

## CHAPTER – IV

### ERRORS, LAPSES, VIOLATIONS AND TRAFFIC AWARENESS OF DRIVERS

#### 4.1 Introduction

In this chapter, socio-economic profile, errors, lapses, violations and traffic awareness of drivers were analysed and the results are here under presented.

#### 4.2. Socio-Economic Profile of Drivers

The socio-economic profile of drivers was analysed and the results are hereunder presented.

##### 4.2.1. Age Group of Drivers

The age group of drivers is presented in Table 4.1.

**Table-4.1. Age Group of Drivers**

Sl. No.	Age Group	Number of Drivers	Percentage
1.	Less than 20 years	37	7.40
2.	20 – 29 years	197	39.40
3.	30 – 39 years	143	28.60
4.	40 – 49 years	71	14.20
5.	More than 50 years	52	10.40
	<b>Total</b>	<b>500</b>	<b>100.00</b>

Source: Primary Data

The results show that 39.40 per cent of drivers are in the age group of 20 – 29 years followed by 30 – 39 years (28.60 per cent), 40 – 49 years (14.20 per cent), more than 50 years (10.40 per cent) and less than 20 years (7.40 per cent). It is inferred that the majority of drivers are in the age group of 20 – 29 years.

#### 4.2.2. Educational Qualification of Drivers

The educational qualification of drivers is presented in Table 4.2.

**Table-4.2. Educational Qualification of Drivers**

<b>Sl. No.</b>	<b>Educational Qualification</b>	<b>Number of Drivers</b>	<b>Percentage</b>
1.	Illiterate	177	35.40
2.	Primary	185	37.00
3.	Intermediate	61	12.20
4.	Secondary	47	9.40
5.	University	30	6.00
	<b>Total</b>	<b>500</b>	<b>100.00</b>

Source: Primary Data

The results indicate that 37.00 per cent of drivers have primary education followed by illiterate (35.40 per cent), intermediate (12.20 per cent), secondary education (9.40 per cent) and university education (6.00 per cent). It reveals that the most of drivers have primary education.

### 4.2.3. Occupation of Drivers

The occupation of drivers is presented in Table 4.3.

**Table-4.3. Occupation of Drivers**

<b>Sl. No.</b>	<b>Occupation</b>	<b>Number of Drivers</b>	<b>Percentage</b>
1.	Sedentary	188	37.60
2.	Manual	173	34.60
3.	Business	62	12.40
4.	Student	42	8.40
5.	Retired	35	7.00
	<b>Total</b>	<b>500</b>	<b>100.00</b>

Source: Primary Data

It is clear that 37.60 per cent of drivers have occupation of sedentary followed by manual (34.60 per cent), business (12.40 per cent), student (8.40 per cent) and retired (7.00 per cent). It is inferred that the majority of drivers have occupation of sedentary.

### 4.2.4. Driving Experience of Drivers

The driving experience of drivers is presented in Table 4.4.

It is observed that 45.60 per cent of drivers have driving experience of less than two years followed by 2 – 5 years (29.60 per cent), 5 – 10 years (14.60 per cent) and more than 10 years (10.20 per cent). It reveals that the most of drivers have driving experience of less than two years.

**Table-4.4. Driving Experience of Drivers**

<b>Sl. No.</b>	<b>Driving Experience</b>	<b>Number of Drivers</b>	<b>Percentage</b>
1.	Less than 2 years	228	45.60
2.	2 – 5 years	148	29.60
3.	5 – 10 years	73	14.60
4.	More than 10 years	51	10.20
	<b>Total</b>	<b>500</b>	<b>100.00</b>

Source: Primary Data

#### **4.2.5. Vehicles Used by Drivers**

The vehicles used by drivers are presented in Table 4.5.

**Table-4.5. Vehicles Used by Drivers**

<b>Sl. No.</b>	<b>Vehicles Used</b>	<b>Number of Drivers</b>	<b>Percentage</b>
1.	Car	228	45.60
2.	Van	118	23.60
3.	Bus	57	11.40
4.	Lorry	61	12.20
5.	Auto	36	7.20
	<b>Total</b>	<b>500</b>	<b>100.00</b>

Source: Primary Data

It is apparent that 45.60 per cent of drivers have used car followed by van (23.60 per cent), lorry (12.20 per cent), bus (11.40 per cent) and auto (7.20 per cent). It is inferred that the majority of drivers have used car.

### 4.3. Errors of Drivers

The errors of drivers was analysed and the results are presented in Table 4.6.

**Table-4.6. Errors of Drivers**

<b>Sl. No.</b>	<b>Errors</b>	<b>Mean</b>	<b>Standard Deviation</b>
1.	Fail to notice a pedestrian crossing when turning into a side-street from a main road	1.75	1.07
2.	Turn left on the main road into the path of an oncoming vehicle whose speed you had misjudged; as a result, the oncoming vehicle is forced to brake	1.95	1.21
3.	Misjudge the road surface, through which your braking path is longer than you expected	1.96	1.28
4.	Cut the bends and occasionally drive in the left lane in rural areas even though your sight is short	1.92	1.27
5.	Almost go off the road because you ride too fast when turning a corner	1.97	1.20
6.	Fail to realise that you should give priority and narrowly avoid colliding	1.94	1.26
7.	On turning right, nearly hit a cyclist who has come up on your inside	2.19	1.28
8.	Underestimate the speed of an oncoming vehicle when overtaking	2.18	1.22
9.	Misjudge your speed when approaching a crossing or traffic light and have to slam on the brakes	2.30	1.25

<b>Sl. No.</b>	<b>Errors</b>	<b>Mean</b>	<b>Standard Deviation</b>
10.	Brake too quickly on a slippery road and/or steer the wrong way into a skid	2.25	1.21
11.	Fail to watch over your shoulder or to check your mirror before driving away or overtaking	2.19	1.22
12.	Attempt to overtake a person that you hadn't noticed to be signalling its intention to turn left	2.25	1.25
13.	Not take account of the blind spot of a car or truck	2.27	1.16

Source: Primary Data

The results show that the drivers are rarely fail to notice a pedestrian crossing when turning into a side-street from a main road, turn left on the main road into the path of an oncoming vehicle whose speed they had misjudged as a result, the oncoming vehicle is forced to brake, misjudge the road surface, through which their braking path is longer than they expected, cut the bends and occasionally drive in the left lane in rural areas even though their sight is short and almost go off the road because they ride too fast when turning a corner. fail to realise that they should give priority and narrowly avoid colliding, on turning right, nearly hit a cyclist who has come up on their inside, underestimate the speed of an oncoming vehicle when overtaking, misjudge their speed when approaching a crossing or traffic light and have to slam on the brakes, brake too quickly on a slippery road and/or steer the wrong way into a skid, fail to watch over their

shoulder or to check their mirror before driving away or overtaking, attempt to overtake a person that they hadn't noticed to be signalