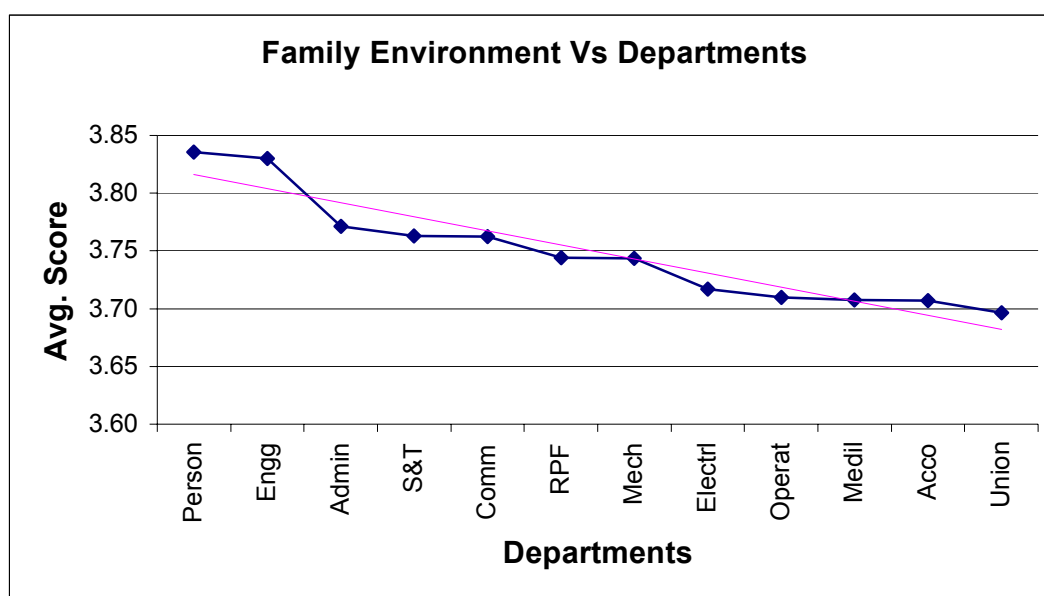
- (i) As compared to the other motivational aspects considered in the study, it is noticed that the average scores obtained under the physical working conditions are less, and hence there is need to initiate actions to improve the working conditions to ensure that the overall motivation level of the employees improves on that score so that their performance and output are increased.
- (ii) The Union office bearers have scored less mark under Physical Working Conditions. It is mainly due to the fact that for redressal of grievances of staff like improper maintenance of staff quarters, improper sanitation of colonies, improvement in the working environment, and issue of timely promotion orders and timely payments, they have to take up the issues often with the higher administration for their non-performance. Therefore, they are generally bitter about the physical working conditions. Hence, the Union office bearers have the tendency to show dissatisfaction about the physical working conditions.
- (iii) The staffs posted in semi-urban and urban localities are more dissatisfied with the physical working conditions as compared to the staffs posted in the rural localities. This is mainly due to the reason that the staffs posted in the rural areas are having low satisfaction/ expectation level and limited requirements as compared to the staffs posted in the semi-urban and urban areas.
- (iv) It is also observed that the highly qualified employees are having more expectations for improvement in the physical working conditions. The qualified railway staffs will, therefore, always have more desire for getting improvements in their physical working conditions.
- (v) The married employees are also having more desire to have improvements in the physical working conditions as compared to the unmarried people in the following specific areas:

- Promotions
- Timely payments
- Proper work output from the concerned dealing clerical staffs
- Proper cleanliness and sanitation in offices and colonies
- Proper maintenance of engineering and electrical assets.

8.11 Family Environment Vs Departments : The average and percentage scores of the various departments for the family environment are given in Table-8.20A and the associated chart.

Table 8.20A: Departmental scores for Family Environment

S.No.	1	2	3	4	5	6	7	8	9	10	11	12	
Department	Unions	Accounts	Medical	Operating	Electrical	Mechanical	RPF	Commercial	S&T	Administration	Engineering	Personnel	Overall average
Avg. score	3.7	3.71	3.71	3.71	3.72	3.74	3.74	3.76	3.76	3.77	3.83	3.84	3.75
% Score	74	74.2	74.2	74.2	74.4	74.8	74.8	75.2	75.2	75.4	76.6	76.8	74.98



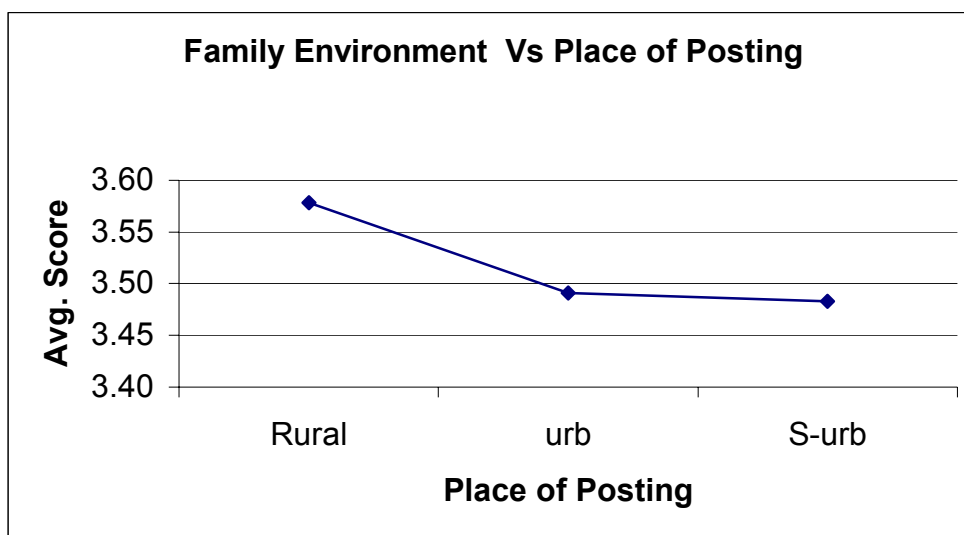
The aspect of family environment that influences the motivation level exposes how the railway man adjusts himself within his family and how his family members react to his service conditions. The important items selected for assessing this aspect are items like whether he spends most of the time with his family members or friends' circle, or doing some thing else, opinion of his family members about his absence, etc.

In this aspect, the union persons are the lowest scorer with a score of 74%, whereas the personnel department has scored the highest of 76.8%. Since much variation is not noticed from the lowest to the highest scores, it is evident that the attitude of the railway employees towards their family members is satisfactory.

8.11.1 Family Environment Vs Place of Posting: The average and percentage scores of all the employees, rural, semi-urban and urban area-wise, are given in Table-8.20B along with its chart.

Table 8.20B: Scores for Family Environment based on place of posting

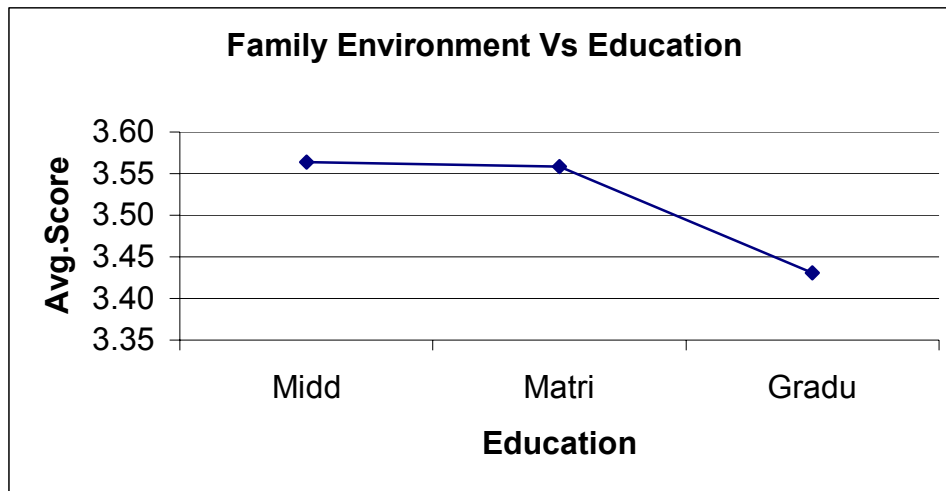
S.No.	Question	Rural (179 Nos)	Rural % Score	Semi Urb (178 Nos)	Semi Urb % Score	Urban (432 Nos)	Urban % Score
1	After office most of the time remain with family	4.36	87.2	4.04	80.8	4.33	86.6
2	After office most of the time remain with friends	2.96	59.2	3.06	61.2	2.84	56.8
3	After office carry out religious works	3.69	73.8	3.57	71.4	3.48	69.6
4	After office do social works	3.75	75.0	3.46	69.2	3.60	72.0
5	Family members feel my absence	4.30	86.0	4.29	85.8	4.22	84.4
6	Family members do not feel my presence	2.08	41.6	2.31	46.2	2.11	42.2
7	Family members move with me	3.91	78.2	3.64	72.8	3.85	77.0
	Overall average score	3.58	71.6	3.48	69.6	3.49	69.8



8.11.2 Family Environment Vs Educational Qualification: The average and percentage scores of all the employees, educational-qualification-wise, are given in Table-8.20C along with its chart.

**Table 8.20C: Scores for Family Environment
based on educational qualification**

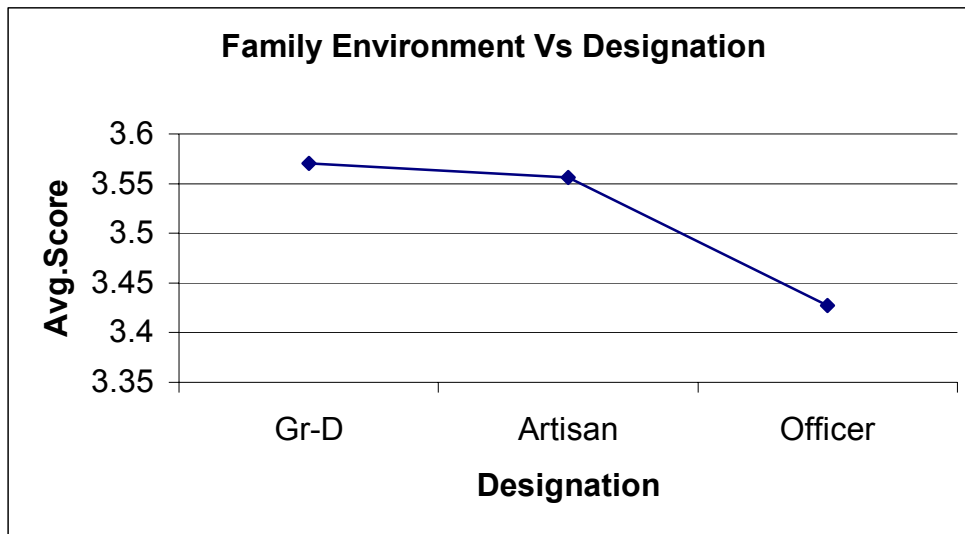
S. No.	Question	Grad + above (318 Nos)	Grad + above % Score	HSC+ Matr (192 Nos)	HSC+ Matr % Score	Middle & below (279 Nos)	Middle & below % Score
1	After office most of the time remain with family	4.29	85.8	4.31	86.2	4.23	84.6
2	After office most of the time remain with friends	2.81	56.2	3.07	61.4	2.94	58.8
3	After office carry out religious works	3.31	66.2	3.63	72.6	3.75	75
4	After office do social works	3.6	72	3.55	71	3.65	73
5	Family members feel my absence	4.39	87.8	4.2	84	4.14	82.8
6	Family members do not feel my presence	1.84	36.8	2.26	45.2	2.43	48.6
7	Family members move with me	3.77	75.4	3.9	78	3.82	76.4
	Overall average score	3.43	68.6	3.56	71.2	3.56	71.2



8.11.3 Family Environment Vs Designation: The average and percentage scores of all the employees, officer/supervisor, artisan and helper-wise, are given in Table-8.20D along with its chart.

Table 8.20D: Scores for Family Environment based on designation

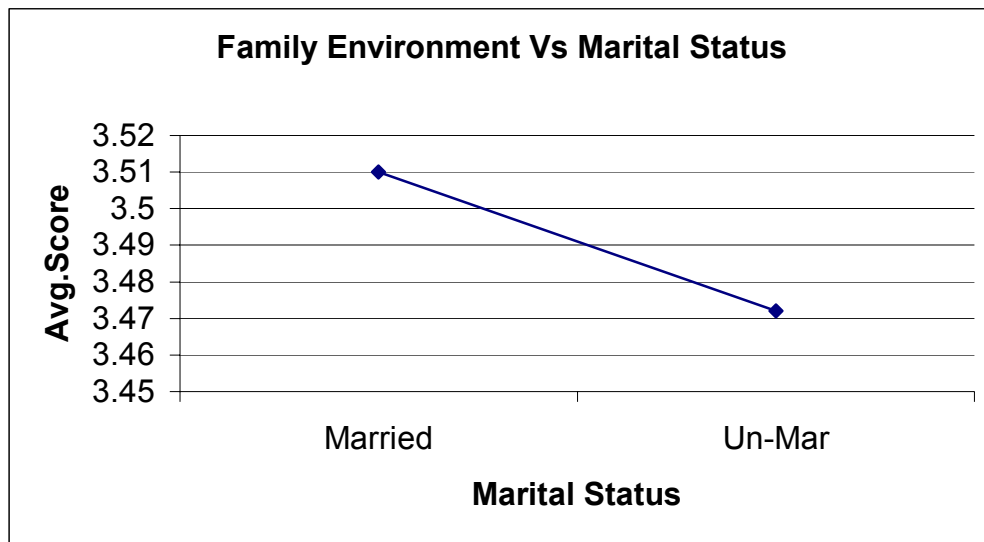
No	Question	Offr+ Super. (315 Nos)	Offr+ Super. % Score	Artisan (231 Nos)	Artisan % Score	Helper (243 Nos)	Helper % Score
1	After office most of the time remain with family	4.24	84.8	4.33	86.6	4.26	85.2
2	After office most of the time remain with friends	2.84	56.8	2.98	59.6	2.96	59.2
3	After office carry out religious works	3.35	67	3.64	72.8	3.71	74.2
4	After office do social works	3.57	71.4	3.62	72.4	3.64	72.8
5	Family members feel my absence	4.32	86.4	4.36	87.2	4.06	81.2
6	Family members do not feel my presence	1.91	38.2	2.13	42.6	2.48	49.6
7	Family members move with me	3.77	75.4	3.82	76.4	3.88	77.6
	Overall average score	3.43	68.6	3.56	71.2	3.57	71.4



8.11.4 Family Environment Vs Marital Status: The average and percentage scores of all the employees, marital-status-wise, are given in Table-8.20E along with its chart.

**Table 8.20E: Scores for Family Environment
based on marital status**

No	Question	Married (766 Nos)	Married % Score	Unmarr (23 Nos)	Unmarr % Score
1	After office most of the time remain with family	4.28	85.61	4.00	80.00
2	After office most of the time remain with friends	2.90	58.02	3.52	70.43
3	After office carry out religious works	3.55	70.97	3.48	69.57
4	After office do social works	3.61	72.14	3.52	70.43
5	Family members feel my absence	4.25	84.99	4.35	86.96
6	Family members do not feel my presence	2.15	43.03	2.13	42.61
7	Family members move with me	3.83	76.66	3.30	66.09
	Overall average score	3.51	70.20	3.47	69.44



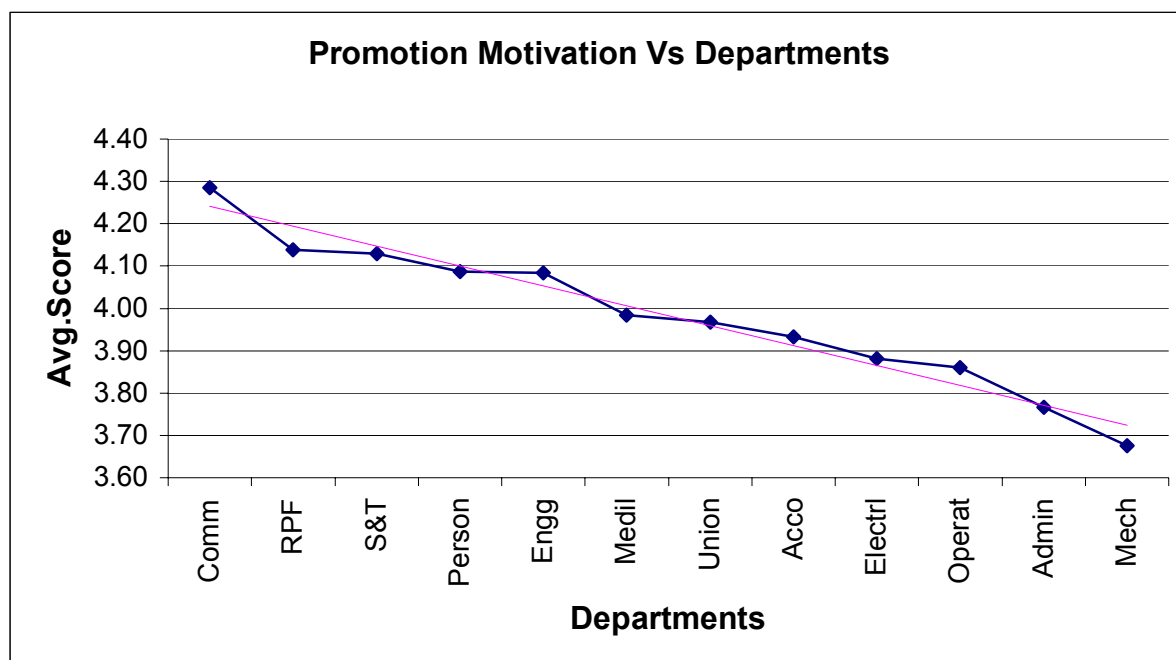
8.11.5 From the data contained in the tables 8.20A to 8.20E, it is observed that even though there is no significant variations in the motivation scores obtained by the employees of different departments posted in different areas viz. urban, rural and semi-urban and having different educational backgrounds and different standings in the organization, the following facts emerge from a careful and detailed analysis of the data:

- (i) The employees staying in the rural areas are more satisfied with the family environment as compared to the employees posted in the semi-urban and urban areas. The employees having rural background try to spend more time with their family members.
- (ii) The more qualified employees have scored less mark in the family environment as they invariably shoulder higher responsibilities that compel them to devote less time with their family members. Similar is the situation with the officers and senior supervisors.
- (iii) The married employees are having more family bonds as compared to unmarried employees.

8.12 Promotion Motivation Vs Departments : The average and percentage scores of the various departments for the promotion motivation are given in Table-8.21A and the associated chart.

Table 8.21A: Departmental scores for Promotion Motivation

S.No.	1	2	3	4	5	6	7	8	9	10	11	12	
Department	Mechanical	Administration	Operating	Electrical	Accounts	Union	Medical	Engineering	Personnel	S&T	RPF	Commercial	Overall average
Avg. score	3.68	3.77	3.86	3.88	3.93	3.97	3.98	4.08	4.09	4.13	4.14	4.29	3.98
% Score	73.6	75.4	77.2	77.6	78.6	79.4	79.6	81.6	81.8	82.6	82.8	85.8	79.67



The impact of promotion on the motivation level of the employees helps to understand the interests of the staffs to get promotions that evaluate their status in the society. Some of the items considered in assessing this area are like whether social

status and prestige have increased due to promotion or not, whether job is more interesting after the promotion or not, and whether happiness, motivation, power, etc have been enhanced or not.

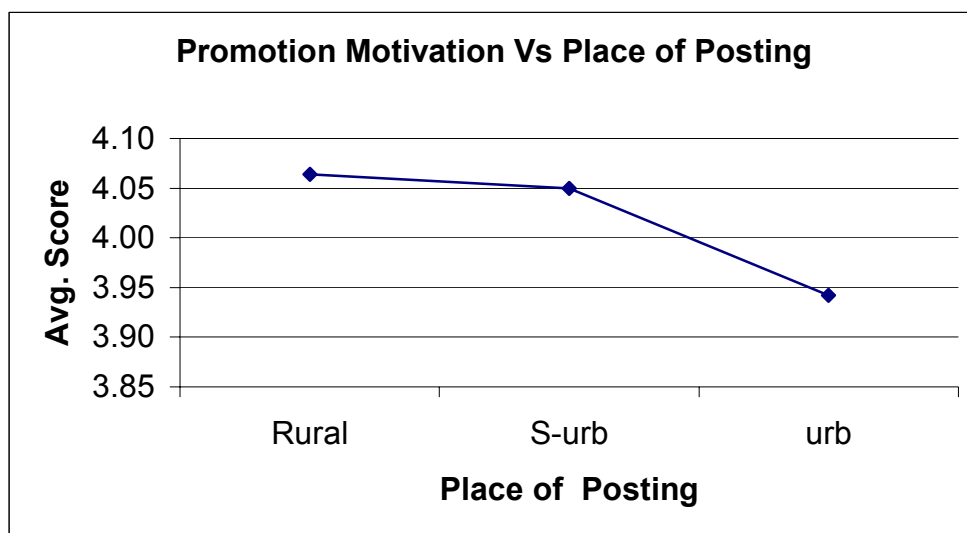
As per the data contained in the table – 8.21A, the impact of promotion on the motivation levels of the staffs of the Mechanical department is the lowest score as indicated by their score of 73.6%, and whereas the staffs of the Commercial department are more enthusiastic on promotion as suggested by their highest score of 85.8%. In this motivational aspect, the difference between the lowest score and the highest score is 12.2%, which is very significant. However, this aspect depends upon the importance given by individuals as well.

8.12.1 Promotion Motivation Vs Place of posting: The average and percentage scores of all the employees, rural, semi-urban and urban area-wise, are given in Table-8.21B along with its chart.

Table 8.21B: Scores for promotion motivation based on place of posting

S.No.	Question	Rural (179 Nos)	Rural % Score	Semi Urb (178 Nos)	Semi Urb% Score	Urban (432 Nos)	Urban % Score
1	Status improves with promotion	4.00	80.0	4.08	81.7	3.97	79.4
2	I find the job interesting on promotion	4.12	82.5	4.11	82.1	3.92	78.4
3	I feel sense of achievement after promotion	4.11	82.1	4.03	80.6	3.93	78.6
4	Promotion motivated me to work harder	4.17	83.5	4.11	82.1	4.00	80.1
5	I am happy with more pay on promotion	4.09	81.9	4.17	83.4	4.13	82.6
6	I got more authority and	4.08	81.7	4.03	80.6	3.98	79.7

	responsibility after promotion						
7	Promotion increased my control on staff	3.87	77.3	3.83	76.5	3.66	73.2
	Overall average score	4.06	81.2	4.05	81.0	3.94	78.8

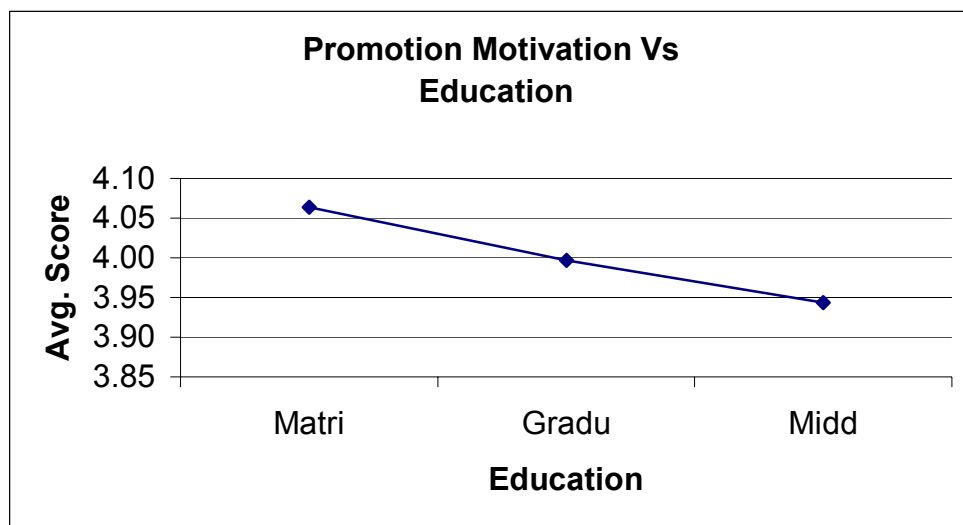


8.12.2 Promotion Motivation Vs Educational Qualification: The average and percentage scores of all the employees, educational-qualification-wise, are given in Table-8.21C along with its chart.

Table 8.21C: Scores for promotion motivation based on educational qualification

S. No.	Question	Grad + above (318 Nos)	Grad + above % Score	HSC+ Matr (192 Nos)	HSC+ Matr % Score	Middle & below (279 Nos)	Middle & below % Score
1	Status improves with promotion	4.04	80.8	4.01	80.2	3.95	79.0
2	I find the job interesting on promotion	3.96	79.2	4.08	81.7	4.01	80.2
3	I feel a sense of achievement after promotion	4.00	79.9	4.04	80.8	3.95	79.1
4	Promotion motivated me to work harder	4.07	81.3	4.17	83.3	4.00	79.9

5	I am happy with more pay on promotion	4.10	82.1	4.27	85.3	4.07	81.4
6	I got more authority and responsibility after promotion	4.10	82.0	4.06	81.3	3.89	77.8
7	Promotion increased control on staff	3.70	74.1	3.82	76.4	3.74	74.8
	Overall average score	4.00	80.0	4.06	81.2	3.94	78.8

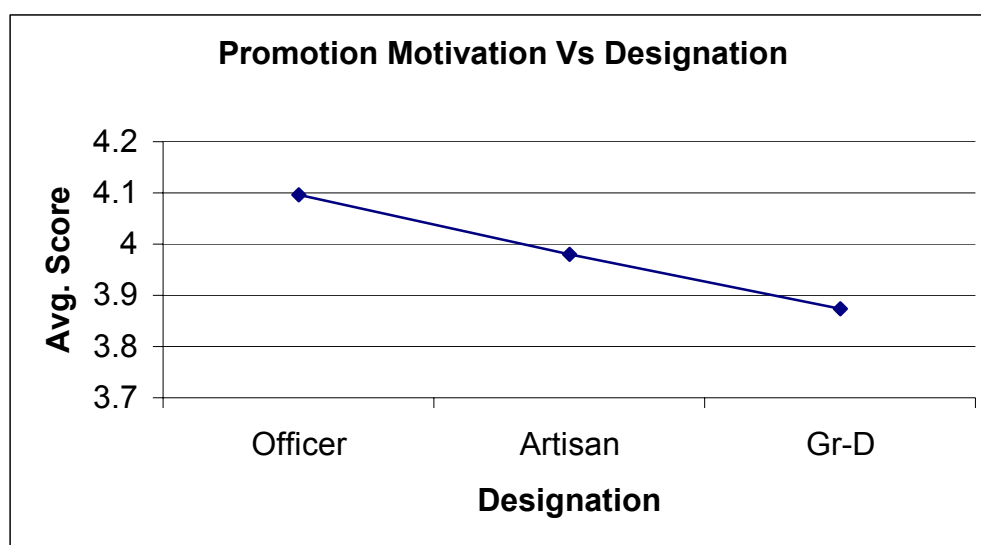


8.12.3 Promotion Motivation Vs Designation: The average and percentage scores of all the employees, officer/supervisor, artisan and helper-wise, are given in Table-8.21D along with its chart

Table 8.21D: Scores for promotion motivation based on designation

No	Question	Offr+ Super. (315 Nos)	Offr+ Super. % Score	Artisa n (231 nos)	Artisa n % Score	Helper (243 Nos)	Helper % Score
1	Status improves with promotion	4.12	82.4	4.00	80.0	3.85	77.0
2	I find the job interesting on promotion	4.06	81.3	4.04	80.9	3.91	78.1
3	I feel a sense of achievement after promotion	4.09	81.8	3.95	79.0	3.91	78.1

4	Promotion motivated me to work harder	4.17	83.4	4.02	80.3	3.98	79.5
5	I am happy with more pay on promotion	4.22	84.4	4.17	83.5	3.97	79.4
6	I got more authority and responsibility after promotion	4.19	83.7	3.98	79.6	3.83	76.6
7	Promotion increased control on staff	3.82	76.4	3.70	74.0	3.68	73.7
	Overall average score	4.10	82.0	3.98	79.6	3.87	77.4

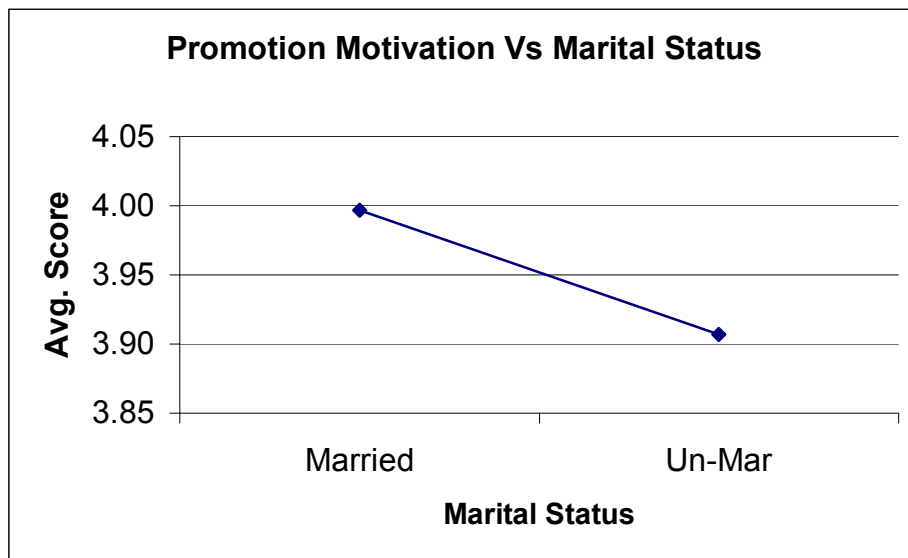


8.12.4 Promotion Motivation Vs Marital Status: The average and percentage scores of all the employees, marital-status-wise, are given in Table-8.21E along with its chart.

Table 8.21E: Scores for promotion motivation based on marital status

No.	Question	Married (766 nos)	Married % Score	Unmarr (23 Nos)	Unmarr % Score
1	Status improves with promotion	4.01	80.1	3.87	77.4
2	I find the job interesting on promotion	4.01	80.2	3.96	79.1
3	I feel a sense of achievement after promotion	4.00	79.9	3.83	76.5

4	Promotion motivated me to work harder	4.07	81.4	3.87	77.4
5	I am happy with more pay on promotion	4.13	82.6	4.13	82.6
6	I got more authority and responsibility after promotion	4.01	80.3	4.09	81.7
7	Promotion increased control on staff	3.75	75.0	3.61	72.2
	Overall average score	4.00	80.0	3.91	78.2



8.12.5 From the details of analysis contained in the tables 21A to 21E, the following views emerge:

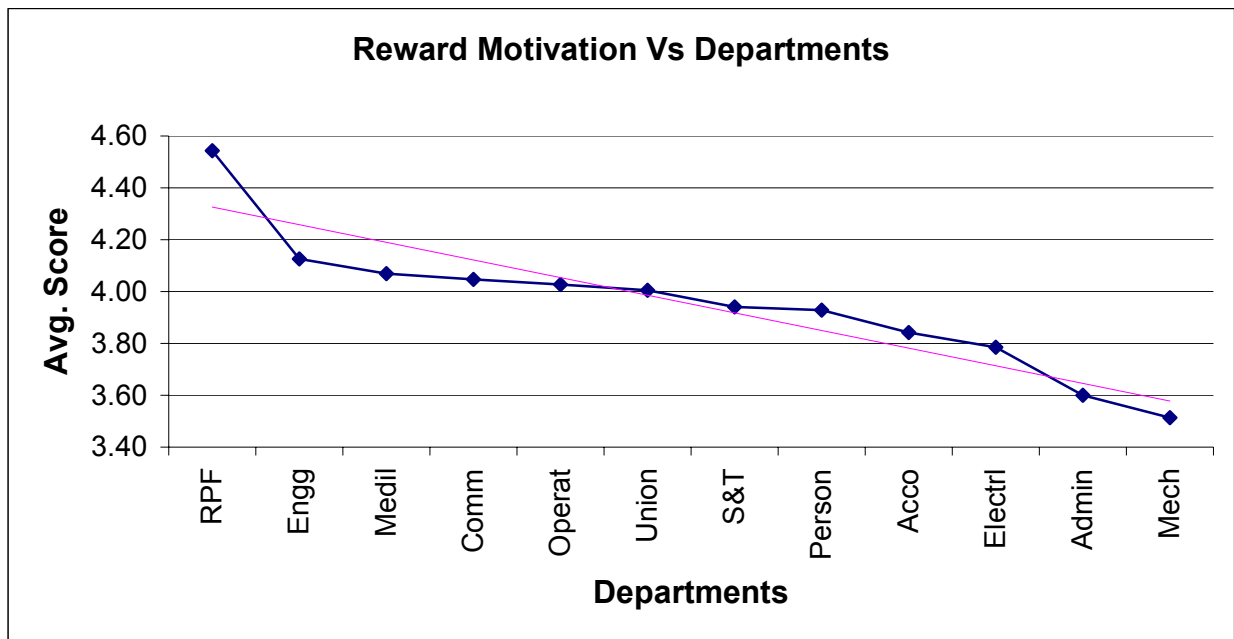
- (i) The employees belonging to the Commercial, RPF, S&T, Personnel and Engineering departments are having more urge for promotions. It is clear that, with promotions in their career, the status and responsibility of the employees belonging to these departments having public dealing increased substantially, which in turn improved their social status. As such, the staffs of these departments are motivated to get further promotions.

- (ii) The data also brings out that the staffs posted in the rural and semi-urban areas are having more urge for promotions, as with promotions their overall status in the society gets upgraded.
- (iii) The officers and senior supervisors are also motivated more on promotions as compared to the staffs in the artisan and helper category.
- (iv) The married staffs are also having more desire for promotion as compared to the unmarried employees.

8.13 Reward motivation Vs Departments: The average and percentage score of the various departments for reward motivation are given in Table-8.22A and the associated chart.

Table 8.22A: Departmental scores for Reward motivation

S.No.	1	2	3	4	5	6	7	8	9	10	11	12	Overall average
Department	Mechanical	Administration	Electrical	Accounts	Personnel	S&T	Union	Operating	Commercial	Medical	Engineering	RPF	
Avg. score	3.51	3.6	3.78	3.84	3.93	3.94	4.01	4.03	4.05	4.07	4.13	4.54	
% Score	70.2	72	75.6	76.8	78.6	78.8	80.2	80.6	81	81.4	82.6	90.8	79.05



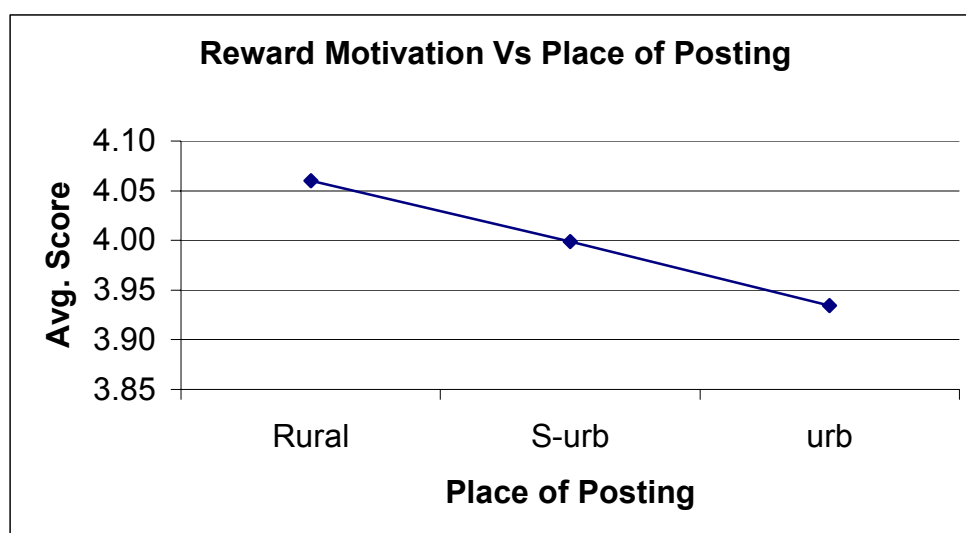
The aspect of reward motivation is to ascertain the views of the railway employees as to how much they are meriting it. The items like the award gives a sense of achievement for the employee, the award/recognition motivates the employee to work harder, awards elevate the status of the employee in the society, the organization has recognized his services by giving him award, and awards are strictly given on the basis of one's performance were considered for assessing this aspect.

From the data obtained, it is seen that there is considerable difference of opinion among the various departments. The lowest score of 70.2% was credited by the mechanical department, whereas the highest score of 90.8% was credited by the RPF department. Since the RPF staffs are specifically recognised by their department due to rewards, they might have strongly been influenced by the reward motivation.

8.13.1 Reward motivation Vs Place of Posting: The average and percentage scores of all the employees, rural, semi-urban and urban area-wise, are given in Table-8.22B along with its chart.

Table 8.22B: Scores for reward motivation based on place of posting

S.No.	Question	Rural (179 Nos)	Rural % Score	Semi Urb (178 Nos)	Semi Urb% Score	Urban (432 Nos)	Urban % Score
1	Awards give a sense of achievement	4.19	83.8	4.13	82.7	4.12	82.5
2	Awards motivate to work hard	4.26	85.1	4.26	85.2	4.09	81.8
3	Awards elevate the status in society	4.03	80.6	4.11	82.2	3.93	78.6
4	Awards are given on performance	3.87	77.3	3.91	78.2	3.86	77.1
5	Awards are given strictly on the basis of performance	3.96	79.2	3.58	71.6	3.68	73.5
	Overall average score	4.06	81.2	4.00	80.0	3.93	78.6

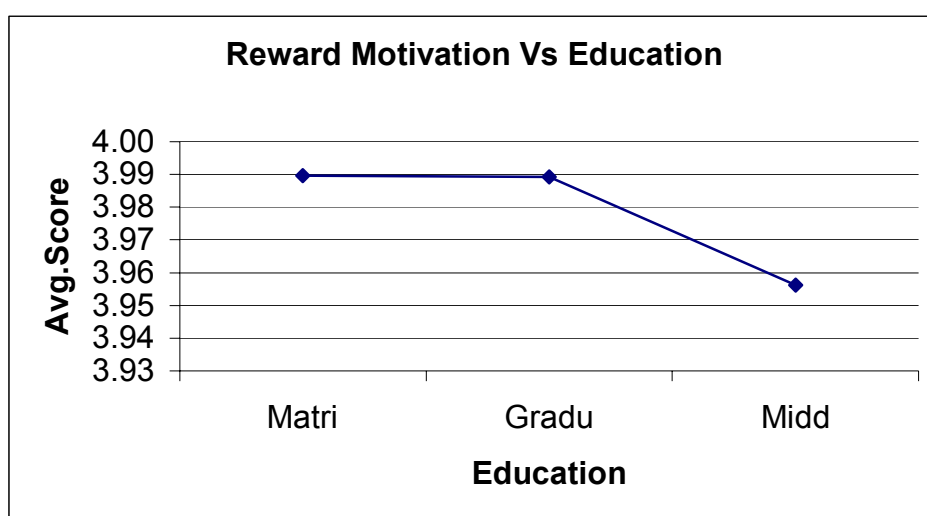


8.13.2 Reward Motivation Vs Education: The average and percentage scores of all the employees, educational-qualification-wise, are given in Table-8.22C along with its chart.

Table 8.22C: Scores for reward motivation based on educational qualification

S. No.	Question	Grad + above 318	Grad + above %	HSC+ Matr 192	HSC+ Matr %	Middle & below 279	Middle & below %
1	Awards give a sense of achievement	4.20	84.0	4.14	82.7	4.08	81.5

2	Awards motivate to work hard	4.24	84.7	4.11	82.3	4.12	82.4
3	Awards elevate the status in society	3.97	79.4	3.98	79.7	4.03	80.6
4	Awards are given on performance	3.87	77.4	3.96	79.3	3.81	76.1
5	Awards are given strictly on the basis of performance	3.67	73.4	3.75	75.0	3.75	75.1
	Overall average score	3.99	79.8	3.99	79.8	3.96	79.2

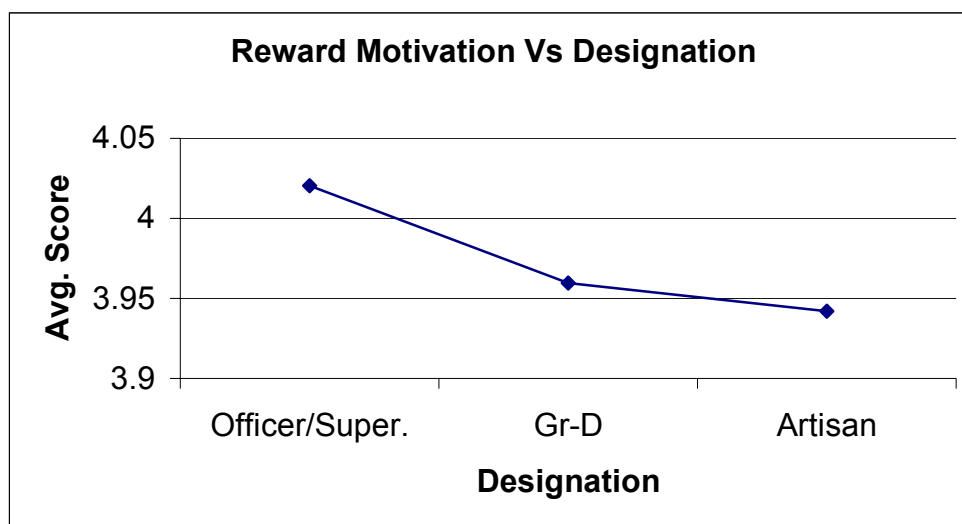


8.13.3 Reward Motivation Vs Designation: The average and percentage scores of all the employees, officer/supervisor, artisan and helper-wise, are given in Table-8.22D along with its chart.

Table 8.22D: Scores for reward motivation based on designation

No	Question	Offr+ Super. 315	Offr+ Super. %	Artisa n 231	Artisa n %	Helper 243	Helper %
1	Awards give a sense of achievement	4.22	84.4	4.10	82.1	4.07	81.4
2	Awards motivate to work hard	4.24	84.8	4.10	81.9	4.14	82.7
3	Awards elevate the status in society	3.95	78.9	4.02	80.4	3.98	79.6

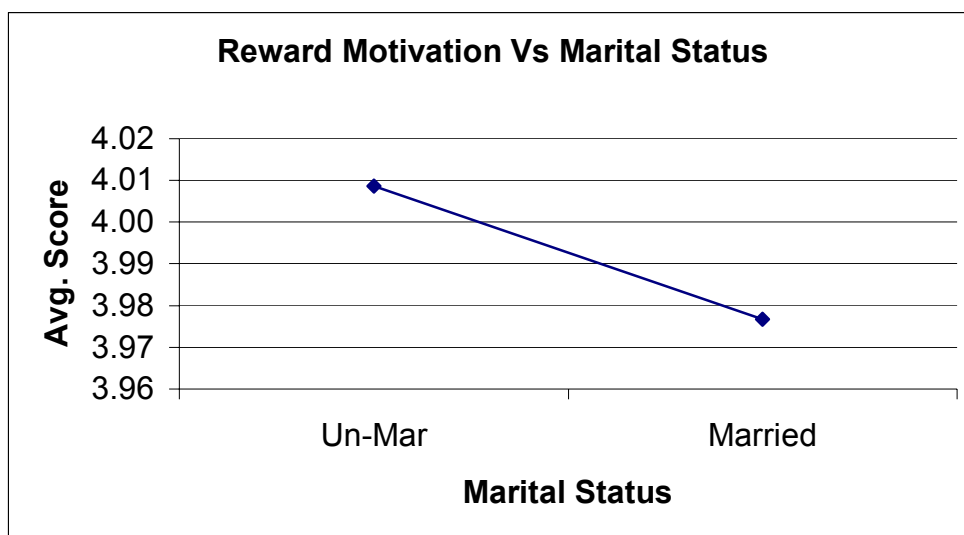
4	Awards are given on performance	3.95	78.9	3.88	77.6	3.77	75.3
5	Awards are given strictly on the basis of performance	3.75	75.0	3.61	72.2	3.78	75.6
	Overall average score	4.02	80.4	3.94	78.8	3.96	79.2



8.13.4 Reward Motivation Vs Marital Status: The average and percentage scores of all the employees, marital-status-wise, are given in Table-8.22E along with its chart.

Table 8.22E: Scores for reward motivation based on marital status

No	Question	Married (766 Nos)	Married % Score	Unmarr (23 Nos)	Unmarr % Score
1	Awards give a sense of achievement	4.14	82.7	4.26	85.2
2	Awards motivate to work hard	4.17	83.3	4.13	82.6
3	Awards elevate the status in society	3.99	79.8	4.04	80.9
4	Awards are given on performance	3.87	77.4	3.87	77.4
5	Awards are given strictly on the basis of performance	3.72	74.4	3.74	74.8
	Overall average score	3.98	79.6	4.01	80.2



8.13.5 The analysis contained in the tables 8.22A to 8.22E brings out the following facts:

- (i) The staffs of the RPF departments are highly motivated to get rewards as, by getting rewards, the chances for their further promotions increase. At the same time, their status in the society also gets upgraded.
- (ii) Due to the prevailing social customs, the employees posted in the rural and semi-urban areas are having more urge to get awards, as, with the receipt of awards, their overall standing in the society gets elevated.

In this regard, I would like to narrate a simple incident. During the General Manager/Western Railway's annual inspection of the Okha-Rajkot section in the year 2003, the level crossing gate near Dwarika station was inspected. The GM had tested the knowledge of the gateman who was present at the gate. The gateman was able to answer the questions satisfactorily and GM was pleased to sanction an award of Rs. 1,000 to the gateman. After the receipt of this award, the concerned gateman became a 'HERO' in his village.

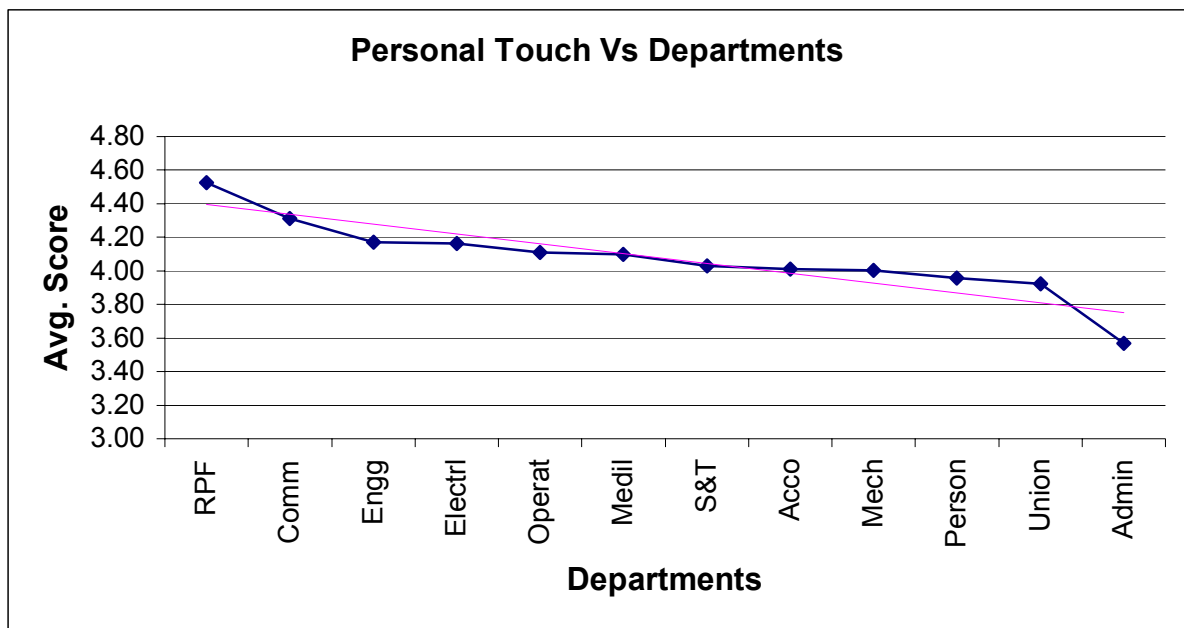
This level crossing gate was looked after by three gatemen in three shifts and due to their combined efforts, the upkeep of this gate was satisfactory. The other two gatemen who were posted at this gate and staying in the same village were looked down by their fellow villagers on the plea that out of three gatemen only one was awarded by the GM.

Later on, during my inspection of the same LC gate, another gateman was present on duty and he clearly brought out to my notice that the upkeep of that gate had improved not due to the hard work put in by one gateman who was awarded by the GM, but it was a result of the combined efforts put in by all the three gatemen posted at that gate. He also brought out to my notice that since only one gateman was awarded, that had created a serious situation for him in the society as the overall status of the gateman who was awarded by the GM had improved and the villagers are not treating the other two gatemen properly. There was a clear sign of dissatisfaction on his face and it was quite apparent that the other two gatemen posted at the same level crossing gate were highly demoralized. In order to correct the situation and to give importance to the other two gatemen, I immediately sanctioned individual awards in their favour and subsequently it was learnt that these two gatemen were also honoured in their village, and this action proved as a catalyst in motivating the other two gatemen.

8.14 Personnel Touch Vs Departments: The average and percentage scores of the various departments for personnel touch are given in Table-8.23A and the associated chart.

Table 8.23A: Departmental scores for Personnel touch

S.No.	1	2	3	4	5	6	7	8	9	10	11	12	Overall average
Department	Administration	Unions	Personnel	Mechanical	Accounts	S&T	Medical	Operating	Electrical	Engineering	Commercial	RPF	
Avg. score	3.57	3.92	3.96	4	4.01	4.03	4.1	4.11	4.16	4.17	4.31	4.53	
% Score	71.4	78.4	79.2	80	80.2	80.6	82	82.2	83.2	83.4	86.2	90.6	81.45



The aspect of personal touch has been used to evaluate the opinion of the employees on their higher authorities on matters related to work as also personal affairs. Therefore, the questions like:

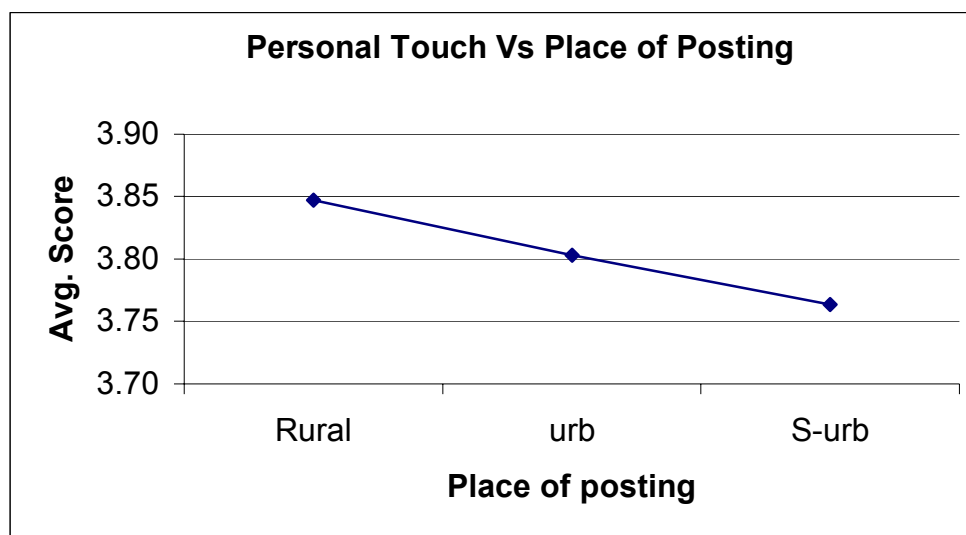
- i. Do you agree that the head of division takes personal interest in the welfare of the employees?
- ii. Do you agree that your supervisors provide technical support to you?
- iii. Do you agree that your supervisors give personal support in times of difficulties?
- iv. Does the top manager understand your problems and sincerely solve them?
- v. Are you able to approach your superior officers easily? were considered.

Under this aspect, the RPF personnel have scored 90.6% and that is the highest among all the departments. The Administration department has scored the minimum score of 71.4%, and thus there is a difference of 19.2% between the highest and lowest scores obtained on this aspect.

8.14.1 Personal Touch Vs Place of Posting: The average and percentage scores of all the employees, rural, semi-urban and urban area-wise, are given in Table-8.23B along with its chart.

Table 8.23B: Scores for personal touch based on place of posting

S.No	Question	Rural (179 Nos)	Rural % Score	Semi Urb (178 Nos)	Semi Urb% Score	Urban (432 Nos)	Urban % Score
1	Do you agree that HOD takes personal interest in staff welfare?	4.16	83.1	4.03	80.6	4.16	83.3
2	Examples by top manager encourage me to work harder	4.20	83.9	4.10	82.0	4.20	84.1
3	Supervisors provide technical support	4.06	81.1	3.94	78.8	3.98	79.6
4	Supervisors give personal support in difficult times	4.12	82.5	4.02	80.3	4.05	81.0
5	Top manager understands my problems and solves sincerely	4.13	82.7	4.06	81.1	4.06	81.3
6	I am able to approach superiors easily	3.45	68.9	3.40	68.0	3.33	66.6
7	I can express problems to seniors and seek redressal	3.37	67.5	3.21	64.3	3.31	66.3
8	Sympathetic attitude of top management motivates me to work harder	3.74	74.9	3.75	74.9	3.71	74.2
9	I have full faith in my superiors	3.64	72.7	3.72	74.5	3.66	73.1
10	The leadership of superiors encourages me	3.60	72.1	3.41	68.2	3.56	71.2
	Overall average score	3.85	77.0	3.76	75.2	3.80	76.0

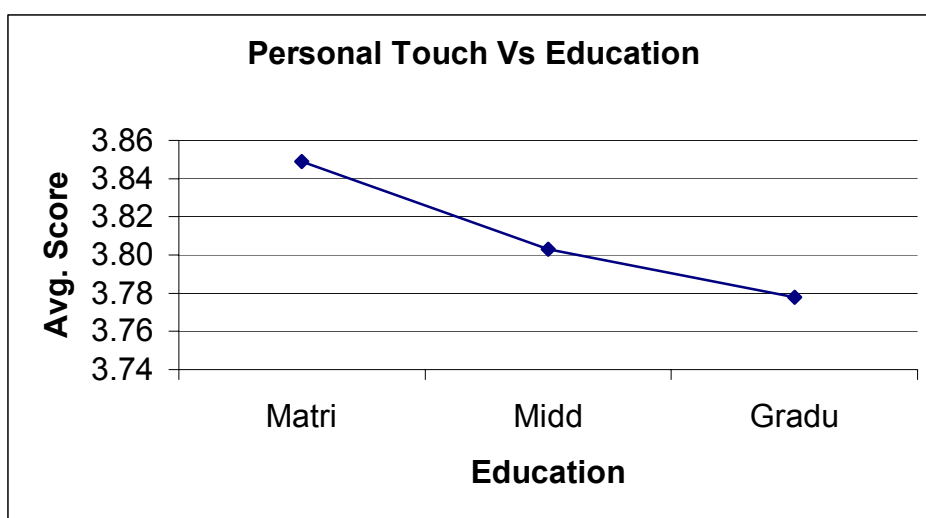


8.14.2 Personal Touch Vs Educational Qualification: The average and percentage scores of all the employees, educational-qualification-wise, are given in Table-8.23C along with its chart.

Table 8.23C: Scores for personal touch based on educational qualification

S. No.	Question	Grad + above 318	Grad + above %	HSC+ Matr 192	HSC+ Matr %	Middle & below 279	Middle & below %
1	Do you agree that HOD takes personal interest in staff welfare?	4.19	83.7	4.17	83.4	4.04	80.9
2	Examples by top manager encourage me to work harder	4.24	84.8	4.18	83.6	4.10	82.1
3	Supervisors provide technical support	3.98	79.6	4.02	80.4	3.97	79.5
4	Supervisors give personal support in difficult times	4.06	81.2	4.10	82.1	4.03	80.5
5	Top manager understands my problems and solves sincerely	4.05	81.1	4.16	83.2	4.05	81.0
6	I am able to approach superiors easily	3.27	65.3	3.40	68.0	3.47	69.4

7	I can express problems to seniors and seek redressal	3.22	64.5	3.34	66.8	3.38	67.5
8	Sympathetic attitude of top management motivates me to work harder	3.66	73.1	3.77	75.3	3.77	75.5
9	I have full faith in my superiors	3.64	72.8	3.79	75.7	3.62	72.4
10	The leadership of superiors encourages me	3.47	69.5	3.56	71.1	3.59	71.8
	Overall average score	3.78	75.6	3.85	77.0	3.80	76.0

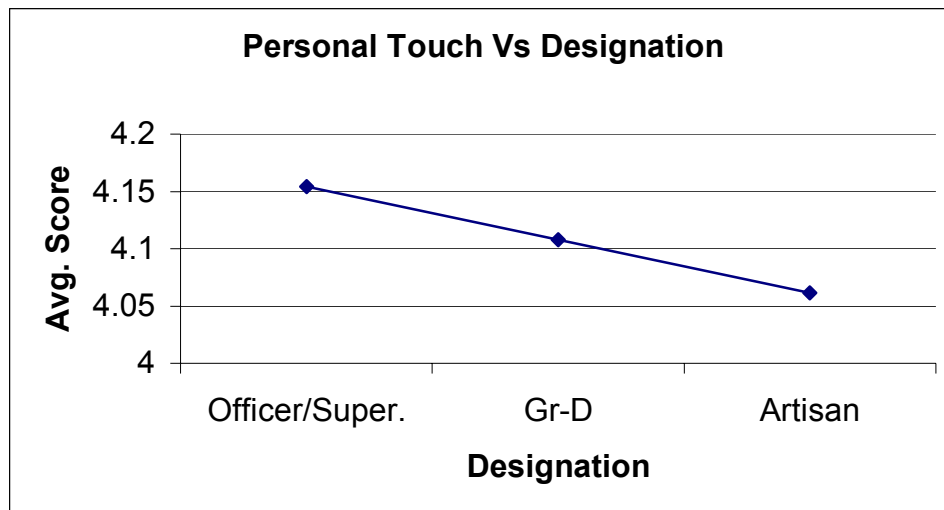


8.14.3 Personal Touch Vs Designation: The average and percentage scores of all the employees, officer/supervisor, artisan and helper-wise, are given in Table-8.23D along with its chart

Table 8.23D: Scores for personal touch based on designation

No	Question	Offr+ Super. 315	Offr+ Super. %	Artisa n 231	Artisa n %	Helper 243	Helper %
1	Do you agree that HOD takes personal interest in staff welfare?	4.12	82.5	3.87	77.5	3.95	79.0
2	Examples by top manager encourage me to work harder	4.17	83.3	4.01	80.3	4.05	81.1

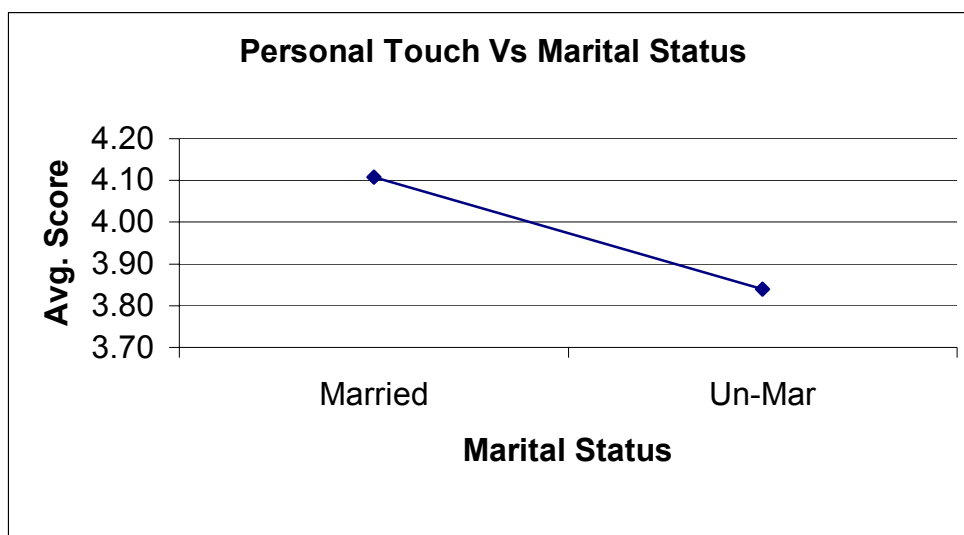
3	Supervisors provide technical support	4.02	80.4	4.06	81.3	4.14	82.9
4	Supervisors give personal support in difficult times	4.07	81.3	4.07	81.4	4.14	82.7
5	Top manager understands my problems and solves sincerely	4.05	81.0	3.99	79.8	4.11	82.2
6	I am able to approach superiors easily	4.20	84.0	4.03	80.5	4.00	80.1
7	I can express problems to seniors and seek redressal	4.19	83.9	4.05	81.0	4.09	81.7
8	Sympathetic attitude of top management motivates me to work harder	4.23	84.6	4.07	81.4	4.14	82.8
9	I have full faith in my superiors	4.29	85.7	4.26	85.1	4.29	85.8
10	The leadership of superiors encourages me	4.20	84.1	4.20	84.1	4.16	83.2
	Overall average score	4.15	83.0	4.06	81.2	4.11	82.2



8.14.4 Personal touch Vs Marital Status: The average and percentage scores of all the employees, marital-status-wise, are given in Table-8.23E along with its chart.

Table 8.23E: Scores for personal touch based on marital Status

No	Question	Married (766 Nos)	Married % Score	Unmarr (23 Nos)	Unmarr % Score
1	Do you agree that HOD takes personal interest in staff welfare?	3.99	79.8	4.22	84.3
2	Examples by top manager encourage me to work harder	4.08	81.7	4.17	83.5
3	Supervisors provide technical support	4.08	81.5	4.00	80.0
4	Supervisors give personal support in difficult times	4.08	81.6	3.96	79.1
5	Top manager understands my problems and solves sincerely	4.04	80.9	4.04	80.9
6	I am able to approach superiors easily	4.08	81.6	3.52	70.4
7	I can express problems to seniors and seek redressal	4.11	82.2	3.13	62.6
8	Sympathetic attitude of top management motivates me to work harder	4.15	83.1	3.96	79.1
9	I have full faith in my superiors	4.28	85.6	3.61	72.2
10	The leadership of superiors encourages me	4.19	83.8	3.78	75.7
	Overall average score	4.11	82.2	3.84	76.8



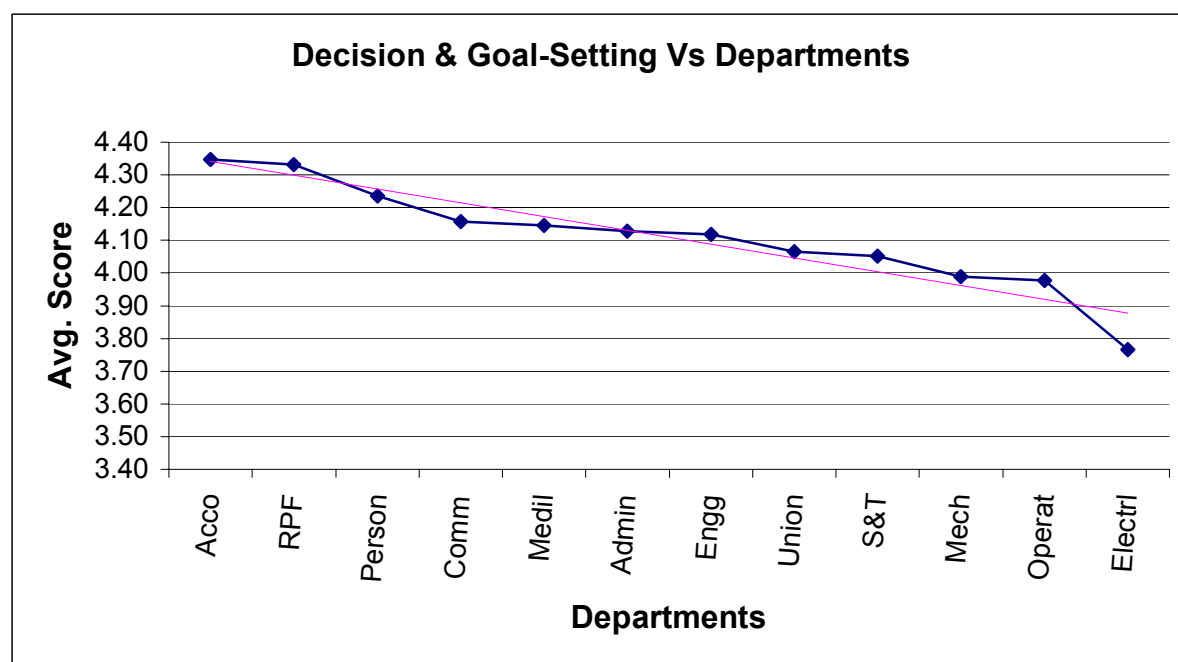
8.14.5 The analysis contained in the tables 8.23A to 8.23E brings out the following facts::

- (i) The staffs posted in the rural areas are more influenced by the personal touch effect and attach more importance to the personal touch displayed by their officers.
- (ii) The staffs having limited educational background are more motivated by the personal touch as compared to other staffs having higher education backgrounds.
- (iii) The officers and senior supervisors also show improvement in their performance with the concern and personal touch displayed by their senior officials.
- (iv) As compared to the unmarried staffs, the married staffs are encouraged more by the personal touch, as psychologically they are altogether different from the married employees.

8.15 Decision and Goal-Setting Vs Departments: The average and percentage scores of the various departments for decision and goal-setting are given in Table-8.24A and the associated chart.

Table 8.24A: Departmental scores for decision and goal-setting

S.No.	1	2	3	4	5	6	7	8	9	10	11	12	
Department	Electrical	Operating	Mechanical	S&T	Union	Engineering	Administration	Medical	Commercial	Personnel	RPF	Accounts	Overall average
Avg. score	3.77	3.98	3.99	4.05	4.07	4.12	4.13	4.15	4.16	4.24	4.33	4.35	4.11
% Score	75.4	79.6	79.8	81	81.4	82.4	82.6	83	83.2	84.8	86.6	87	82.23



The decision and goal-setting aspect of motivation level is to know the attitude and aim of an employee to achieve the desired target/output. Here, the valuation has been made by obtaining the views of the employees as to what exactly they would like to set as their goals. Some of the items covered are as under:

- i. I want to set my own goals and work accordingly.

- ii. I want to make my own decisions.
- iii. I want to direct others to the goal.
- iv. I want to have social contacts with people working in the organization.
- v. I want companionship with others.

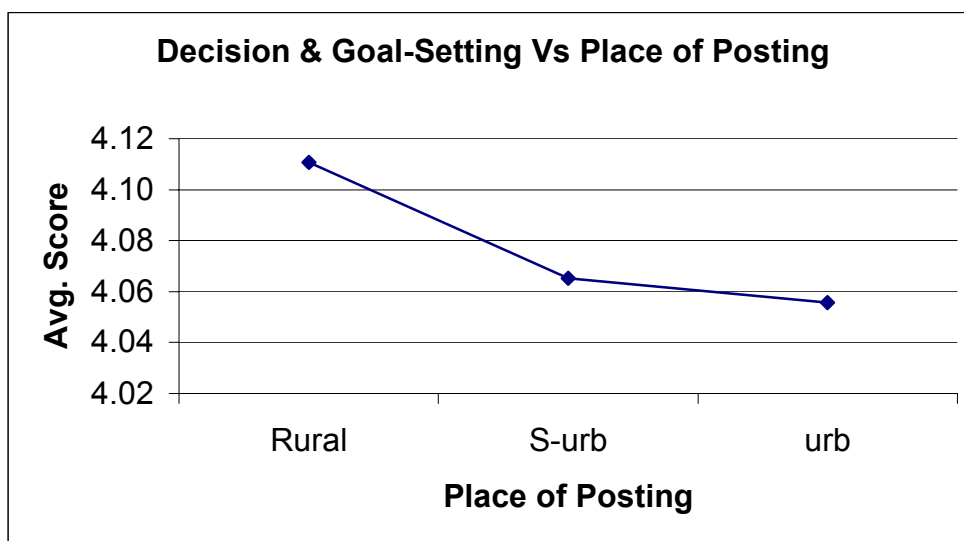
In this aspect, the Accounts department has scored 87%, which is the highest score among all the departments. The Electrical department has got the lowest score of 75.4%.

The reason for the safety departments like Operating, S&T, Electrical, and Mechanical to have low scores is that they are not able to take independent decisions on the spot. Whereas, the Accounts, RPF and Personnel departments are able to take their decisions on the spot according to the prevailing situations.

8.15.1 Decision and Goal-setting Vs Place of posting: The average and percentage scores of all the employees, rural, semi-urban and urban area-wise, are given in Table-8.24B along with its chart.

Table 8.24B: Scores for decision and goal-setting based on place of posting

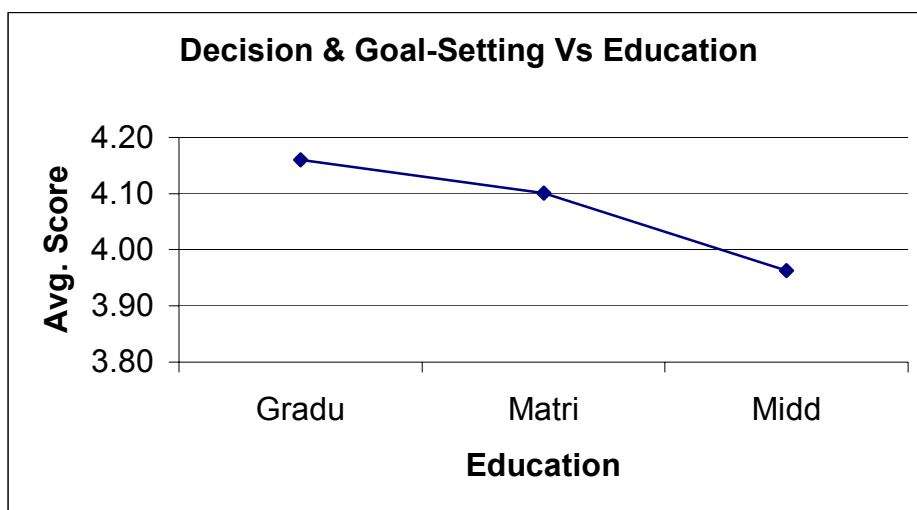
S.No.	Question	Rural (179 Nos)	Rural % Score	Semi Urb (178 Nos)	Semi Urb% Score	Urban (432 Nos)	Urban % Score
1	I want to set my own goals	4.35	87.0	4.26	85.3	4.27	85.5
2	I want to make my own decisions	4.30	86.0	4.10	82.0	4.19	83.8
3	I want to direct others	3.82	76.3	3.81	76.2	3.79	75.8
4	I want to have social contacts	4.06	81.1	4.08	81.6	4.06	81.2
5	I want companionship	4.03	80.6	4.10	81.9	3.96	79.3
	Overall average score	4.11	82.2	4.07	81.4	4.06	81.2



8.15.2 Decision and goal-setting Vs Education: The average and percentage scores of all the employees, educational-qualification-wise, are given in Table-8.24C along with its chart.

Table 8.24C: Scores for decision and goal setting based on qualification

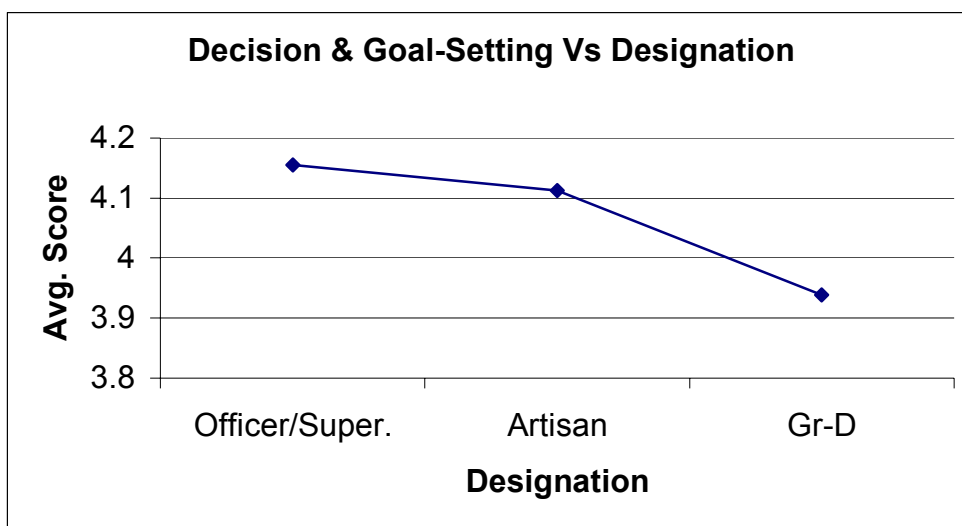
S. No.	Question	Grad + above 318	Grad + above %	HSC+ Matr 192	HSC+ Matr %	Middle & below 279	Middle & below %
1	I want to set my own goals	4.47	89.4	4.24	84.9	4.11	82.3
2	I want to make my own decisions	4.32	86.4	4.26	85.2	4.08	81.6
3	I want to direct others	3.85	77.0	3.80	76.0	3.74	74.8
4	I want to have social contacts	4.12	82.4	4.13	82.5	3.96	79.1
5	I want companionship	4.04	80.9	4.07	81.5	3.92	78.4
	Overall average score	4.16	83.2	4.01	80.2	3.96	79.2



8.15.3 Decision and Goal-Setting Vs Designation: The average and percentage scores of all the employees, officer/supervisor, artisan and helper-wise, are given in Table-8.24D along with its chart

Table 8.24D: Scores for decision and goal-setting based on designation

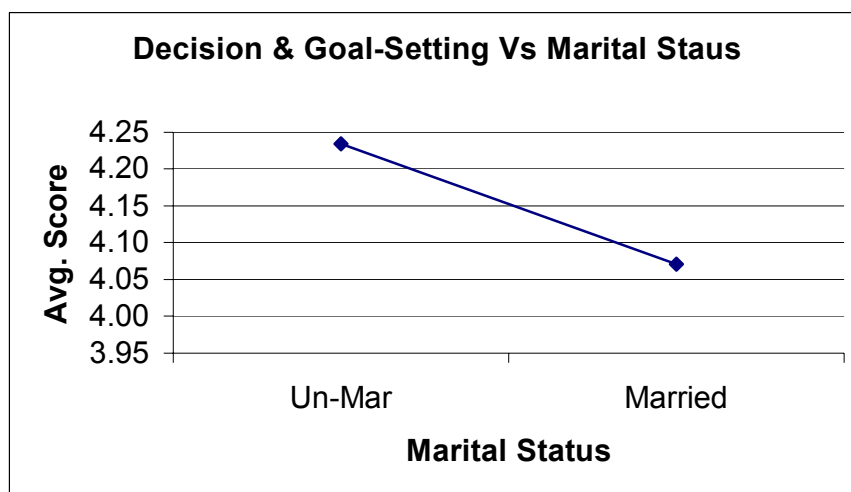
No	Question	Offr+ Super. 315	Offr+ Super. %	Artisa n 231	Artisa n %	Helper 243	Helper %
1	I want to set my own goals	4.42	88.3	4.35	86.9	4.07	81.4
2	I want to make my own decisions	4.29	85.8	4.31	86.2	4.05	80.9
3	I want to direct others	3.86	77.1	3.84	76.8	3.69	73.7
4	I want to have social contacts	4.16	83.2	4.06	81.3	3.94	78.8
5	I want companionship	4.06	81.1	4.00	80.0	3.95	79.0
	Overall average score	4.16	83.2	4.11	82.2	3.94	78.8



8.15.4 Decision and Goal-Setting Vs Marital Status: The average and percentage scores of all the employees, marital-status-wise, are given in Table-8.24E along with its chart.

Table 8.24E: Scores for decision and goal-setting based on marital status

No	Question	Married (766 Nos)	Married % Score	Unmarr (23 Nos)	Unmarr % Score
1	I want to set my own goals	4.28	85.6	4.65	93.0
2	I want to make my own decisions	4.21	84.3	4.43	88.7
3	I want to direct others	3.80	76.0	3.78	75.7
4	I want to have social contacts	4.06	81.3	4.09	81.7
5	I want companionship	4.00	80.0	4.22	84.3
	Overall average score	4.07	81.4	4.23	84.6



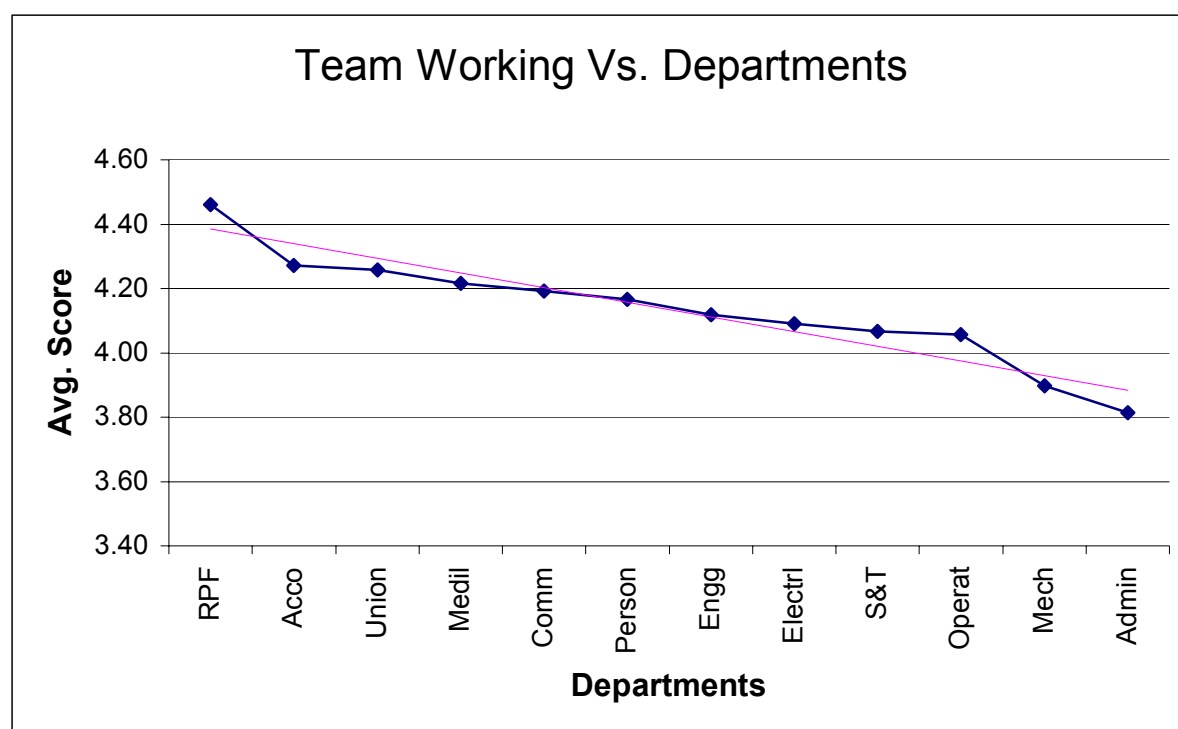
8.15.5 The analysis contained in the tables 8.24A to 8.24E brings out the following facts::

- (i) The officers and senior supervisors including artisans are more motivated to take decisions and set their own targets and goals.
- (ii) The unmarried staffs are more inclined to set their own goals and take independent decisions, whereas the married staffs generally have a tendency to take decisions in consultation with their family members.
- (iii) The educated qualified staffs are more motivated to take decisions and set their own goals as compared to the staffs having limited educational background.
- (iv) The staffs posted in the rural areas are also having more flare for decision and goal-setting as compared to the staffs posted in the urban and semi-urban areas. This is mainly due to the reason that the staffs posted in the rural areas and staying in isolation are located far away from their headquarters. For their day-to-day work, they have to depend upon their own initiatives and decisions. Therefore, such types of staff are more motivated to take independent decisions and set their own goals.

8.16 Team Working Vs Departments: The average and percentage scores of the various departments for team working are given in Table-8.25A and the associated chart.

Table 8.25A: Departmental scores for team working

S.No.	1	2	3	4	5	6	7	8	9	10	11	12	
Department	Administration	Mechanical	Operating	S&T	Electrical	Engineering	Personnel	Commercial	Medical	Union	Accounts	RPF	Overall average
Avg. score	3.81	3.9	4.06	4.07	4.09	4.12	4.17	4.19	4.22	4.26	4.27	4.46	4.14
% Score	76.2	78	81.2	81.4	81.8	82.4	83.4	83.8	84.4	85.2	85.4	89.2	82.7



The team-working plays a very important role in any organisation for their efficient performance and results of the unit. Here also the aim of considering this

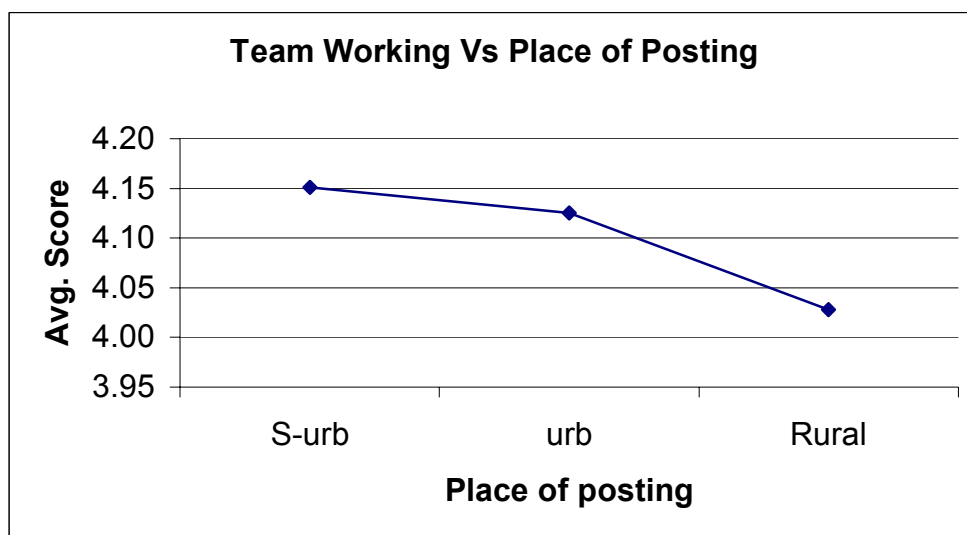
aspect is to determine the existing relationships of the employees of the various departments.

From the data in the table 8.25A, it is evident that the RPF department is the best performer of team working, with a score of 89.2%. The least scorer is the Administration department that has scored only 76.2%. A variation of 13.0% is there between the highest and lowest scores. This much variation is there due to differences in the nature of work from one department to another, differences in dealing with technical matters, involvement of safety consciousness, dealing with public, etc.

8.16.1 Team Working Vs Place of Posting: The average and percentage scores of all the employees, rural, semi-urban and urban area-wise, are given in Table-8.25B along with its chart.

Table 8.25B: Scores for team working based on place of posting

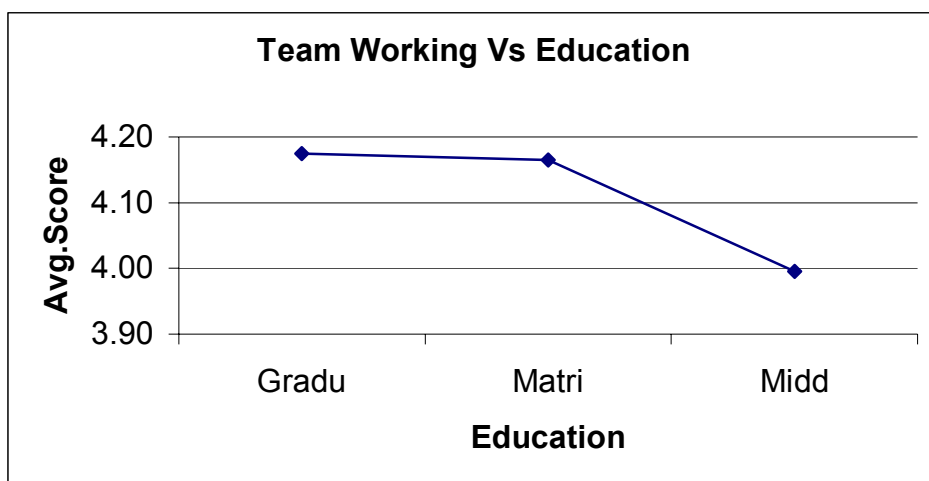
S.No.	Question	Rural (179 Nos)	Rural % Score	Semi Urb (178 Nos)	Semi Urb% Score	Urban (432 Nos)	Urban % Score
1	I seek others' support	3.92	78.3	4.01	80.1	3.95	79.0
2	I like to extend support to others	4.07	81.5	4.20	83.9	4.25	84.9
3	I develop meaningful relationships	4.07	81.5	4.18	83.6	4.13	82.5
4	I like frequent interactions	3.51	70.3	3.80	76.0	3.72	74.4
5	I like to take responsibility	4.26	85.3	4.33	86.6	4.30	86.0
6	I like to develop skill & ability	4.33	86.6	4.39	87.9	4.41	88.2
	Overall average score	4.03	80.6	4.15	83.0	4.13	82.6



8.16.2 Team Working Vs Education: The average and percentage scores of all the employees, educational-qualification-wise, are given in Table-8.25C along with its chart.

Table 8.25C: Scores for team working based on qualification

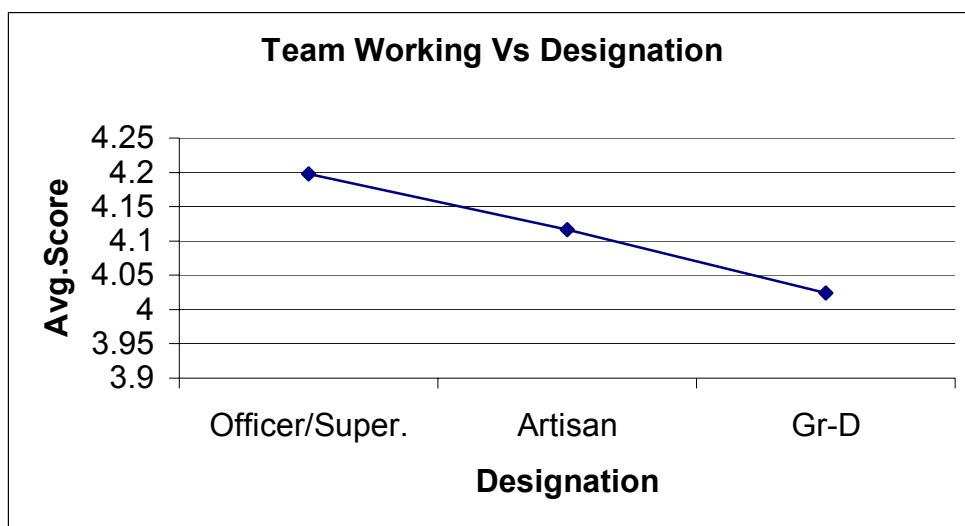
S. No.	Question	Grad + above 318	Grad + above %	HSC+ Matr 192	HSC+ Matr %	Middle & below 279	Middle & below %
1	I seek others' support	3.93	78.7	4.03	80.6	3.92	78.5
2	I like to extend support to others	4.28	85.6	4.21	84.2	4.09	81.8
3	I develop meaningful relationships	4.19	83.8	4.22	84.5	3.99	79.7
4	I like frequent interactions	3.70	74.1	3.83	76.7	3.58	71.6
5	I like to take responsibility	4.41	88.1	4.30	86.0	4.17	83.4
6	I like to develop skill & ability	4.53	90.7	4.39	87.8	4.22	84.4
	Overall average score	4.17	83.4	4.16	83.2	4.00	80.0



8.16.3 Team Working Vs Designation: The average and percentage scores of all the employees, officer/supervisor, artisan and helper-wise, are given in Table-8.25D along with its chart

Table 8.25D: Scores for team working based on designation

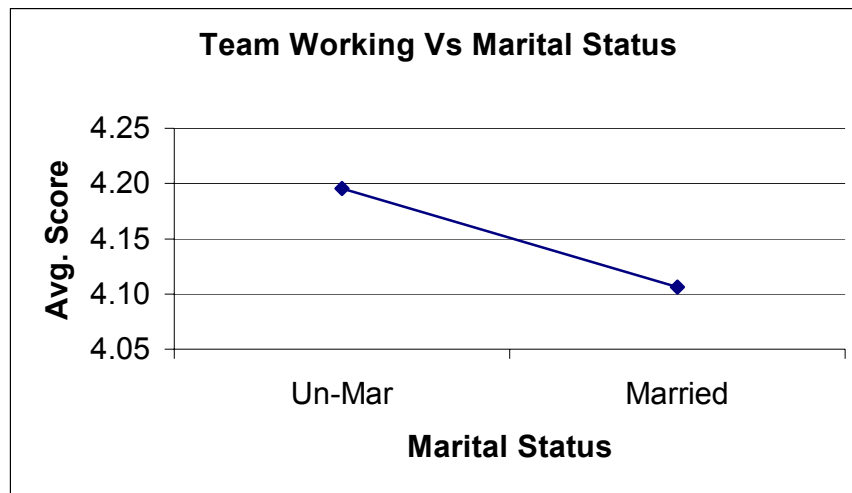
No	Question	Offr+ Super. 315	Offr+ Super. %	Artisan 231	Artisan %	Helper 243	Helper %
1	I seek others' support	3.98	79.6	3.99	79.7	3.87	77.4
2	I like to extend support to others	4.31	86.2	4.16	83.2	4.08	81.6
3	I develop meaningful relationships	4.24	84.8	4.15	83.0	3.95	79.1
4	I like frequent interactions	3.77	75.5	3.64	72.7	3.64	72.8
5	I like to take responsibility	4.38	87.7	4.32	86.5	3.81	76.3
6	I like to develop skill & ability	4.50	90.0	4.44	88.8	4.19	83.9
	Overall average score	4.20	84.0	4.12	82.4	4.02	80.4



8.16.4 Team Working Vs Marital Status: The average and percentage scores of all the employees, marital-status-wise, are given in Table-8.25E along with its chart.

Table 8.25E: Scores for team working based on marital Status

No	Question	Married (766 Nos)	Married % Score	Unmarr (23 Nos)	Unmarr % Score
1	I seek others' support	3.96	79.1	3.87	77.4
2	I like to extend support to others	4.20	83.9	4.17	83.5
3	I develop meaningful relationships	4.12	82.4	4.26	85.2
4	I like frequent interactions	3.68	73.7	3.96	79.1
5	I like to take responsibility	4.29	85.9	4.43	88.7
6	I like to develop skill & ability	4.39	87.7	4.48	89.6
	Overall average score	4.11	82.2	4.20	84.0



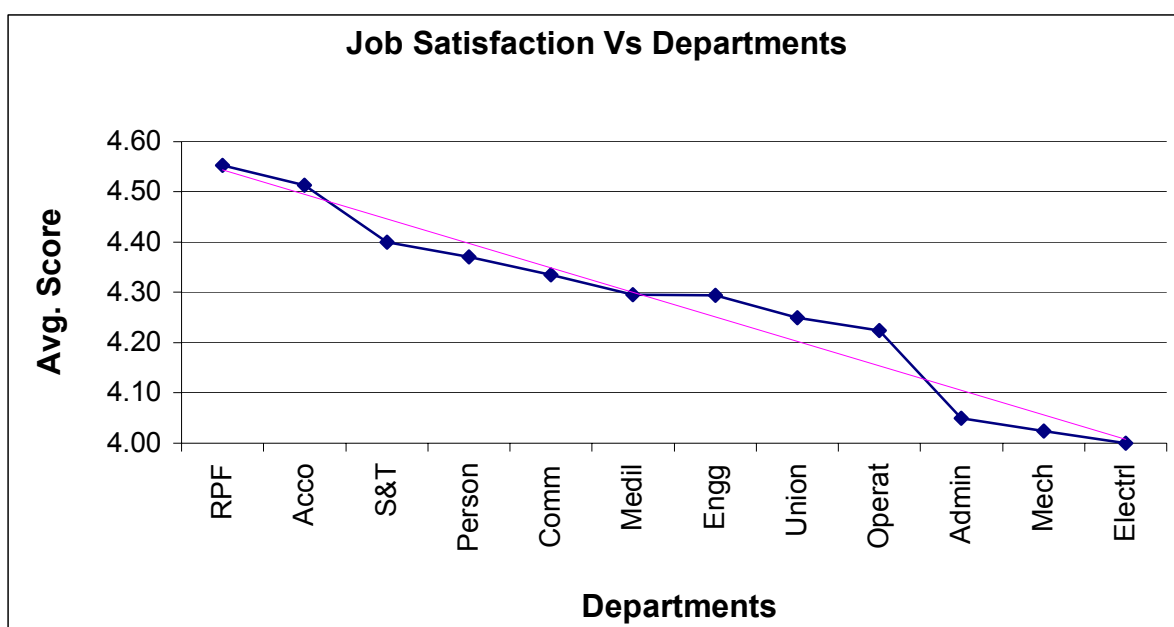
8.16.5 The analysis contained in the tables 8.25A to 8.25E brings out the following facts:

- (i) The well-educated and qualified staffs understand the importance of team working and they are well motivated to work in any team satisfactorily.
- (ii) The senior supervisors and officers also understand the importance of team working and they are well motivated for team work.
- (iii) The unmarried staffs are not bound by any family bonds and they tend to be playful and easily mix with other fellow employees, and hence they are more suitable for a team work.

8.17 Job satisfaction Vs Departments: As the proverb “work is worship” implies, one has to attach most importance to his work; however, a few may not agree with this principle. Hence, the aspect of job satisfaction has also been incorporated in the study to evaluate the interest of the employees, like whether he likes his work or not, whether his work is challenging, whether he develops skills on his working, etc. The average and percentage scores of the various departments for job satisfaction are given in Table-8.26A and the associated chart.

Table 8.26A: Departmental Scores for Job Satisfaction

S.No.	1	2	3	4	5	6	7	8	9	10	11	12	Overall average
Department	Electrical	Mechanical	Administration	Operating	Union	Engineering	Medical	Commercial	Personnel	S&T	Accounts	RPF	
Avg. score	4	4.02	4.05	4.22	4.25	4.29	4.3	4.33	4.37	4.4	4.51	4.55	4.27
% Score	80	80.4	81	84.4	85	85.8	86	86.6	87.4	88	90.2	91	85.48

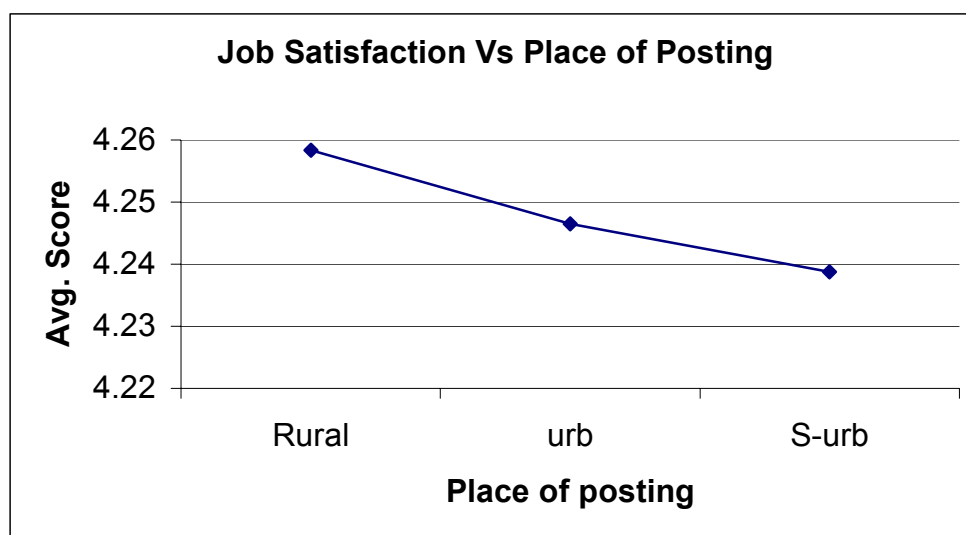


From the data contained in the table 8.26A, it is seen that the Electrical department has scored the least value of 80.0%, whereas the staff of the RPF has scored the maximum score of 91%.

8.17.1 Job Satisfaction Vs Place of Posting: The average and percentage scores of all the employees, rural, semi-urban and urban area-wise, are given in Table-8.26B along with its chart.

Table 8.26B: Scores for job satisfaction based on place of posting

S.No.	Question	Rural (179 Nos)	Rural % Score	Semi- Urb (178 Nos)	Semi- Urb% Score	Urban (432 Nos)	Urban %
1	I like my work	4.45	88.9	4.45	89.0	4.42	88.3
2	My work is challenging	4.20	83.9	4.15	82.9	4.10	81.9
3	I like to get feed back of my performance	4.16	83.1	4.05	81.0	4.13	82.5
4	I like to develop skills	4.23	84.7	4.31	86.2	4.35	86.9
	Overall average score	4.26	85.2	4.24	84.8	4.25	85.0

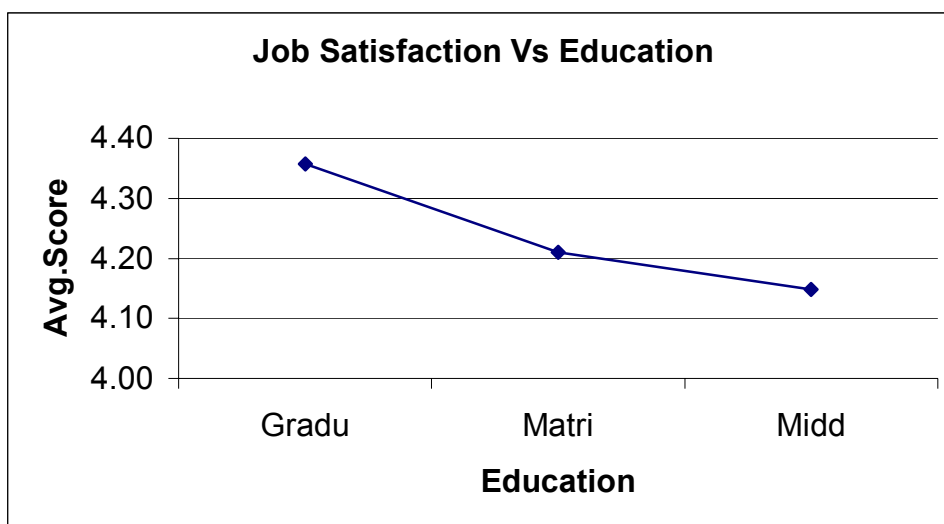


8.17.2 Job Satisfaction Vs Education: The average and percentage scores of all the employees, educational-qualification-wise, are given in Table-8.26C along with its chart.

Table 8.26C: Scores for job satisfaction based on educational qualification

S. No.	Question	Grad + above (318 Nos)	Grad + above % Score	HSC+ Matr (192 Nos)	HSC+ Matr % Score	Middle & below (279 Nos)	Middle & below % Score
1	I like my work	4.47	89.4	4.42	88.3	4.39	87.9
2	My work is challenging	4.24	84.8	4.07	81.4	4.05	80.9

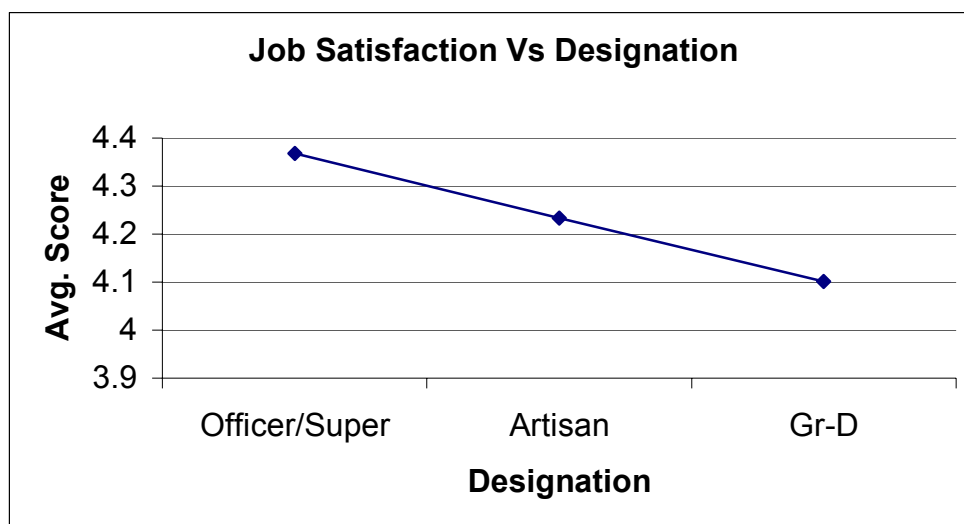
3	I like to get feed back of my performance	4.21	84.3	4.09	81.9	4.02	80.4
4	I like to develop skills	4.50	90.0	4.26	85.2	4.14	82.7
	Overall average score	4.36	87.2	4.21	84.2	4.15	83.0



8.17.3 Job Satisfaction Vs Designation: The average and percentage scores of all the employees, officer/supervisor, artisan and helper-wise, are given in Table-8.26D along with its chart

Table 8.26D: Scores for job satisfaction based on designation

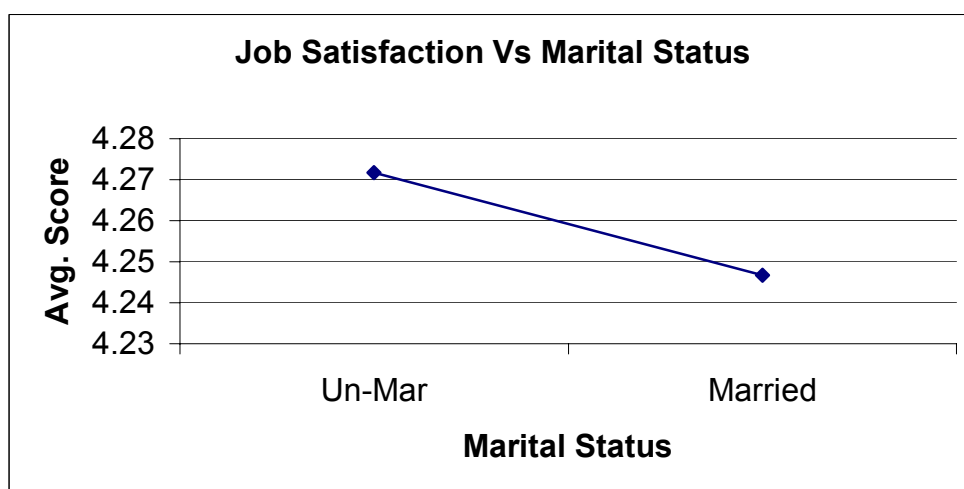
No	Question	Offr+ Super. (315 Nos)	Offr+ Super. % Score	Artisa n (231 Nos)	Artisa n % Score	Helper (243 Nos)	Helper % Score
1	I like my work	4.53	90.5	4.41	88.1	4.33	86.6
2	My work is challenging	4.27	85.4	4.11	82.3	3.96	79.2
3	I like to get feed back of my performance	4.24	84.8	4.08	81.6	3.99	79.8
4	I like to develop skills	4.44	88.8	4.33	86.6	4.13	82.6
	Overall average score	4.37	87.4	4.23	84.6	4.10	82.0



8.17.4 Job Satisfaction Vs Marital Status: The average and percentage scores of all the employees, marital-status-wise, are given in Table-8.26E along with its chart.

Table 8.26E: Scores for job satisfaction based on marital status

No	Question	Married (766 Nos)	Married % Score	Unmarr (23 Nos)	Unmarr % Score
1	I like my work	4.44	88.7	4.26	85.2
2	My work is challenging	4.13	82.6	4.17	83.5
3	I like to get feed back of my performance	4.11	82.2	4.26	85.2
4	I like to develop skills	4.31	86.2	4.39	87.8
	Overall average score	4.25	85.0	4.27	85.4



8.17.5 From an analysis of the data contained in the tables 8.26A to 8.26E, it clearly emerges that the staffs of all the departments are satisfied with their jobs; this is considered to be on account of the following reasons:

- (i)** Assured promotion at an interval of twelve years under the Assured Career Progression Scheme.
- (ii)** Implementation of cadre restructuring from time to time for opening more avenues of promotions for the staff.
- (iii)** The railway staffs are trained at regular intervals to update their knowledge and improve their skills so that there are tangible improvements in their performance, output, and dealings with their customers.

CHAPTER 9

ANALYSIS OF MOTIVATION LEVELS AND JOB SATISFACTION OF RAILWAY EMPLOYEES

9.1 Introduction: On the basis of answers obtained from the employees of various departments to the 63 questions contained in the questionnaire, the overall scores obtained by the employees of the various departments were calculated on the Five Point Scale. In addition, the overall scores of the employees of the various departments by assigning a maximum of five marks to each option were also calculated. The results of the scores obtained by the employees of the various departments are shown in tables 8.13, 8.14A and 8.14B.

From the results contained in the tables, it is observed that the overall average score obtained by the employees of all the departments is 247 out of 315 which is 78.41%, and the same is obviously a very good score. Similarly, on Five Point Scale, the overall average score obtained by the employees of all the departments is 3.93.

9.2 Analysis of Job Satisfaction Level of Railway employees:

Job satisfaction is one of the nine heads of motivational aspects used for determining the overall motivation level of the railway employees. As far as the job satisfaction head of the motivational aspects is concerned, the employees of the different departments have scored values as indicated in Table 9.1 on the Five Point Scale.

Average Motivation scores obtained by railway employees of different departments on Job Satisfaction

S. No.	Department	Average motivation score on Job Satisfaction	Overall average motivation score on all nine aspects
i.	Accounts	4.51	3.94
ii.	Administration	4.05	3.68

iii.	Commercial	4.33	4.07
iv.	Electrical	4.00	3.86
v.	Engineering	4.29	4.03
vi.	Mechanical	4.02	3.75
vii.	Medical	4.30	3.90
viii.	Operating	4.22	3.89
ix.	Personnel	4.37	3.92
x.	S&T	4.40	3.94
xi.	RPF	4.55	4.24
xii.	Union	4.25	3.92
	Average	4.27	3.93

Table 9.1

9.2.1 It is observed from the table 9.1 that all the railwaymen have scored the maximum score in Job Satisfaction as compared to other heads. An average score of 4.27 has been scored on the Five Point Scale for Job Satisfaction. This average score works out to 85%, and this score is obviously a very good score. This high score in the area of job satisfaction clearly establishes that the railway employees are highly satisfied and contented with their jobs and this information is quite encouraging for the Railway Administration.

9.3 Collection of Data and Application of Statistical Techniques:

The required information was gathered from the questionnaire filled by the employees belonging to the different departments. Specific information in the following areas has been collected for determining the motivation level of the employees.

- Place-of-posting-wise, i.e. whether the employee is posted in urban, semi-urban or rural area.
- Marital-status-wise, i.e. whether the employee is married or unmarried.

- Educational-qualification-wise, i.e. whether the employee is graduate or above, matric, or middle or below.
- Designation-wise, i.e. whether the employee is officer or senior supervisor, artisan, or helper in group D service.

For determining, whether there exists a significant variation in the motivation levels of the employees belonging to the different departments and having different characteristics, viz. place of posting, educational standard, marital status, and official position (i.e. designation), Analysis of variance (ANOVA) Test, Kruskal Wallis Test and T-Test techniques have been used. The details of the statistical tests performed for determining the motivation levels of employees belonging to the different department s are given in the subsequent paragraphs.

9.4 Hypothesis for testing the Motivation Level of employees of all departments:

9.4.1 Assumptions :

Null Hypothesis: There is no significant difference in the motivation levels of the employees belonging to the different departments, viz. Accounts, Administration, Commercial, Electrical, Engineering, Mechanical, Medical, Operating, Personnel, S&T, RPF and Unions. This assumption leads to the following null Hypothesis:

$$H(o): \quad \mu_{\text{Acco.}} = \mu_{\text{Admn.}} = \mu_{\text{Comm.}} = \mu_{\text{Elect.}} = \mu_{\text{Engg.}} = \mu_{\text{Mech.}} = \mu_{\text{Med.}} = \mu_{\text{Optg.}} = \mu_{\text{Pers.}} = \mu_{\text{S\&T}} = \mu_{\text{RPF}} = \mu_{\text{Unions}}$$

Alternate Hypothesis: There is significant difference in the motivation levels of the employees belonging to the different departments, viz. Accounts, Administration, Commercial, Electrical, Engineering, Mechanical, Medical, Operating, Personnel, S&T, RPF and Unions. This assumption leads to the following alternate Hypothesis:

$$H(a): \quad \mu_{\text{Acco.}} \neq \mu_{\text{Admn.}} \neq \mu_{\text{Comm.}} \neq \mu_{\text{Elect.}} \neq \mu_{\text{Engg.}} \neq \mu_{\text{Mech.}} \neq \mu_{\text{Med.}} \neq \mu_{\text{Optg.}} \neq \mu_{\text{Pers.}} \neq \mu_{\text{S\&T}} \neq \mu_{\text{RPF}} \neq \mu_{\text{Unions}}$$

9.4.2 Analysis based on ANOVA: The Anova single factors have been calculated for the above two assumptions and the same are given in Tables 9.2 & 9.3 respectively.

ANOVA: Single Factor
Department wise avg. score and Variance

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Accounts	9	36.08	4.0088889	0.0906
Administration	9	33.25	3.6944444	0.1114
Commercial	9	36.76	4.0844444	0.0516
Electrical	9	34.66	3.8511111	0.0408
Engineering	9	36.47	4.0522222	0.0262
Mechanical	9	33.94	3.7711111	0.0444
Medical	9	35.48	3.9422222	0.1022
Operating	9	35.44	3.9377778	0.0371
Personnel	9	35.5	3.9444444	0.1261
S&T	9	35.86	3.9844444	0.0475
RPF	9	38.53	4.2811111	0.0775
Unions	9	35.69	3.9655556	0.0428

Table - 9.2

ANOVA results for the response collected in the survey

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	2.243063	11	0.2039148	3.0653	0.0014721	1.8898
Within Groups	6.3863333	96	0.0665243			
Total	8.6293963	107				

Table - 9.3

9.4.2.1 Conclusion: From the above Anova results given in table 9.3, it is noticed that the calculated value of F is more than the critical value; hence the null hypothesis testing is rejected and the alternate hypothesis testing is accepted. It clearly establishes that there exists a significant difference in the motivation levels of the employees belonging to the different departments.

9.4.3 Analysis based on Kruskal Wallis Test: On the data captured in the survey, “Kruskal Wallis” test has also been performed. The result of testing is furnished in the Table 9.4. below:

Kruskal Wallis one-way analysis of variance test

	Family Env.	Author. & Powr.	Decisin & GS	Team Work	Job Satisfac.	Reward	Promotion	Personnel touch	Physical working con.	Total	Square Total/9
Acco	3.71	3.80	4.35	4.27	4.51	3.84	3.93	4.01	3.66		
Rank	16	35	101	94	105	39	48	58	13	509	28787
Admi	3.77	2.98	4.13	3.81	4.05	3.60	3.77	3.57	3.57		
Rank	30	1	78	36	64	10	31	7	8	265	7803
Com	3.76	3.76	4.16	4.19	4.33	4.05	4.29	4.31	3.91		
Rank	26	27	83	87	99	65	95	98	45	625	43403
Elect	3.72	3.52	3.77	4.09	4.00	3.78	3.88	4.16	3.74		
Rank	19	5	32	72	56	34	43	84	21	366	14884
Engg	3.83	3.82	4.12	4.12	4.29	4.13	4.08	4.17	3.91		
Rank	38	37	76	77	96	79	71	85	46	605	40669
Mech	3.74	3.57	3.99	3.90	4.02	3.51	3.68	4.00	3.53		
Rank	22	9	55	44	60	4	14	57	6	271	8160
Medi	3.71	3.34	4.15	4.22	4.30	4.07	3.98	4.10	3.61		
Rank	17	3	82	88	97	68	53	74	11	493	27005
Oper	3.71	3.84	3.98	4.06	4.22	4.03	3.86	4.11	3.63		

Rank	18	40	54	67	89	62	42	75	12	459	23409
Pers	3.84	3.16	4.24	4.17	4.37	3.93	4.09	3.96	3.74		
Rank	41	2	91	86	102	49	73	51	23	518	29814
RPF	3.76	3.76	4.05	4.07	4.40	3.94	4.13	4.03	3.72		
Rank	28	29	66	69	103	50	80	63	20	508	28674
S&T	3.74	4.22	4.33	4.46	4.55	4.54	4.14	4.53	4.02		
Rank	24	90	100	104	108	107	81	106	61	781	67773
Unio	3.70	3.74	4.07	4.26	4.25	4.01	3.97	3.92	3.77		
Rank	15	25	70	93	92	59	52	47	33	486	26244

Table 9.4

The comparative positions of the motivation levels of all the employees of the various departments are given in table 9.4 along with the application of Kruskal Wallis one-way analysis of variance test on these ratios.

$$K = \frac{12}{n(n+1)} \sum_{i=1}^k \frac{R_i^2}{n_i} - 3(n+1)$$

where, n_i = the number of items in sample 'i'

R_i = the sum of the ranks of all the items in sample 'i'

k = the number of samples

n = $n_1 + n_2 + \dots + n_k$

= the total number of observations in all the samples.

$$K = \frac{12}{108(108+1)} \left\{ \frac{509^2}{9} + \frac{265^2}{9} + \frac{625^2}{9} + \frac{366^2}{9} + \frac{605^2}{9} + \frac{271^2}{9} + \frac{493^2}{9} + \frac{459^2}{9} + \frac{518^2}{9} + \frac{508^2}{9} + \frac{781^2}{9} + \frac{486^2}{9} \right\} - 3(108+1)$$

$$= 26.32$$

Calculated value of K = 26.32

Table value of K = 19.68 for 11 degrees of freedom.

9.4.3.1 Conclusion: From the above, it is evident that the calculated value of K is higher than the table value. Hence, the null hypothesis is rejected and the alternate hypothesis

is accepted. It means that there exists a significant difference in the motivation levels between the employees belonging to the different departments.

9.5 Further Analysis on the obtained Scores:

9.5.1 On the Five Point Scale, the average score obtained by the employees belonging to the different departments is 3.93. The main reasons for the high motivation scores of the railway employees are considered to be on account of the following factors:

- Job security
- Time bound promotions
- Security after retirement
- Housing facilities during service
- Free medical facility for self & dependants
- Travelling passes for self & dependants
- School passes for children studying at outstations
- Systematic mechanism to redress staff grievances
- Dependants of the families of deceased railway employees are looked after well. An appointment on compassionate grounds is also assured after the reported death of a railway employee to one of his dependents.
- Complementary passes after retirement.
- Good recreation facilities in the form of Institutes, clubs, stadiums, holiday homes, etc. for the staff.

9.5.2 From the table 8.13, it is noticed that the employees of the RPF department have scored the maximum score followed by the staff belonging to the Commercial, Engineering and S&T departments for the overall motivation level. This result clearly establishes that the staffs of the RPF department are highly motivated. The staffs of the Commercial, Engineering, Accounts and S&T departments are reasonably motivated.

The staffs belonging to the Administration, Electrical and Mechanical departments have scored less marks. This clearly establishes that the staffs belonging to these departments are not motivated enough, and certain actions are needed to be taken to improve the motivation level of employees belonging to the above departments.

The staffs of the Medical, and Operating departments and of Unions are more or less having a satisfactory motivation level as their average scores, more or less, match with the overall average score of the employees of all the departments.

9.5.3 The reasons for high and low motivation levels are given below:

- ❖ The staffs of the RPF, Commercial, Accounts, Engineering and S&T departments are required to play a crucial role in day-to-day running of trains on the railway system. Their motivation level is on higher side mainly due to the fact that the staffs of these departments play an important role for achieving the various targets of the departments as a whole.
- ❖ The staffs of the RPF, Commercial and Engineering departments come in contact with the public and their recognition in the public increases further with their promotions. In order to get further promotions, they take all the required actions. Therefore, the staffs of these departments have a higher motivation level as compared to staffs of other departments.
- ❖ The staffs of the Engineering department have scored more marks as compared to other technical departments. The main reason for this is that the staffs of the Engineering department are responsible for the maintenance of track, service buildings, service quarters, private sidings and railway quarters, and they have to deal with large number of private agencies while performing their day-to-day functioning, and, therefore, these factors alone are responsible for their high motivation level as compared to the employees belonging to other technical departments of the Indian Railways.
- ❖ The staffs of the S&T department are also having a high motivation level as now-a-days the safety of train operations is getting a prime importance on the railway system. The S&T department is directly responsible for installing various safety equipments and improving the communication facilities on the Railways. Due to these important functions being performed by the employees of the S&T department, the motivation level of the employees of this department is on the higher side.

❖ The staffs of the Administration and Personnel departments are having less motivation level as compared to the employees belonging to other departments mainly on account of following reasons:

- No job rotation.
- No formal training at the time of induction and during service.
- Entrusting of unimportant works to them by their superior officers.
- No incentive for acquiring higher education.
- Improper provision of facilities at their work place.

9.5.4 The survey results have also brought out that the staffs of the Electrical and Mechanical departments posted in the Okha-Viramgam section have scored less marks as compared to the employees of other departments. Attempt was made to find out the reason for low motivation level of staffs belonging to these two important departments of the Indian Railways.

During discussions with the staffs, it was brought out that the staffs of these two departments viz. Electrical and Mechanical are not maintaining important trains like Shatabdi Express, Rajdhani Express, and Ashram Express, and their responsibility in the day-to-day railway operations is also relatively less. Due to such reasons, their motivation level is low.

In order to study the impact of the above factor, action was taken to get the same questionnaire filled up from 50 employees each of the Electrical and Mechanical departments posted in the Ahmedabad (ADI) area, who are responsible to maintain the prestigious trains like ADI-New Delhi Rajdhani Express, Ashram Express, Delhi Mail, etc.

The analysis of the data received reveals that the overall scores have improved from **241** to **252**, and **235** to **262** respectively for the staff of electrical and mechanical departments as compared to the staffs of these two departments posted in the Okha-Viramgam section of the Rajkot division. The improvement in the scores obtained by the staffs posted in the ADI area clearly establishes that there is a close relationship between the motivation level of the employee and the functional responsibility of the

employee & the importance attached to his functions. An employee entrusted with a job of less importance has less opportunity for getting his performance recognised (in his limited area of work) by his superiors as compared to another who is entrusted with a relatively important work. Similarly, while the results of certain works are directly/ immediately perceivable by others, in many types of works the results are not directly or immediately perceivable. For example, the passengers can directly feel the extent of cleanliness of the passenger coaches, and whereas the passengers cannot directly feel the extent of safety related checks/ works carried out in the coaches by the concerned staffs, even though the latter work is most important for the safe travel of the passengers. Hence, there has to be a proper mechanism to correctly assess the standard of output rendered by various employees and to appropriately motivate them so as to maintain their high spirits in their works.

From the above discussion, it would be clear that there is a need to improve the overall motivation level of the staffs of the Administration, Electrical and Mechanical departments working in the Okha-Viramgam section of the Rajkot division.

9.6 Hypothesis for testing the Motivation Level of married and unmarried employees:

9.6.1 Assumptions:

Null Hypothesis: There is no significant difference in the mean scores of the motivation level of the married and the unmarried employees of the different departments.

$$H(o) \quad \mu_{\text{Married}} = \mu_{\text{Unmarried}}$$

Alternate Hypothesis: There exists a significant difference in the mean scores of the motivation levels of the married and the unmarried employees of the different departments.

$$H(a) \quad \mu_{\text{Married}} \neq \mu_{\text{Unmarried}}.$$

9.6.2 Analysis based on ANOVA: The motivation levels of the married and the unmarried employees of all the departments are given in Table 9.5. From the values

measured, the Anova single factors have been calculated for the above two assumptions and the same are given in Tables 9.6 & 9.7 respectively

Motivation levels of married and unmarried employees

<i>Category</i>	<i>Married</i>	<i>Un married</i>
1. <i>Family Environment</i>	3.51	3.47
2. <i>Authority & Power</i>	3.70	3.82
3. <i>Decision & Goal Setting</i>	4.07	4.23
4. <i>Team Working</i>	4.11	4.20
5. <i>Job Satisfaction</i>	4.25	4.27
6. <i>Reward Motivation</i>	3.98	4.01
7. <i>Promotion & Motivation</i>	4.00	3.91
8. <i>Personal touch & Motivation</i>	4.11	3.84
9. <i>Physical working condition</i>	3.75	4.07
Overall score of motivation level	35	36
Average motivation level	3.91	3.97

Table 9.5

ANOVA: Single Factor Average Score & Variance

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Married	9	35.48	3.9422222	0.0568
Unmarried	9	35.82	3.98	0.0643

Table 9.6

ANOVA results for response collected in the survey

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>F crit</i>
Between Groups	0.006422	1	0.0064222	0.1061	4.494
Within Groups	0.968756	16	0.0605472		
Total	0.975178	17			

Table 9.7

9.6.2.1 Conclusion: From the table 9.7, it is noticed that the calculated value of F is less than the critical value. Hence, the null hypothesis testing is accepted; this means that the marital status of employees has no significant impact on the overall motivation level.

9.6.3 Analysis based on T-Test On the data captured in the survey, “T- test” has also been performed. The result of testing is furnished in Table 9.8.

T-Test: Paired Two Sample for Means

	<i>Variable 1</i>	<i>Variable 2</i>
Mean	3.942222222	3.98
Variance	0.056819444	0.064275
Observations	9	9
Pearson Correlation	0.772764827	
Hypothesized Mean Difference	0	
df	8	
T Stat (calculated value)	-0.681022301	
P (T<=t) one-tail	0.257541064	
T Critical one-tail	1.85954832	
P (T<=t) two-tail	0.515082128	
T Critical two-tail (table value)	2.306005626	

Table 9.8

Calculated value of T = - 0.68

Critical value of T = 2.31

9.6.3.1 Conclusion: From the above, it is evident that the calculated value of T is lower than the critical value. Hence, the null hypothesis is accepted. It means that there has been no significant difference in the motivation level of staffs with different marital status.

9.7 Hypothesis for testing the Motivation Level of Employees of Different Qualifications:

9.7.1 Assumptions:

Null Hypothesis: There is no significant difference in the mean scores of motivation level obtained by the employees of different qualifications.

$$H(o): \quad \mu_{\text{Graduate}} = \mu_{\text{Matric}} = \mu_{\text{Middle}}$$

Alternate Hypothesis: There exists a significant difference in the mean scores of motivation level obtained by the employees of different qualifications.

$$H(a): \quad \mu_{\text{Graduate}} \neq \mu_{\text{Matric}} \neq \mu_{\text{Middle}}$$

9.7.2 Analysis based on ANOVA: The motivation levels of the employees of all the departments for different qualifications are given in Table 9.9. From the values indicated, the Anova single factors have been calculated for the above two assumptions and the same are given in Tables 9.10 & 9.11 respectively

Motivation levels of employees of different qualifications

<i>Category</i>	<i>Graduate & Above</i>	<i>HSC & Matric</i>	<i>Helper</i>
1. <i>Family Environment</i>	3.43	3.56	3.56
2. <i>Authority & Power</i>	3.60	3.83	3.72
3. <i>Decision & Goal Setting</i>	4.16	4.10	3.96
4. <i>Team Working</i>	4.17	4.16	4.00
5. <i>Job Satisfaction</i>	4.36	4.21	4.15

6.	Reward Motivation	3.99	3.99	3.96
7.	Promotion & Motivation	4.00	4.06	3.94
8.	Personal touch & Motivation	3.78	3.85	3.80
9.	Physical working condition	3.90	4.00	4.00
Overall score of motivation level		35	36	35
Average motivation score		3.90	3.96	3.90

Table 9.9

ANOVA: Single Factor Average score & Variance

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Graduate	9	35.39	3.9322	0.0857694
Matric	9	35.76	3.9733	0.04025
Middle	9	35.09	3.8989	0.0311611

Table 9.10

ANOVA results for response collected in the survey

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	0.025	2	0.0125	0.2388619	0.7894	3.4028318
Within Groups	1.2574	24	0.0524			
Total	1.2825	26				

Table 9.11

9.7.2.1 Conclusion: From the table 9.11, it is evident that the calculated value of F is lower than the critical value. Hence, null hypothesis is accepted. It means that there does not exist any significant difference in the motivation levels of staffs with different educational qualifications.

9.7.3 Analysis based on Kruskal Wallis Test: On the data captured in the survey, “Kruskal Wallis” test has also been performed. The result of testing is furnished in Table 9.12.

Kruskal Wallis one-way analysis of variance test

Category	Graduate	Rank	Matric	Rank	Middle	Rank
1. Family Environment	3.43	1	3.56	2	3.56	3
2. Authority & Power	3.6	4	3.83	8	3.72	5
3. Decision & Goal Setting	4.16	23	4.10	21	3.96	12
4. Team Working	4.17	25	4.16	24	4	18
5. Job Satisfaction	4.36	27	4.21	26	4.15	22
6. Reward Motivation	3.99	14	3.99	15	3.96	13
7. Promotion & Motivation	4	16	4.06	20	3.94	11
8. Personal touch & motivation	3.78	6	3.85	9	3.8	7
9. Physical working condition	3.9	10	4.00	17	4	19
Total of rank		126		142.00		110.00
(Square of total of ranks)/9		1764.00		2240.44		1344.44

Table 9.12

$$K = \frac{12}{27(27+1)} \left\{ \frac{126^2}{9} + \frac{142^2}{9} + \frac{110^2}{9} \right\} - 3(27+1)$$

$$= 0.903$$

$$\text{Calculated value of K} = 0.903$$

$$\text{Table value of K} = 5.991 \text{ for two degrees of freedom.}$$

9.7.3.1 Conclusion: From the above, it is evident that the calculated value of K is lower than the table value. Hence, null hypothesis is accepted. It means that there does not exist any significant difference in the motivation levels of staffs with different educational qualifications.

9.8 Hypothesis for Testing the Motivation Level of Employees Posted in Different Areas:

9.8.1 Assumptions:

Null Hypothesis: There is no significant difference in the mean scores obtained by the employees of the different departments posted in different areas.

$$H(o): \quad \mu_{\text{Urban}} = \mu_{\text{Semi-urban}} = \mu_{\text{Rural}}$$

Alternate Hypothesis: There exists a significant difference in the mean scores of motivation level of employees of the different departments posted in different areas.

$$H(a): \quad \mu_{\text{Urban}} \neq \mu_{\text{Semi urban}} \neq \mu_{\text{Rural}}$$

9.8.2 Analysis based on ANOVA: The motivation levels of the employees of all the departments for different areas of posting are given in Table 9.13. From the values indicated, the Anova single factors have been calculated for the above two assumptions and the same are given in Tables 9.14 & 9.15 respectively.

Place of Posting wise Overall Avg. Motivation Score

<i>Category</i>	<i>Urban</i>	<i>Semi-Urban</i>	<i>Rural</i>
1. <i>Family Environment</i>	3.49	3.48	3.58
2. <i>Authority & Power</i>	3.53	3.92	3.90
3. <i>Decision & Goal Setting</i>	4.06	4.07	4.11
4. <i>Team Working</i>	4.13	4.15	4.03
5. <i>Job Satisfaction</i>	4.25	4.24	4.26
6. <i>Reward Motivation</i>	3.93	4.00	4.06
7. <i>Promotion & Motivation</i>	3.94	4.05	4.06
8. <i>Personal touch & Motivation</i>	3.80	3.76	3.85
9. <i>Physical working conditions</i>	3.95	3.92	4.02
Overall Score of Motivation Level	35	36	36
Average Motivation Level	3.89	3.92	3.97

Table 9.13

ANOVA: Single Factor – Average Score and Variance

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Urban	9	35.08	3.8978	0.0651194
Semi-Urban	9	35.59	3.9544	0.0512028
Rural	9	35.87	3.9856	0.0369028

Table 9.14

ANOVA results for response collected in the survey

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	0.0357	2	0.0178	0.3490147	0.7089	3.4028318
Within Groups	1.2258	24	0.0511			
Total	1.2615	26				

Table 9.15

9.8.2.1 Conclusion: From the above, it is evident that the calculated value of F is lower than the critical value; hence, null hypothesis is accepted. It means that there does not exist any significant difference in the motivation levels of staffs posted in different areas viz rural, semi-urban and urban.

9.8.3 Analysis based on Kruskal Wallis Test: On the data captured in the survey, “Kruskal Wallis” test has also been performed. The result of testing is furnished in the Table below:

Kruskal Wallis one-way analysis of variance test

Category	Urban	Rank	S-Urban	Rank	Rural	Rank
1. Family Environment	3.49	2	3.48	1	3.58	4
2. Authority & Power	3.53	3	3.92	9	3.9	8
3. Decision & Goal Setting	4.06	18	4.07	21	4.11	22

4. Team Working	4.13	23	4.15	24	4.03	16
5. Job Satisfaction	4.25	26	4.24	25	4.26	27
6. Reward Motivation	3.93	11	4.00	14	4.06	19
7. Promotion & Motivation	3.94	12	4.05	17	4.06	20
8. Personal touch & motivatn	3.8	6	3.76	5	3.85	7
9. Physical working condition	3.95	13	3.92	10	4.02	15
Total of rank		114		126		138
(Square of total of ranks)/9		1444		1764		2116

Table 9.16

$$K = \frac{12}{27(27+1)} \left\{ \frac{114^2}{9} + \frac{126^2}{9} + \frac{138^2}{9} \right\} - 3(27+1) = 0.508$$

Calculated value of K = 0.508

Table value of K = 5.991 for two degrees of freedom.

9.8.3.1 Conclusion: From the above, it is evident that the calculated value of K is lower than the table value; hence, null hypothesis is accepted. It means that there does not exist any significant difference in the motivation levels of staffs posted in different areas viz rural, semi-urban and urban.

9.9 Hypothesis for Testing the Motivation Level of Employees of Different Designations:

9.9.1 Assumptions:

Null Hypothesis: There is no significant difference in the mean scores obtained by the employees of different designations.

H(o): $\mu_{\text{Officer/Supervisor}} = \mu_{\text{Artisan}} = \mu_{\text{Helper}}$

Alternate Hypothesis: There exists a significant difference in the mean scores of motivation level obtained by the employees of different designations.

$$H(a): \mu_{\text{Officer/Supervisor}} \neq \mu_{\text{Artisan}} \neq \mu_{\text{Helper}}$$

9.9.2 Analysis based on ANOVA: The motivation levels of the employees of all the departments for different designations are given in Table 9.17. From the values indicated, the Anova single factors have been calculated for the above two assumptions and the same are given in Tables 9.18 & 9.19 respectively.

Designation wise Overall Avg. Motivation Score

<i>Category</i>	<i>Officer+ Supervisor</i>	<i>Artisan</i>	<i>Helper</i>
1. Family environment	3.43	3.56	3.57
2. Authority & Power	3.73	3.63	3.73
3. Decision & Goal Setting	4.16	4.11	3.94
4. Team Working	4.20	4.12	4.02
5. Job Satisfaction	4.37	4.23	4.10
6. Reward Motivation	4.02	3.94	3.96
7. Promotion & Motivation	4.10	3.98	3.87
8. Personal touch & Motivation	4.15	4.06	4.11
9. Physical working conditions	3.75	3.74	3.78
Overall Score of Motivation Level	36	35	35
Average Motivation Level	3.95	3.90	3.89

Table 9.17

ANOVA: Single Factor – Average Score and Variance

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Officer	9	35.91	3.99	0.0869
Artisan	9	35.37	3.93	0.0551
Helper	9	35.08	3.8977778	0.0321

Table - 9.18

Table 9.16:ANOVA results for response collected in the Survey

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	0.0394296	2	0.0197148	0.3398	0.7152997	3.4028
Within Groups	1.3925556	24	0.0580231			
Total	1.4319852	26				

Table - 9.19

9.9.2.1 Conclusion: From the table 9.19, it is evident that the calculated value of **F** is lower than the critical value; hence, null hypothesis is accepted. It means that there does not exist any significant difference in the motivation levels of staffs with different designations.

9.9.3 Analysis based on Kruskal Wallis Test: On the data captured in the survey, “Kruskal Wallis” test has also been performed. The result of testing is furnished in the Table below:

Kruskal Wallis one-way analysis of variance test

Category	Officer/ Superv	Rank	Artisan	Rank	Helper	Rank
1. Family Environment	3.43	1	3.56	2	3.57	3
2. Authority & Power	3.73	5	3.63	4	3.73	6
3. Decision & Goal Setting	4.16	24	4.11	20	3.94	12

4. Team Working	4.2	25	4.12	22	4.02	16
5. Job Satisfaction	4.37	27	4.23	26	4.1	19
6. Reward Motivation	4.02	15	3.94	11	3.96	13
7. Promotion & Motivation	4.1	18	3.98	14	3.87	10
8. Personal touch & motivatn	4.15	23	4.06	17	4.11	21
9. Physical working condition	3.75	8	3.74	7	3.78	9
Total of rank		146		123.00		109.00
(Square of total of ranks)/9 items		2368.44		1681.00		1320.11

Table - 9.20

$$K = \frac{12}{27(27+1)} \left\{ \frac{146^2}{9} + \frac{123^2}{9} + \frac{109^2}{9} \right\} - 3(27+1) = 1.231$$

Calculated value of K = 1.231

Table value of K = 5.991 for two degrees of freedom.

9.9.3.1 Conclusion: From the above, it is evident that the calculated value of K is lower than the table value; hence, the null hypothesis is accepted. It means that there does not exist any significant difference in the motivation level of staffs with different designations.

9.10 Main Purpose of Study:

The main purpose of this study was to find out the reasons of variations between the motivation levels of employees belonging to different departments and to suggest measures to improve the overall motivation level of employees of departments identified to have less motivation level as compared to employees of other departments having satisfactory motivation level. The findings and recommendations are included in Chapter 10 of this report.

CHAPTER 10

FINDINGS AND RECOMMENDATIONS

10.1 Need to improve the Motivation Level in Government sector:

The urges for growth and the necessities of the people and the society subsequent to independence compelled the States and the Central Government of India to intervene and take initiatives in many fields that would have otherwise remained neglected. This led to the enlargement of the government activities and the State and the Central Governments became the biggest employers of manpower in the country. The government employees now not only undertake routine clerical works but they are also involved in running of the important services like Railways, Post & Telegraph Department, and Public Sector Enterprises. While comparing the productivity level of the government employees with that of the staff of the private sectors, it is generally felt that the productivity and motivation level of the employees of the private sectors is much higher than that of the government employees.

10.2 Behaviour of Human Beings:

Man is a social animal and not a machine. He carries out many activities in his day-to-day life; some activities, like eating and sleeping, are carried out because they are necessary and essential for his survival, and whereas certain activities are required to be performed by him because of the social system and his job obligations. For performing the latter properly and efficiently, he needs constant motivation from his organization, fellow human beings and his work environment. His behaviour in the work place and in the society is influenced by his personal traits & characteristics and the characteristics of his environment (which includes men, machines, climate, social values, customs, and all such elements), and the interactions and responses between these two. Management involves creation and maintenance of a conducive environment for efficient performance of individuals working together in groups towards accomplishment of the common objectives of the organization. In this research paper, an attempt has been made to measure the motivation levels of the Railway Employees

of the various departments, and to identify departments/sections of staff where the motivation levels are low. The factors for low motivation levels have been identified and actions that are required to be taken to improve the motivation levels so as to contribute to better performance and efficiency in work are suggested.

Findings and Recommendations from the Study Conducted through Survey

10.3 Motivation Levels:

10.3.1 The study conducted on the 789 employees of the Rajkot division revealed that there are significant differences in the mean scores of motivation levels of the employees of different departments.

10.3.2 The staff of the RPF department have the highest motivation level (with a score of 267 out of 315), and whereas the staff of the Administration department have the lowest motivation level (with a score of 228 out of 315). The staffs of the Electrical and Mechanical departments have also scored relatively less.

10.3.3 The overall motivation level of the railway employees as found out from the survey is considered very high as compared to other industries operating in India. The high motivation level clearly indicates that the staff of the Indian Railways are highly motivated ones, and due to their high motivation level only, it has been possible to run the trains efficiently from one corner to another corner of the country.

10.3.4 Out of the nine aspects considered for studying the motivation level of the railway employees, it is observed that the staffs of all the departments have scored the maximum marks under the head “job-satisfaction”. This clearly establishes that all the railway employees are satisfied with their jobs. This high level of job satisfaction only is primarily responsible for the efficiency and the productivity of the railway employees, because of which the Indian Railways has all along been a profit earning organization, as compared to many foreign Railways that are financially losing or not so much financially viable as the Indian Railways.

10.3.5 Due to the high job-satisfaction and the high motivation level amongst the railway employees, it has been possible for the Indian Railways to absorb the latest technologies successfully in different departments. The challenge of meeting the increasing demand of freight and passenger traffic has been successfully met and substantial progress made on the Indian Railways. It is pertinent to mention here that considerable progress has been made in the various departments in spite of the fact that many major problems are being faced by the Indian Railways especially in the following areas:

- Overaged assets.
- Severe competitions from road and coastal shipping, thereby reducing its percentage share substantially.
- Saturation of routes.
- Cross subsidization of passenger services by freight segment.
- Impending financial crunch.
- Reduction in the quality and cost of railway investment.

10.3.6 In order to meet the challenges in future, the human resources of the railways have to play an active role. The skills of the railway employees have to be continuously upgraded. The number of manpower employed by the Indian Railways has to be reduced substantially in a gradual and a well-planned manner. The additional traffic in the future on the Indian Railways will have to be handled by fewer staff. In order to achieve this objective, there is a need to increase the productivity and motivation level of the employees further.

10.3.7 The staff will have to be continuously motivated to ensure that their motivation level is maintained/improved which in turn will play a catalyst role to improve their productivity and as a consequence the profitability of the organization.

10.3.8 The overall motivation score obtained by the staffs of all the departments of the Rajkot division clearly indicates that the staff are extremely satisfied with their jobs and therefore it can safely be concluded that due to the satisfied staff available on the Indian

Railways, there has not been any major industrial unrest apart from the isolated case of railway strike of 1974.

10.3.9 There is no significant difference in the motivation levels of the railway employees posted in different areas viz. urban, semi-urban and rural areas.

10.3.10 There is no significant difference in the motivation levels between the married and unmarried railway employees.

10.3.11 There is no significant difference in the motivation levels of the railway employees having different qualifications viz. graduate, matriculation, middle or less education.

10.3.12 There is no significant difference in the motivation levels of the railway employees having different designations viz. officers, senior supervisors, artisans and helpers.

10.4 **Weak Areas:** Even though the overall motivation levels of the employees of the different departments are quite high, there are specific weak areas that need attention for further improvement in the motivation level of the employees. The areas identified are Authority & Power and Physical Working Conditions.

10.4.1 **Authority & Power:** The improvement in the area of Authority & Power cannot be brought out in the organization over a small period of time. A deliberate attempt has to be made on the Railways to bring about tangible improvements in this critical and very important area of Authority & Power. Giving systematic training to the staff in the following areas can bring perceivable improvements:

- Organizational behaviour
- Leadership qualities
- Managing changes in the organization
- Team working
- Financial management and profitability of the organization
- Opening of economy and competitive markets due to globalisation

The help from reputed consultancy firms can be taken for bringing the desired attitudinal changes in the employees of the different departments.

10.4.2 Physical Working Conditions: In the study, it is also revealed that the staff are not satisfied with the working conditions prevailing in their working and living areas. In order to boost up the motivation level of the railway employees, concrete actions should be taken to improve the physical working conditions meant for the use of the railway employees.

The following areas can be tackled effectively for improving the motivation level of the railway employees:

- Proper engineering maintenance of railway quarters and service buildings is required to be ensured.
- Proper attention is required to be given for ensuring adequate water supply and sanitation arrangements in the railway quarters and service buildings.
- The electrical maintenance of railway quarters and service buildings is required to be improved.
- The working of Personnel and Administration departments is required to be improved so that the railway staff can get their promotions and payments in time and their grievances are also redressed expeditiously.

10.5 Reasons for High Motivation Level of employees of Railway Protection Force:

Discussions were held with Shri Anil Sharma, the Chief Security Commissioner, West Central Railway, Jabalpur- who had earlier worked as Dy Chief Security Commissioner, Western Railway and is well conversant with the RPF department of the Rajkot division; Shri Meena, Divisional Security Commissioner, Rajkot; Shri Yadav, Sr. RPF Inspector, Rajkot; and other office bearers of the RPF Association of Rajkot.

10.5.1 During the discussions, it emerged that the following are the reasons for the high motivation level of the staff of the RPF department:

- Earlier, the staff of the RPF department was entrusted the unimportant duties of watch and ward on the Indian Railways. They were not expected to play an important role in the day-to-day operations on the Indian Railways. The staff of the State Police, namely Government Railway Police, played the major important role. The staff of the Government Railway Police had shown indifferent attitude towards the railways' management in the past and to take care of this important factor, it was considered necessary by the Railway Board to give more powers to the RPF. As a consequence, special Act was passed in the Parliament and the staff of the RPF department was given the investigating and prosecuting powers on the Railways and many important trains have been taken over by the staff of the RPF from the Government Railway Policy with effect from 01.07.2004 for escorting.
- For ensuring day-to-day operations, the RPF is playing an important role. Laudable efforts are being made to reduce the theft incidences in the railway system, and the menace of ticketless travel is also being checked. The RPF staff are now taking active part in the intensive ticket checking drives being launched by the Commercial department.
- The service conditions of the RPF staff have also been improved. Constables, who were earlier recruited as group D employees, are now upgraded to group 'C'. For imparting systematic training, their training establishments are having proper facilities. Right from their initial training days, a sense of commitment and responsibility is inculcated in the minds of the RPF staff.
- To redress the grievances of the staff, the RPF staff Association has been recognized and formed on the Railways. To redress the grievances of the RPF staff, regular meetings are being held by the RPF Associations with the Railway Administration at Divisional, Zonal and Railway Board's level.
- The RPF staff are being given proper housing accommodation.
- Improvements in their working areas and offices have also been brought out.

- Earlier, the Divisional Railway Managers and General Managers were not giving due importance to officers from the RPF cadre. At present, in all the important meetings, the officers of the RPF department (or their senior Inspectors in absence of senior officers from the Head Quarter) are being consulted by the Divisional Railway Managers and General Managers.
- Over the years, the responsibility and commitment of the RPF staff has increased.

10.6 Reasons for Low Motivation Level of employees of Administration Department:

For identifying the reasons for low motivation level of the staff belonging to the Administration department, discussions were held with the Chief Personnel Officer, West Central Railway- Shri Manoj Pande who had earlier worked as ADRM/Bhavnagar (a division close to the Rajkot division), union leaders, the staff and senior supervisors of the Rajkot division.

After having discussions at various levels, the following reasons have been identified for the low motivation level of the staff of the Administration department.

- There is no systematic practice for imparting training to the staff recruited for the Administration department. The staff are not given training on their joining the railway service, nor given any refresher course training during their service. They always lack knowledge of their specific working areas, and have mostly to consult the rulebooks and various circulars for taking decisions. Not imparting any training is therefore a major factor for the low motivation level of the staff of the Administration department.
- The staff of the Administration department are not provided with the required facilities including proper furniture at their work place.
- The staff are deputed by the officers & supervisors to undertake their petty personal works.
- The staff of the Administration department are treated as non-safety staff and the staff from reserved communities are given promotions by relaxing

the laid down standards. When the employees with the relaxed standards supersede the employees belonging to the other castes, they are not in a position to get the desired work from the staff working under their control.

- The staff are terribly afraid to use the computer.
- There are no incentives for acquiring higher technical qualifications.
- It is also noticed that training facilities exist for all the employees of the various departments of the Indian Railways except for the ministerial category. The staff recruited as Jr Clerk through Railway Recruitment Board are straightway posted against the working post. From the day one, the staff are expected to know the intricate rules of the Administration department without undergoing any formal training, which is really an impossible task to achieve.

10.6.1 For improving the overall motivation level of the staff belonging to the Administration department, it is considered necessary that Training Institutes should be created for the Administration department including Personnel department so that as and when the staff report for their duties, they are imparted suitable training. Refresher course training for a period of fifteen days after 3-5 years can also be planned. If proper training is imparted to the staff, it will definitely bring overall changes in the behaviour and motivation level of the employees belonging to the Administration department.

10.7 High Efficiency of Accounts Department: It is also noticed that the efficiency of the clerical staff of the Accounts department is much better as compared to the staff of the Administration and Personnel departments. Direct recruitment is held for Jr Accounts Assistant and Sr Accounts Assistant of the Accounts department through the RRB examination. The Accounts department plays an important role in managing the railway finances. No laxity from the staff of Accounts department can be tolerated as all the cases being dealt by the staff of the Accounts department have huge financial implications. For getting further promotions, the Jr Accounts Assistant is required to pass Appendix-II examination conducted by the Zonal Railway at regular intervals; only then he is promoted as Sr Accounts Assistant (; otherwise it takes 20 to 25 years to get promotion). The directly recruited Sr Accounts Assistant has to pass the Appendix-

II exam within three years of joining(; otherwise he is reverted to Jr Accounts Assistant). For further promotions as Section Officer, Traffic Inspector Accounts, or Inspector Stores Accounts, one has to pass the Appendix-III exam conducted by the Railway Board. Thus at each level in the Accounts department, the knowledge of the staff is important. To qualify these examinations and to take further promotions, the staff of the Accounts department always try to keep their knowledge up-to-date so that, as and when, the above examinations are conducted by the Zonal railway/ Railway Board, they can pass the examinations easily. Because of the above procedure, it has been possible to bring overall efficiency and competitive spirit amongst the staff of the Accounts department.

10.7.1 Improvements Required in Personnel and Administration departments: On the other hand, the staff of the Personnel and Administration departments of the Railways get their promotions right from Jr Clerk to Sr Clerk, Sr Clerk to Hd Clerk, Hd Clerk to OS-II, OS - II to OS - I and OS-I to Chief OS as a matter of routine. Because of this factor, while the staff of the Administration and Personnel departments are expected to be masters of various rules pertaining to different types of administrative matters, they are not really so because of lack of any motivation for learning the rules. Therefore, in order to bring efficiency in this category, it is strongly recommended that for granting promotions to the staff of the Personnel and Administration departments, examinations at regular intervals should be conducted by the Railway Board before promotions are given to the staff, as done in the case of the Accounts department. If the competitive examinations for the staff of the Administration and Personnel departments are introduced at the Railway Board level, it will ensure that competitive spirit amongst the staff of the Administration and Personnel departments is developed, which in turn will improve the overall efficiency and motivation level of the staff belonging to the Administration and Personnel departments.

The staff of the Administration and Personnel departments should also be given suitable training in the following areas (apart from the field of training pertaining to their departments):

- Customer care.
- Leadership qualities.
- Attitudinal changes required for meeting the challenges of the fast changing environment.
- Managing changes.

The trainings can be organized either in-house or by engaging outside Consultants.

10.8 Reasons for low Motivation Level of certain staff: While identifying the reasons for the low motivation level of the staff of the Electrical and Medical departments of the Rajkot division posted in the Okha-Viramgham section, it was brought to light that the staff of these departments do not play any important role in the running of the day-to-day operations, and this was the main reason for their low motivation. This factor was clear when a fresh survey of 50 employees each of the Electrical and Mechanical departments posted in Ahmedabad area was undertaken. The staff of the Electrical and Mechanical departments posted in the Ahmedabad area are seen to have a higher motivation level as compared to the staff posted in the Okh-Viramgham section. This study clearly establishes that the motivation level depends upon the role and responsibility being played by the staff.

10.9 Additional Findings: The study also brought out the following additional facts to the surface.

10.9.1 Authority and Power Motivation

- The employees posted in semi-urban and rural areas desire to have more authority and power as compared to employees posted in urban areas.
- The staff having less educational qualification background desire to have more authority and power.
- The unmarried staff are also having tendency to show more authority and power as compared to married staff.
- The staff from lower categories have desire to show more authority and power as compared to employees belonging to higher grades.

10.9.2 Physical Working Condition Motivation

- Union office bearers are not satisfied with the physical working conditions available on the railway system.
- The staff posted in urban and semi-urban areas are more dissatisfied with the physical working conditions and their expectation levels are high as far as physical working conditions are concerned.
- The married staff also have more desire to have improvement in physical working conditions.
- Highly qualified staff are having more expectations for better physical working conditions.
- The married employees have more desire for timely promotions and timely payments as compared to unmarried staff.

10.9.3 Family Environment Motivation

- The employees posted in rural areas are more attached to their families as compared to employees posted in semi-urban and urban areas. The employees having rural background try to spend more time with their family members.
- The qualified employees have to shoulder higher responsibilities, which compels them to devote less time with their family members. Similar is the situation with the officers and senior supervisors. Hence, they have scored less score in this vital area.
- The married employees are having more family bonds as compared to unmarried employees.

10.9.4 Promotion Motivation

- The staff of Commercial, RPF, S&T, Personnel and Engineering departments are having more urge for promotions as further promotions in their career bring more status.

- Officers, senior supervisors and married staff also give special importance to promotion aspects.

10.9.5 Reward Motivation

- The staff of RPF department are maximum motivated by getting rewards during their service.
- The employees posted in rural and semi-urban areas are having more urge to get rewards and recognition.
- Unmarried staff have also more desire to get rewards.

10.9.6 Personal Touch Motivation

- The staff posted in rural areas having less educational background give favourable response to the personal touch.
- The officers and senior supervisors also show their improvements in their working with the concern and personal touch displayed by their senior officials.
- The married staff are encouraged more by personal touch.

10.9.7 Decision and Goal Setting Motivation

- The officers and senior supervisors including artisans are motivated more in the field of decision and goal setting.
- The unmarried staff and educated staff are more motivated to take decisions and to set their goals.
- The staff posted in rural areas have more flare for decision and goal setting as compared to staff posted in urban and semi-urban areas.

10.9.8 Team Working Motivation

- The educated staff, senior supervisors and unmarried staff are more suitable for team working.

10.10 Recruitment:

After the introduction of the Fifth Pay Commission recommendation, the central Government employees are well paid. It has now become extremely difficult for the candidates to secure government jobs. On the Indian Railways, for recruitment against the popular categories like Assistant Station Master, Ticket Collector, Assistant Driver etc., more than two or three lakh applications are received for even just 500 posts. The candidates who appear for these recruitments are well educated and after they secure job, they come in contact with the public during their day-to-day work.

It is felt that the day a candidate is selected and offered a government job, his frustration period starts. Without having any background of the government department, a fresh appointee, when he reports for duty, is normally directed to meet the clerk concerned and he is issued a medical memo for undergoing medical examination. There is generally no formal welcoming, nor the detailed information about the organization and its structure and the role that the new employee is likely to play in his department as well as in the organization is provided to him.

Proper sitting arrangement is also not generally available, and, in few cases, it is observed that a fresh candidate has to wait for 10 to 15 days to complete their joining formalities. From the first day onwards till completion of the joining formalities, the newly recruited candidates do not have exciting memorable experience and they are forced to remember the bad experience of the first day for all the time to come. It is felt that whatever treatment one gets during the period of his joining duty, similar type of treatment he tends to give to others during his service (or at least for quite a considerable period of his service). In order that the newly recruited candidate feels important, it is suggested to initiate the following action:

- The new candidates should be welcomed on joining the service by offering a flower bud.
- On the day the new staff reports for duty, he should be introduced to his superiors and colleagues of his department.

- The newly recruited candidates should be provided with proper sitting arrangement on his arrival for completing the initial formalities before he is allowed to join the service.
- Detailed information should be provided to him in a booklet form containing the salient features of the job that he has to perform.
- The new candidates should also be apprised about the organizational structure of the department.
- In the call letter, the designation of the authority to whom the newly recruited candidate is expected to report should be advised clearly.

10.11 Improvement in the Working Environment:

It is noticed that in the majority of the Government offices, the working environment is not up to the mark. The condition of furniture like chairs, tables, cupboards and other tools and plants is not satisfactory. In case the furniture gets damaged, the concerned staff continue to use the same, as required powers to get the furniture repaired are not available with them. Good canteen facilities are also not readily available.

Under such situations, the staff are not motivated enough during their working in the office. In order to motivate the staff, the following remedial measures are required to be taken:

- The administration must provide a good working environment.
- The good quality of furniture should be made available to the employees at their work place.
- Proper delegation of powers should be made so that in case the T&P items get damaged, the same can be got repaired expeditiously.
- Good canteen facilities should be provided in the work place.

10.12 Delayed Promotions in Service:

Normally in one's career on the Railways, an employee gets four to five promotions. It is generally observed that due to lethargy on the part of the dealing

clerical staff, the promotions of the staff are delayed as a matter of routine. The staff invariably have to chase the dealing clerks for issue of their promotion orders. The delay in issuing the promotion orders to the employees not only affects the salary while in service, but it also adversely affects the post retirement benefits as well. This aspect has a deterrent effect on the motivation level of the employees and, therefore, the cases for promotion to the staff should be dealt expeditiously. In this context, the concept of 'Global Assessment' of vacancies and selections has been explained in Para-10.15.1.1 of this report.

10.13 Contact with Higher Officers:

The officer to staff ratio on the Indian Railways is very high. On the Indian Railways, there are hardly 8,000 officers for 15 lakh employees; this means that for every 200 staff, there is only one officer. In major workshops, this ratio is as high as 1:1000. It is observed that the personal contact of the officers and senior supervisors with the staff working under their control is practically missing in most cases. Due to this lacuna, major difficulties are being experienced in understanding & appreciating the actual problems, and taking timely corrective actions that are required for motivating the staff to bring improvements in their working. It is suggested that during normal working there should be proper contact between officers/senior supervisors and staff, and the same should be made mandatory so that the higher management can be informed of the day-to-day problems that the lowest staff are facing. This would establish a very effective and fast communication channel for exchange of accurate information, and would therefore facilitate evolving workable solutions to reduce staff problems and provide suitable work environment. If the personal contact between the officers/ senior supervisors and the staff is established, it is felt that this factor itself will improve the railway operations considerably.

10.14 Criteria for Promotions:

It is observed that, in the government sector, the promotions to the employees are granted as a matter of routine irrespective of the fact whether the employee has worked efficiently or not. As per laid down standards, the employee even with average grade is required to be promoted. The employees are always in queue and get their promotions as per their turn. The staff who really show excellence in their job and are graded as outstanding are not promoted on out-of-turn basis, but they also get their promotions on their turn only based on their seniority. With the adoption of queuing system for promotion, the motivation for showing one's efficiency and talents in work during the service of the employee is missing altogether. In order to take care of this lacuna, it is recommended that the employees graded as 'Outstanding' should be given due weightage for promotions, and should be promoted 'ahead of employees' who are graded as average or good. It is also suggested that the Administration initiates confidential reports of only two categories of staff: one category of staff who are considered fit for accelerated promotions, and the other category of staff who are not considered fit for any promotions due to their poor performance. The staff not covered in these two categories will get promotions on their turn based on their seniority after exhausting the out-of-turn category staff.

10.15 Improvements in the Physical Working Conditions:

As already brought out, the staff have not given good feedback against the physical working condition head of the motivation level. It is therefore implied that if the staff satisfaction level in this area is improved, then, the overall motivation level of the staff of different departments on the Railways can be improved.

As far as physical working conditions are concerned, the report submitted by Shri P.C.Sehgal, Researcher on the subject of "A Perspective Plan for Making Permanent Negotiating Machinery effective on Indian Railways – Project for Partial Fulfillment of Requirement for Master of Business Administration Programme" was also referred to.

For bringing tangible improvements in the motivation level of the employees in the area of physical working conditions, the following factors have been identified for bringing improvement.

10.15.1 Timely promotions

To improve the motivational level of the railway employees, it is considered essential that the railway employees get their promotions in time. For effecting timely promotions, proper assessment of the vacancies is required to be made by the competent authority.

It is noticed that in the various grades of any department a large number of vacancies always exists, which clearly shows that the assessment of the vacancies is not done properly. The concerned officers do not conduct the selections/trade tests in time, and, therefore, the staff are denied their timely promotions. The delay in issue of the promotion orders is having a direct bearing on their present and future financial gains. In order to take care of this important area, a global assessment of the vacancies is required to be done. The procedure for 'Global Assessment' of vacancies is explained below.

10.15.1.1 Global Assessment of vacancies:

In the various categories of the technical and the non-technical departments in Group 'C' and Group 'D' category, 10 different levels exist. For the technical departments, the following levels exist:

<u>Designation</u>	<u>Pay Scale (in Rs.)</u>
(i) Khalasi	2550-3200 (RSRP)
(ii) Sr Khalasi	2610- 3540 (RSRP)
(iii) Tech Gr III	3050-4590 (RSRP)
(iv) Tech Gr II	4000-6000 (RSRP)
(v) Tech Gr I	4500-7000 (RSRP)
(vi) Master Craftsman	5000-8000 (RSRP)
(vii) JE-II	5000-8000 (RSRP)

(viii) JE-I	5500-9000 (RSRP)
(ix) SE	6500-10500 (RSRP)
(x) SSE	7450-11500 (RSRP)

The detailed study has brought out that, on an average, each Railway employee with satisfactory output gets four to five promotions during his service span of thirty years approximately. On an average, on the retirement of each railway employee, four to five promotions to other staff are involved. On a Railway Division, for every 1000 staff strength, 33 retirements on an average are effected per year. In other words, for every 1000 staff strength (against 33 retirements per year), at least 165 employees should get promotions per year.

During a study, the Vadodara Division had staff strength of about 30,000. About 1,000 railway employees were retiring every year; it was noticed that 5000 employees were not getting promotions every year due to some reasons or the other, and the promotions were therefore always in arrears.

Detailed investigations were undertaken and it was revealed that for ordering selections, proper assessment of vacancies in particular grade was not being done. For assessing the vacancies in a particular grade, all the existing and anticipated vacancies in that grade and the grades above should be considered, as all the posts in the higher grades are filled up from the staff working in the lower grades.

To ensure that no vacancies exist in the different grades, it is preferable to undertake a overall global assessment of the vacancies in the existing relevant grades and all the grades above. With this practice, it will be possible to assess accurately the required number of posts for which selection is to be ordered. This action will enable the employees to get promotions in time. It was also found that it will be always better that all the files dealing with selections in various grades are dealt at the same time so that the effect of selection in one grade to another grade is properly taken care of. The officers of the Personnel and the concerned technical departments should deal the files related to promotions/selections from the highest grade to the lowest grade simultaneously.

The above practice was introduced in the Vadodara Division from the year 1994 onwards. Proper assessment of the vacancies in different grades was made, and it was possible to promote 4500 employees per year. The promotion orders were issued expeditiously. Critical watch on the different phases of selection proceedings was also kept at appropriate level. With timely promotions, the overall morale and motivation level of the staff went up and the staff complaints were also reduced by 40%. The staff was generally satisfied with the sound administrative action taken by the Management of the Vadodara Division. As a result, the staff were always ready to face any new challenging works with dedication.

Lessons to be learnt:

- To have progress in one's career, every one aspires to have promotions in time.
- The top management must monitor the proceedings of selections and ensure timely promotions to their staff.
- Timely promotions given to the staff act as catalyst in improving the overall motivation and satisfaction level of the staff.
- Promotions play a very crucial role in one's life. With promotions, not only the staff gain financially but also their social status is improved in the society.

10.15.2 Computerisation of Personnel Department:

For ensuring efficient and fair dealing to the staff, it is essential that the following important works of the Personnel department should be computerized:

- Service Records of employees.
- Leave Records of employees.
- Payroll applications.
- Personnel Management Information System.
- Training programme for staff.
- Seniority lists of staff.

- Cadre statements.
- Staff grievances redressal.
- Settlement cases of staff on retirement.

10.15.3 Timely Payment to Staff:

For ensuring timely payments to the staff, the following case of the Vadodara division is narrated. In the year 1994, the Additional Divisional Railway Manager/Vadodara Division was made the overall incharge of the work of the Personnel department and staff grievances. In the year 1994, many representations were received from the dependant/widows of the late railway employees for non-payment of pensionary benefits to them after the death of the railway employees. Employment on compassionate ground was also delayed.

Investigations revealed that the staff getting super-annuation after completing their full service were getting their full settlement dues on their last working day mainly due to the reason that this important activity was being watched by the Head Quarter office. Whereas, in the case of the staff who were retiring on grounds other than normal (ONR cases), mainly due to untimely deaths, voluntary retirement, etc, it was noticed that the post retirement payments were not timely being made to them.

Studies, further, brought out that on the Vadodara Division, in Sept '94, 356 cases were pending for settlement of employees who had died during their service or had taken premature retirement. After this issue came to the light, the Unions took up the issue with the Administration for early finalization of those cases. The CPO/Western Railway also visited the Vadodara Division and during discussions with the CPO and the Divisional Secretaries of both the recognized Unions, it was brought out that due to introduction of five days working per week from 1986, hardly seven days are available to the staff of the Personnel department for dealing the other important issues other than Union items as per details given below:

Table 10.1: Items of work Vs Time spent thereon by Personnel department

S.No.	Item of Work	No. of days spent in meetings
1.	Permanent Negotiating Machinery meetings with one recognized union in a month	3
2.	Preparation days for meetings and discussions with officers/DRM/ADRM	3
3.	Informal meeting - one meeting with both the Unions in a month	2
4.	Preparation days for informal meeting	2
5.	Non-payment meetings with both the Unions in a month	2
6.	Preparation days for non-payment meeting	2
7.	Total days required for meetings	14
8.	Time available at the disposal of Personnel Officers/ staff for dealing with other important issues and making systematic work (21 - 14).	7

10.15.3.1 Effect of having less Meetings with Unions:

To evaluate the impact of the above, a request was made to the Divisional Secretaries of both the Unions to skip the Union meetings for three months viz. October 1994 to December 1994, so that time so saved can be utilized effectively for settling the important pending issues. Both the Divisional Secretaries agreed to this proposal and during October 1994 to December 1994, meeting were not held with the Unions and the following important pending works of the Vadodara Division were cleared:

- (i) **ONR cases:** Out of 356 cases, 221 cases were settled and sufficient progress was also made on the balance 135 cases.
- (ii) **Notification of Seniority List:** 135 pending seniority lists were notified and the staff grievances as far as seniority lists were concerned were sorted out and timely promotion to the staff was also ensured.

- (iii) **Screening of Casual Labour:** 400 casual labour available on the BRC division were screened and confirmed in the Departments where the vacancies in group 'D' were existing.
- (iv) **Notification of Selection/Trade Test and Issue of Promotion Orders:** 62 notifications for holding selections/trade tests were issued involving the promotions of 1097 employees. Apart from that, 98 promotion orders for 772 employees were also issued.

10.15.4 Importance of ONR cases: While dealing the ONR cases, it was observed that in 50% of the cases, leave and service records were not readily available and hence difficulties were being faced in settling their cases. The families of the staff who die in harness require timely payments and also appointment of one of the dependents on compassionate ground. Thus, there is a need to keep a proper watch at the appropriate level on the settlement cases of employees who had parted from the Railways on other than normal ground.

10.15.5 Attention to Service and Residential Buildings:

It is also noticed that on each Division approximately 20 to 30% staff grievances are received from the staff in respect of following deficiencies:

- Improper maintenance of staff quarters.
- Improper maintenance of service buildings where the staff are posted to perform their duties.
- Improper supply of drinking water.
- Improper sanitation conditions in railway colonies and service buildings.
- Replacement of staff quarters on age-cum-condition basis.
- Replacement of old wirings on age-cum-conditions basis.

10.15.6 Effect of Improvements in Work Places and Residences on the Efficiency of Railway employees:

It is a well-known fact that the efficiency of the staff depends on the facilities that are available at their working places and at their residence. If proper maintenance of

the service buildings and residential colonies is ensured, it is observed that the overall efficiency of the employees is also improved. The railway workers now-a-days are highly educated and are fully aware of their rights. If the maintenance of the facilities at their work places and at their residences is not up to the mark, the staff becomes dissatisfied and representations are made at very senior levels either through Unions or by the staff themselves directly. The staff dissatisfaction on this account affects their productivity adversely.

To ensure proper maintenance of the facilities, it is strongly felt that the top management must ensure that the funds available at their disposal for the maintenance purposes are utilized efficiently. Amount should be utilized to take care of the overall needs of the staff and their complaints. Wrong priorities are likely to be given to unimportant works if these works are selected at lower level, and there is likelihood of spending the budgeted amount in unwanted areas. If the limited railway resources are spent in unimportant areas, it will affect the productivity and the staff satisfaction adversely.

In the year 1994, on the Vadodara division, it was observed that a large number of essential maintenance works were in arrears. The staff representations in respect of improper maintenance of staff quarters, service buildings and non-availability of basic facilities at their work places etc. were being submitted to the General Manager and other senior officers of the Headquarter during their visit to the Division. In order to streamline this activity, in the year 1994, it was decided that the selections of works which are required to be undertaken through Zones by the Engineering department will be done by ADRM, Vadodara on the basis of representations received from the staff, Unions and other Authorities. With the introduction of this procedure, it was possible to allot the required funds for undertaking priority works. With the introduction of this new system, it was possible to take care of a large number of staff complaints. The staff complaints reduced substantially on the Vadodara Division, and the staff were satisfied. The practices of handing over memorandum to higher officials during their visit to the Vadodara division were also stopped.

10.15.7 Lessons to be Learnt: The lessons to be learnt from the above experience are:

- The selection of repair works for service buildings and staff quarters is an important task. This function should not be delegated to lower authorities.
- On the basis of budgetary grant available at disposal, the works should be selected at the appropriate level. The representations received from staff, Union representatives, supervisors and officers should be taken into view while selecting the works. The maintenance grant should be utilized in the priority areas only.
- The physical progress of these important works should be monitored closely at appropriate level at regular intervals so that these works are completed in time and the staff problems are solved.
- The physical and financial progress of the works should invariably be monitored closely so that timely payments to contractors are made and they are suitably motivated to give their best output.

10.15.8 Issues of Service Departments:

As already discussed, approximately 20% of the issues pertain to improper maintenance of staff quarters, service buildings, water supply and sanitation. These issues can be settled for the benefit of staff in the following manner:

- For the maintenance of staff quarters/buildings, tenders are finalized every year. On the Vadodara division, the selection of works to be carried out through the selected agencies is done by ADRM. While selecting the works, preference is given to the issues taken up by officers during their normal inspection, Union and staff demands etc. By selecting the works at the level of ADRM, it has been noticed that many outstanding issues falling in this category have been settled amicably.
- Similarly, while selecting works which require huge investments, the issues brought out by officers, staff and Unions should be given preference.

- Water supply problems: Water supply problems can be tackled by replacing the water bores and pumps on age-cum-condition basis. Since these works are having long lead time, a long term appropriate planning is needed to tackle these issues efficiently.
- Sanitation problems: Sanitation problems are being faced on the Railways at stations, offices and residential colonies mainly due to provision of improper drainage system. New constructions have come up but the drainage system has not been augmented. Improper sanitation can attract lot of staff discontentment and complaints. This issue can be tackled efficiently by contracting out the maintenance and cleaning of underground drainage system in the railway colonies. Old drainage pipes should also be replaced/repared in time through outside agencies. On the Vadodara division actions on the above lines were initiated and they have brought substantial improvement in the sanitation of service buildings and railway colonies.

10.16 Miscellaneous Recommendations:

10.16.1 Approximately 35% of staff are having qualification of middle standards and below. In order to introduce new technologies and to face the challenges in future successfully due to stiff competition from other mode of transportation, it is suggested that minimum educational standard should be upgraded. No staff below matric + ITI or XIIth standard pass should be recruited in the future.

10.16.2 30% staff of Engineering and Operating departments are posted in rural areas. There is a need to look after the staff well for requirements of medical facility and education for their children.

10.16.3 The overall average number of children, that each employee is having, is 2.45. This figure is considered to be on the higher side. The employees of Commercial, Engineering, Mechanical, Medical and RPF departments should be encouraged to adopt family welfare norms of having a small size family, as in the survey it is revealed that each staff of these departments, on an average, is having more than two children .

10.16.4 In the survey it is brought out that the staff of Mechanical and Engineering departments are having tendency to develop smoking, drinking and pan chewing habits. The staff from these departments should be suitably counseled about the ill-effects of the consumption of these dangerous items.

10.17 Treatment on Retirement:

On the date of retirement of the railway employees, the retirement dues are paid to the staff on their last working day. This factor alone has brought a lot of satisfaction amongst the railway employees.

It is noticed that the settlement function that is held in the government offices on the last day of the month is held in a routine manner. The cheque containing the settlement dues is handed over to the retiring employee in a casual manner. After spending 30 to 40 years in service, the employee retires without experiencing any excitement and his parting from the government job remains as a non-event. Rarely, the retired employees remember their day of retirement with excitement.

Therefore, ways and means are required to be found out so that retirement day of the employees is made a memorable day. The staff should be made to feel their importance that the administration has given to them. Officially, the retiring staff should be permitted to meet other employees to share their experiences with them. The difficulties faced by them during their service should also be heard patiently with a view to initiating remedial actions. It is felt that if this practice is introduced, the morale of the staff is bound to get improved. In this regard, a scheme of benevolent fund has been introduced on Vadodara and Rajkot divisions, and the details are explained in Para-10.19.

10.18 Treatment after Retirement:

After the employee's retirement, if the retired employee happens to visit the office due to any unforeseen circumstances, it is generally noticed that he is treated as a unwelcome guest. No supervisor, clerk or officer gives due cognizance of the presence of the retired employee. The representations submitted by the retired employees for the

redressal of their grievances are also not given due importance and consideration. The retired employees are therefore left dissatisfied, and they tend to project a poor image of the organization to the outsiders. It is recommended that the representations from the retired employees are investigated in detail in a time bound manner, and suitable reply sent to them.

From the above, it is concluded that, in general, the government employees are not treated properly from the first day of their appointment to the last day of their working. Their working environment is also not up to the mark. Thus, there is an urgent need to ensure that the working environment is improved so that the productivity and efficiency of the employees in the government sector is improved, and that the employees are looked after well during their service and after their retirement. In order to achieve the above objectives, there is an urgent need to bring attitudinal changes in the employees. Rules, procedures and policies are required to be modified suitably so that the staff problems are dealt expeditiously.

Certain Related Case Studies

10.19 Introduction of Benevolent Fund for Staff Welfare:

In order to keep a watch on the important issue of timely settlement of ONR cases, a benevolent fund for the welfare activities of the railway employees was started on the Rajkot division where the voluntary deduction of Rs. 5/- per month was made from the salaries of all the employees of the Rajkot division. The account was jointly operated by SrDAO, SrDPO and the Divisional Secretaries of the recognized Unions. The Rajkot division had a total staff strength of 12,000 and as such Rs. 60,000/- was getting collected per month.

Every month, seven to eight deaths of the working railway employees were reported. On the report of the death of a railway employee, a condolence letter from DRM along with a draft of Rs. 7,000/- was sent to the families of the deceased railway employee from the Staff Welfare Benevolent Fund. With the office copy of condolence letter, a case for appointment on compassionate ground in favour of ward of deceased

railway employee, and the payment of settlement dues to the dependant were opened automatically in the respective sections. Through condolence letter, the widow was also informed that after the mourning of fifteen days is over, a Welfare Inspector will visit the family to get the formalities for payment of settlement dues and for appointment on compassionate ground.

On an average, Rs. 49,000/- per month was sent to the dependants of the deceased railway employees; whereas, Rs. 11,000/- per month was still available at the disposal of the welfare committee. It was decided that this amount should be spent on the staff who are retiring on normal grounds. The following incentives have been introduced to the employees who are retiring on the last day of every month from the benevolent fund:

- ❖ Free lunch is served in the railway staff canteen to the railway employees who are retiring on the last day of the month.
- ❖ A photograph is also taken on this occasion. A garland is offered by DRM to the retiring employee during the function. The photograph is supplied free to the retiring employee.
- ❖ Ajanta make clock watch worth Rs. 150/- with insignia of the Rajkot division is given to each retiring employee as a sweet remembrance of their long association with the Rajkot division during their working.
- ❖ The settlement papers are given to the retiring railway employees in a folder of good quality.

10.19.1 Advantages of the Benevolent Fund Scheme: The above benevolent fund scheme has yielded the following results:

- ❖ With the introduction of this welfare scheme, the widows of the deceased railway employees are generally satisfied and they have openly expressed satisfaction with this scheme.
- ❖ The eligible dependants of the deceased railway employees are getting appointments on compassionate grounds expeditiously.

- ❖ The dues to the widows/dependants of the deceased railway employees are being paid to them within a short period of 2 to 3 months.
- ❖ The employees who are retiring on normal grounds feel elevated due to grand send off being arranged by the Railway administration on the last day of their working.
- ❖ The motivation and morale of the staff has been boosted up and this welfare scheme has also worked as a catalyst in improving the productivity and efficiency of the railway staff.
- ❖ From the savings of this fund, the railway pensioners above 75 years of age were also honoured in a special function organized in the Railway Institute, Rajkot on 16.04.03. During this function, 150 retired railway employees were garlanded and given shawls and mementos.
- ❖ To get the redressal of their grievances, in December 2002, 75 retired railway employees attended the pension adalat held in the DRM's office. These retired railway employees were offered garlands and were served with free lunch.
- ❖ From this fund, help was also given to the railway staff who were affected adversely during the communal riots of February, 2002.

In view of the large number of benefits that the benevolent fund for the welfare of the staff can bring, it is recommended that similar benevolent welfare scheme may be introduced on all the Divisions of the Indian Railways.

10.20 Timely up-date of Leave and Service Records:

As already brought out that if the leave and service records are not maintained by the concerned clerical staff, disputes arise for settling the dues in the case of employees retiring on normal as well as on other than normal grounds. In order to give importance to staff welfare activities, Rail Karamchari Sampark Abhiyan has been started on the West Central Railway; the details of which are discussed hereunder.

10.21 Rail Karamchari Sampark Abhiyan:

A happy employee is a safe employee. Keeping this in mind, the Rail Karamchari Sampark Abhiyan (RKSA) has been launched on the West Central Railway, so that we reach out to each one of our employees, with the following objectives:

- ❖ To make contact with all the railway employees posted over West Central Railway.
- ❖ To show service and leave records to all employees of the West Central Railway.
- ❖ To gather other information of the employees (for PRIME) which are not available.
- ❖ To update their nomination of PF/DCRG/GIS.

10.21.1 Working Method:

- ❖ In each and every divisions and workshops, the employees are contacted personally.
- ❖ Contact is made on prefixed dates. The dates are intimated fifteen days in advance so that all employees can ensure their presence.
- ❖ Place of contact is ensured by the supervisor/depot in-charge.
- ❖ A Welfare Inspector does primary contact. The Welfare Inspector visits the contact place one day before, if he considers it necessary. He may carry one dealing clerk with himself.
- ❖ On the contact day, the Welfare Inspector, Assistant Personnel Officer and concerned departmental officers are present there. The camp is continued till the work is over.
- ❖ Accumulated information is submitted before the Divisional Personnel Officer after every contact. Sr Divisional Personnel Officer submits a weekly progress report to the Head Quarter and the Divisional Railway Manager.

10.21.2 Preparatory Work before Contact:

- ❖ The Welfare Inspector keeps the list of employees who are likely to be contacted by obtaining details from the pay slip of the concerned employee.
- ❖ The concerned dealing clerk keeps updated service and leave records of the concerned employee.

10.21.3 Work during Contact:

- ❖ The complaint of the employee is entered into a Register on which signature of the employee is taken. If an employee has no complaint, despite his signature is taken.
- ❖ If an employee has gone on duty, then he is contacted after his arrival from duty. If an employee absents unauthorisedly, this information is also indicated in the Register.
- ❖ The Welfare Inspector brings the service records of the employees and takes their signatures after showing service records to them.
- ❖ The questionnaire enclosed in Annexure-I is filled up by every employee and its acknowledgement is given to them.

10.21.4 After the Contact:

- ❖ Initially, efforts are made to sort out the problems at the divisional level. If the problems are sorted out, the same is intimated to the employee.
- ❖ If the problems are not solved at the divisional level, the same is forwarded to HQ for further necessary action and employees concerned are intimated about the same.

10.21.5 Results Obtained: The response to the program has been extremely encouraging. It is proposed to cover all the employees under this scheme by 31.03.05. The position as on 31.08.04 is as under:

S. No.	Division/ Workshop	Total Employees	Employees covered under RKSA
1	JBP	22088	2272
2	BPL	18651	5406
3	KTT	16248	1988
4	CRWS/BPL	2040	1129
5	WRS/KTT	2751	507
6	Total	61778	11302

10.21.6 Personal Experience and Recommendation: I, the researcher, was present recently at the Electric Loco Shed, Tuglakabad where 1,000 staff are posted and the staff of the Personnel department had come along with their leave records and service records from Kota for showing the same to the staff. During this exercise, the staff of the shed were very happy. In few cases, it was noticed that at the time of joining the Railways, the staff were unmarried and they have nominated their parents as their nominee to get their dues after their death. Now, their parents have also died and the staff are married and are having children. No changes were made in their nomination forms so far. The concerned staff immediately submitted a fresh nomination form by making their wife and their children as their nominee to get the dues from the Railways on their death. This is really a right step in the right direction and this scheme should be introduced on all the Divisions of the Indian Railways so that the motivation level of the staff can be improved

10.22 Need to have less number of Meetings with the recognized Unions:

10.22.1 As already brought out in Para-10.15.3.1 of this Chapter, by postponing three scheduled meetings in the months of October to December, 1994 with the Unions, lot of surplus time was generated and the staff were able to complete many pending issues. In the Vadodara division, in the subsequent months, efforts were also made to reduce the number of scheduled meetings with the Unions. However, the Unions did not agree to this proposal. If scheduled meetings are skipped, the Union office bearers do not get the following privileges.

- Special casual leave and free pass to attend PNM meeting at Divisional/ HQ level.
- Free accommodation for stay.
- Easy accessibility to officers to get the cases of their choice settled.
- Sense of self-importance.

10.22.2 From the experiment conducted on the Vadodara Division, it is concluded that if arrears of the establishment work are to be wiped out, and systematic working of the Personnel department is to be ensured, then scheduled meetings with the Unions are required to be reduced from the present level. There is an urgent need to reduce the number of Permanent Negotiating Machinery/Informal/Non-payment meetings with the Unions. It is proposed that meeting with only one Union should be held in any month at the divisional level so that complete attention can be given to that Union with a view to finalizing the issues brought out by them in their PNM, informal and non-payment meetings. If this is introduced, then in place of the seven days available to the railway staff of the Personnel department to undertake their work other than Union items systematically, 13 days will be made available to them as per the details given below to effect more productivity in their working:

Table 10.2: Suggested time frame for meetings

S. No.	Item of Work	Number of days spent in a month
1	Permanent Negotiating Machinery meeting	3 days
2	Preparation time for PNM	3 days
3	Informal/Non-payment meeting	1 day
4	Preparation time for Informal/Non-payment meeting	1 day
Total time required to hold meetings with Union		8 days
Time available for undertaking other works (21-8)		13 days

10.23 Key to Success is to Set Proper Priorities for Works:

10.23.1 On 26.01.2001, due to a severe earthquake that occurred in Gujarat, a large scale destruction to properties and human life was reported. Many staff quarters and service buildings on the Rajkot division also suffered serious damages. 160 staff quarters completely collapsed to ground and other 3000 staff quarters developed minor cracks. Electrical wiring in these quarters was also affected and therefore these quarters were declared unsafe for occupation.

10.23.2 Near the coastal area, the Wankaner-Navlakhi Railway line also shifted from its original position and was submerged into sea water. The Railway administration had a serious challenge before it to ensure that not only the train services restored immediately on the division, but, at the same time, the staff also housed at safer places.

10.23.3 The staff occupying damaged quarters were asked to vacate their houses and they were shifted to vacant quarters or temporary structures (i.e. tents) erected to house the affected railway employees. The damaged quarters were taken under repairs. Few office buildings were also damaged and the buildings were unsafe for further use. So the concerned staff were also shifted to other safe locations.

10.23.4 Within four to five months time, the repairs to the buildings that required less attention were properly carried out, and the staff shifted there again. The remaining buildings that had suffered extensive damages were taken under heavy repairs. In the Rajkot area, the following buildings suffered serious damages:

- Running Room
- Subordinate Rest House
- Officers' Rest House
- Officers' Club
- Retiring Rooms
- Station Superintendent's Office & VIP Rooms
- Refreshment room at Station
- Engineering Training School

- Safety camp
- DRM's office
- Conference hall in DRM's office
- Community Centre for Staff
- Waiting hall for public at the Station.

10.23.5 Due to non-availability of the above service buildings in the Rajkot area, day-to-day working on the Division was getting seriously affected. It was decided that targets for repairs to the above buildings should be set and progress of the repair works monitored systematically. Due to their importance from national point of view, 15th Aug., 2nd Oct. & 26th Jan. are the three important dates in India. These three important dates were specifically chosen as target dates for completion of repairs to the above buildings, the details of which are given below.

10.23.6 Priority 1: (Target date 15 Aug., 2001)

- DRM's Conference Hall, where scheduled meetings with officers, staff, Unions, and customers are held regularly.
- Officers' Club where recreation facilities for officers are provided. The Officers' club is also utilized for arranging dinner, etc. in honour of visiting dignitaries.
- Running room for driving staff.
- Refreshment room for public.
- Station building for operational requirement.

10.23.7 Priority 2: (Target date 2nd Oct., 2001)

- DRM's office for normal office working.
- SS office for normal administration at the Station.
- VIP room for dignitaries.
- ASM room for train operation.

10.23.8 Priority 3: (Target date 26th Jan., 2002)

- Subordinate Rest House for railway employees

- Retiring rooms for public
- Officers' Rest House for officers.
- Community Centre for railway employees.
- Waiting Hall for general public.

10.23.9 The repair works to the above buildings were taken up on emergency basis. Weekly inspections were conducted at Divisional Railway Manager's level with an intention to remove any bottlenecks that were coming in the way of early execution of the repair works. The above important identified works were completed as per the targets set by the Administration. Special sanctions were also obtained from the General Manager/Western Railway to purchase materials of good quality from the local market for Running Rooms, Public Retiring Rooms, Officers' Rest House, Senior Subordinate Rest House, Station Supdt's office, VIP Room at the station and ASM office. Since materials of good quality were provided for the Running Rooms, Senior Subordinate Rest House and Public Retiring Rooms, the staff and public were very much happy with these developments. The Union leaders complimented the Administration's efforts. Demand was also raised at HQ level that in other divisions also similar type of facilities should be provided for the staff.

10.23.10 While assigning priorities for the different works, it was ensured that equal importance is given to the works pertaining to officers and staff. By providing excellent facilities for the railway staff, a lot of goodwill was generated between the Administration and the staff. The General Manager/Western Railway also appreciated the special efforts made on the Rajkot division in completing the earthquake affected works in the shortest period of time, and he was also pleased to announce a Group Award of Rs. 2 lakhs in favour of the staff of the Rajkot division for the splendid efforts put in to repair the earthquake damaged structures.

10.24 Proliferation of Branches and Composition of Office Bearers of Unions:

One development which have had tremendous adverse impact on the working of the Permanent Negotiating Machinery is the proliferation of the Branches of the recognized Unions. With 4 branches for each Union, there were a total of 8 branches of

both the recognized Unions in 1957 at the time of formation of the Vadodara Division. Whereas, there are now 36 and 34 Branches of WREU and WRMS respectively on the Vadodara Division. The growth of the Union Branches have been as under:

Table 10.3: Growth of Union Branches

Year	WREU	WRMS
1957	4	4
1960	29	24
1977	31	31
1982	36	34
1985	36	34
1998	36	34

10.24.1 The list of Branches and their office bearers are indicated in Table-4 and Table-5. Each Branch is having ten office bearers. Thus, there are 700 Union office bearers on the Vadodara division. It is seen from the list that more than one Branch is also there at a number of stations for each recognized union. The growth of Branches of both the recognized unions is more or less identical. This growth has taken place in earlier years when liberal attitude was given by the Administration in according recognition to Union Branches with a view to encouraging trade union activities on the Railways.

Table 10.4

LIST OF OFFICE BEARERS/ UNION BRANCHES OF WREU ON
VADODARA DIVISION

WESTERN RAILWAY						
List of Office Bearers - WREU, BRC Division						
S. No.	Name of Branch	Senior Supervisor	Ministerial Staff	Group 'D' staff	Other staff	Vacant
1	Divisional branch	02	01	-	04	03
2	BRC (OP) Branch no. 1	01	-	01	08	
3	BRC (P) Branch no. 2	02	-	01-07		
4	BRCY Branch	03	01	-	06	
5	BRCY Loco Branch	01	-	-	09	

6	BRCY (Elec) Loco Branch	03	-	02	05	
7	PRTN Branch no.1	03	-	03	04	
8	PRTN Branch no. 2	03	07	-	-	
9	AKV Branch	04	01	01	04	
10	MYG Branch	02	01	04	03	
11	ANND Branch no. 1	03	-	02	05	
12	ANND Branch no. 2	-	01	-	09	
13	ND Branch	02	-	02	06	
14	MHD Branch	01	01	03	05	
15	KKFY Branch	02	02	01	05	
16	KKF Loco Shed	01	01	-	08	
17	ADI Branch no. 1	02	-	01	07	
18	ADI Branch no. 2	02	01	02	05	
19	ADI Branch no. 3	03	02	02	03	
20	ADI Branch no. 4	03	-	02	05	
21	ASV Branch	02	01	01	06	
22	SBI Branch no. 1	01	-	03	06	
23	SBI Branch no. 2	01	02	03	04	
24	VG Branch no. 1	-	-	02	08	
25	VG Branch no. 2	01	-	04	05	
26	DHG Branch	04	04	-	02	
27	GA Branch no. 1	02	-	-	08	
28	GDA Branch no. 2	02	-	01	07	
29	PTD Branch	04	01	03	02	
30	DB Branch (Station)	-	02	01	07	
31	DB Branch (Loco)	02	-	02	06	
32	MLAB Branch	03	01	03	03	
33	BH Branch	03	01	01	05	
34	VTB Branch no. 1	02	02	01	05	
35	KRCA Branch	01	-	01	08	
36	VTB Branch no. 2	03	-	01	06	
	Total	74	33	54	196	03

Table 10.5

LIST OF OFFICE BEARERS/ UNION BRANCHES OF WRMS
ON VADODARA DIVISION

WESTERN RAILWAY						
List of Office Bearers – WRMS, BRC Division						
S No.	Name of Branch	Senior Supervisor	Ministerial Staff	Group 'D' staff	Other staff	Vacant
1	Divisional branch	6	01	-	2	2
2	PRTN Branch no. 1	1	8	1		
3	PRTN Branch no. 2	3	2	1	4	
4	PRTN Branch no. 3	5		1	3	1
5	BRCP Branch no. 1	3	2	1	4	
6	BRCP Branch no. 2	1	1	2	6	
7	BH Branch	4			6	
8	KSB Branch	4	1		5	
9	MYG Branch	4	1	1	4	
10	ANND Branch no. 1	3	2		5	
11	ANND Branch no. 2	2	3		5	
12	ND Branch no. 1	1			9	
13	ND Branch no. 2	3	2	1	4	
14	MHD Branch	2	3	2	3	
15	KKF Branch no. 1	1	3		6	
16	KKF Branch no. 2	2	2	1	5	
17	ADI Branch no. 1	2		2	6	
18	ADI Branch no. 2	5	1	1	3	
19	ADI Branch no. 3	5			5	
20	SBI Branch no. 1	3	1	1	5	
21	SBI Branch no. 2	3	1	2	4	
22	VG Branch	2	1	1	6	
23	PTD Branch		1	3	6	
24	ASV Branch	2	1	1	6	
25	DB Branch		1		9	

26	GDA Branch no. 1	3	1		6	
27	GDA Branch no. 2	2	1		7	
28	KRCA Branch			3	7	
29	BRCY Branch no. 1	5			5	
30	BRCY Branch no. 2	2	2	1	5	
31	BRCY Branch no. 3	3			7	
32	MALB Branch	3		1	6	
33	DHG Branch	1		1	8	
34	VTA Branch	2	1		7	
	Total	88	42	28	179	3

10.24.2 The department-wise analysis of Supervisors who are active office bearers of the recognized unions is given in Table-10.6.

Table 10.6: Number of Supervisors as office bearers in Unions

Sr No	Description	WREU	WRMS	Total	% of total
1	Total number of branches	36	34	70	
2	Total number of branches of which supervisors are chairman	17	21	38	54.28
3	Department-wise analysis of supervisors				
i)	Engineering	18	33	51	31.48
ii)	Traffic	12	14	26	16.05
iii)	Commercial	07	14	21	12.96
iv)	Carriage & Wagon	11	02	13	8.02
v)	Mechanical loco	04	07	11	6.79
vi)	Signal & Telecom.	05	04	09	5.55
vii)	Electrical Power	02	05	07	4.32
viii)	Electrical TRS	02	02	04	2.46
ix)	Electrical TRD	03	01	04	2.46
x)	Electrical TRO	-	-	-	-
xi)	Medical	04	02	06	3.70
xii)	Personnel	06	04	10	6.17
Total Supervisor Office Bearers		74	88	162	

10.24.3 Analysis of Union Office Bearers: The following details are obtained from tables 10.4, 10.5 and 10.6:

- 54.28% of the total Union Branches are headed by senior supervisors.
- 31.48% of senior supervisors doing active union work belong to the Engineering department. It is worth mentioning here that in the Engineering department in Group 'D' category literacy level is minimum and therefore the supervisors of the Engineering department play the role of active office bearers of both the recognized Unions.
- 16.05%, 12.96%, 8.02% of total senior supervisors belong to Traffic, Commercial and Mechanical departments respectively. The staff of these departments are generally well educated and are conscious of their rights. The supervisors of other departments like Signalling, Electrical, Medical and Personnel departments take active part in union activities in less numbers.

10.24.4 The above growth of the Unions has led to the following ramifications in the working of the Permanent Negotiating Machinery in the Division:

- Local branches tend to act as autonomous units. Generally, the notices for agitation etc. are being received from the branches directly. Most of the agitations are being spearheaded by the branches to get the local problems decided in their favour.
- With large number of branches and office bearers, the management communication links have almost broken and the grievances redressal system has been bypassed. Staff look to these local branches for redressal as the office bearers are readily available. They take up issues of local nature and individual grievances as a part of the strategy to establish the reputation of the local branches in the competition with the rival recognized union. This explains the shift to representation of individual cases and large number of items connected with working conditions and staff quarters in the Permanent Negotiating Machinery and informal meetings.

- Large number of branches and office bearers afford easy opportunity to the staff to become office bearers and, thus, secure immunization against transfers besides availing many other privileges. The senior supervisors in the field have specially availed of this opportunity.
- Front lone supervision comes under lot of pressure from the local office bearers. They feel isolated and helpless and unable to maintain discipline.

10.24.5 The Vadodara division is having a staff strength of 30,000, where 700 office bearers of the recognized unions are available. No industry in the world can deal with such a large number of union leaders. The Railway Reforms Committee in their report has recommended one branch for every 5000 staff. A copy of letter written by the General Manager to Member Staff is enclosed at Appendix-A. It is, therefore, suggested that the recommendations of the Railway Reforms Committee made in the year 1984 should be accepted and implemented. With the implementation of the recommendations of the RRC, the number of branches on the Vadodara division will be reduced substantially as each recognized Union will only have six branches as against 35 now. With the reduction of branches of the recognized Unions, the number of office bearers will also be reduced substantially. This action in turn will reduce the unwanted pressure of the office bearers of the recognized Unions on the officers and staff of the Personnel and other departments as well. It should also be ensured that, on any station, not more than one branch of the recognized union is allowed to exist and operate.

10.24.6 Composition of Office Bearers of Unions:

As already indicated above, there are 700 office bearers on the Vadodara division of both the recognized Unions. The analysis of the office bearers is as under:

Table 10.7: Analysis of Union Office Bearers

	WRMS		WREU		OVERALL %
Supervisors	88	26.1%	74	20.72%	23.34%
Ministerial staff	42	12.46%	33	9.24%	10.80%

Group 'D'	28	8.3%	54	15.12%	11.81%
Others	179	53.11%	196	54.90%	54.03%
Total	337		357		

It can be seen from table-10.7 that supervisors and ministerial staff constitute more than 34% of the total office bearers of the recognized unions. The group D staff constitutes nearly 50% of the total staff of a Division; however, only 11.8% of union leaders are from the category of group D staff. This figure of representation of group D staff as office bearers of the recognized unions is really very low and there is a need to develop more union leaders from this category. Taking up of senior positions by the supervisors and the ministerial staff in the union hierarchy has a very profound bearing on the working of the Permanent Negotiating Machinery as analysed below:

10.24.7 Supervisors and the Unions:

Supervisors occupy key positions in the railway organizational set up. They are the point of direct contact with the employees. They are the front line managers and represent the management to the workers and the workers to the management because they are strategically located in the chain of authority and communication. In short, in the railway organization supervisors are like the hubs of the wheel. With the increase in the workload, increase in the strength of higher-grade supervisors, and increase in the trade union activities, the supervisors will find a shift in their position. The supervisors perceive the following drift in their roles.

10.24.7.1 Supervisor in the middle

The supervisor feels that he is pressed between the management and the worker. Management has one set of expectations i.e. to keep the employees disciplined, maintain the assets efficiently with least cost, carry out plans and achieve targets. The management demands loyalty and devotion to duty. On the other hand the workers want their supervisors to be their spokesmen, keep them out of trouble, interpret their fears and wants to the management and to be heard by them. As a result of the

conflicting demands, the supervisor thinks that he is caught between opposing forces and he feels like a buffer between the management and the workers.

10.24.7.2 Marginal Supervisor:

Some supervisors feel alienated and have become marginal in their role. They feel ignored by both the management and the workers. The unions deal directly with the management. The union leaders consider the supervisors as management's errand boy, and he cannot take decisions and has to be bypassed to get anything. The supervisor now feels that, since negotiations are conducted by higher ups, he is there only to carry out the orders and manage the show somehow. He feels that he works alone, workers have their unions and the management has its power and authority.

10.24.7.3 Supervisor as "Another Worker":

Such supervisors feel that they are employees and supervisors in the title only. They lack authority and they feel they are not part of the management and they feel themselves like another worker. The result is that such supervisors often tend to interpret the management policies and actions in a way that is different from that intended by the management, as could be seen from the fact that 38 branches of unions out of 70 branches are manned by supervisors. Such high involvement of supervisors in the union activities is due to following reasons:

- Protection against transfer being office bearers.
- Supervisor span of control is large. With a large number of union branches, interference from the local union branches is natural. To stand such pressure and maintain their position they consider that it is better to become active office bearer of the union rather than becoming only the supervisor to the administration.

10.24.8 Recommendations: Considering the above aspects, the following recommendations are made for implementation on the Railways:

- When the senior supervisors become the active office bearers of the union, their loyalty to the administration reduces, the staff contact also reduces. It is essential that since senior supervisors are instrumental in implementing the official policy in the field, they should not be allowed to become the office bearers of recognized unions. This decision, however, will have to be taken at the Railway Board's level. This aspect has been stressed by RRC in the report on 'Personnel' department.
- Due care should be taken in the postings and transfers of supervisors. Age, seniority, family commitments and children education problems should be given due consideration. Undue hardships should be avoided.
- Supervisors must be encouraged to come forward with staff grievances. Branch officers must listen to their problems and help them in discharging their function rather than brushing aside the problems being experienced by them as a sign of their incompetence.
- Informal consultation in postings/transfers of staff working under them should be done. This will give them feeling of importance.
- They must be made aware of the planning and strategies and new policies from time to time. This should be done through regular meetings with the supervisors. Seminars should be arranged through which the supervisors can interact with each other and exchange notes. This will give them the sense of participation in management.
- Initial training of the supervisors on recruitment needs a relook.

10.25 Monitoring of Grievances received from Unions and Staff

10.25.1 As already reported, cases of serious nature are taken up by recognized unions for settlement at appropriate level. Since the railway staff are controlled directly through the divisions, the PNM items taken up at the divisional level are required to be settled expeditiously. The following actions can play the role of catalyst in solving the PNM issues:

- In order to settle the PNM cases early, it is necessary that preliminary meeting with Branch officers and Personnel officers are held at ADRM's level at least 15 days before the scheduled date of PNM meeting.
- While discussing the PNM/informal issues, consensus plan of action is arrived at between ADRM, Branch Officers and Personnel Officers so that from the administration point of view, the agreed correct replies are given to the unions during meeting to avoid any complications and confusions.
- If review meetings are held 10/15 days in advance of the scheduled PNM meeting, desired required action on the pending issues can be taken as per the directives given by the higher ups.
- When the administration is well prepared, the chances of finalization of PNM issues are also more.

10.25.2 This Review Meeting was also held regularly on BRC division from April 1994 onwards and it could be seen that the number of items have been reduced by 45% during the last four years. With the reduction of PNM items, the following additional benefits have also been achieved:

- i) PNM meetings can be completed within two days time. In case the pending issues of PNM are more, there are chances that the PNM meeting is extended as it is difficult to discuss more than 200 items in two days.
- ii) The consumption of stationary can also be reduced. With the reduction of PNM items on BRC division, the PNM minutes are having 15/20 pages less as compared to previous pages.
- iii) If the PNM items are reduced, the workload on Union Cell and other staff also reduces and the extra time so generated can be devoted to settle other issues.
- iv) Finalisation of PNM items brings satisfaction not only to the Union Office Bearers but to the line staff also, which in turn improves the productivity and efficiency of the staff.

10.25.3 Apart from PNM issues, the staff and Unions, also write to the Branch Officers and higher officers individual letters bringing out the details of issues which are

required to be settled to eliminate irritation at grass root level. It is noticed that systematic attention to such issues is not being given by Branch Officers. The representations received from Union/staff directly are not properly accounted for in the present system and it becomes extremely difficult to keep a watch on the finalization of such issues. In order to streamline the procedure, it is essential that Branch Officers and Personnel Officers keep separate register where the details of grievances directly received through staff and Unions are tabulated in the following format.

Table 10.8: Format for Grievance Monitoring

S. No.	Date	Date of representation	Brief details of representation	Marked to which officer/section	Progress of action taken

These registers were opened in the office of ADRM, Vadodara, and the results achieved were satisfactory. This monitoring can also be computerized so that if a particular case is not getting proper attention, the concerned dealing staff/officer can be reminded by issuing a reminder letter. A letter containing the list of pending representations can also be issued periodically to the concerned officer for early compliance.

10.26 Monitoring of vacancies, holding of selection, trade test, suitability test and issue of promotion orders of staff:

10.26.1 It is a well-known fact that every individual, wherever he is working, wants further advancements in his career. Due to lethargy on the part of the dealing staff, the selections are not held in time and promotions to the staff are delayed. The delay in promotion not only affects the emoluments but also affects the post retirement pensionary benefits. In other words, if the staff are given delayed promotions on administrative grounds, the carry home salary of the staff gets reduced. It is noticed that about 25% of the PNM cases pertain to promotions and transfers. If proper watch is kept on the finalization of selections and filling up of vacancies, the satisfaction level of staff can be increased.

10.26.2 On the Vadodara division during the four years from 1994 concerted efforts were made to ensure that the selections are held in time and staff promoted as and when due. During the four years the number of staff promoted are given below:

Table 10.9: Staff Promoted

Year	No. of staff promoted
1994	4300
1995	5000
1996	4500
1997	4000

10.26.3 For ensuring early finalization of selections, proper watch is kept on the the Vadodara division. The Personnel Officers of the division are advised to furnish the list of vacant posts and action required to be taken to fill up the same as per the format given below to Sr DPO and ADRM:

Table 10.10: Format for monitoring vacancies and selections

S. No	Category	Scale	Sanctioned strength	Existing vacancies	Action plan to fill up the existing and anticipated vacancies

10.26.4 On the basis of details of vacancy position and action plan to fill up the same submitted to ADRM and branch officers, regular meetings are held at ADRM's level, where officers from Executive Branch and Personnel Branch are also present along with their supervisors. Wherever selections/promotions of staff are held up, immediate actions are initiated to ensure that selections are finalized early and staff promoted. Every month list of selections delayed along with the reasons of delay is being circulated to concerned officers for the early finalization of selections. Systematic monitoring of this vital issue is needed on all the divisions. If the staff are promoted in time it will definitely generate a sense of satisfaction amongst them and which will in turn improve the overall efficiency and productivity of the railway administration.

ANNEXURE I

Questionnaire

DepartmentStation.....Contact date..... Contactor.....

1. Name
2. Father/Husband's name
3. P. F. Number
4. Date of appointment
5. Designation
6. Rate of pay
7. Pay scale
8. Date of promotion in present grade
9. Security/Non-Security

Personal details

1. Date of birth & Place
2. Community
3. Educational Qualification

Family details

S. No.	Names of family members	Relationship with employee	Date of birth	Educational Qualification	Profession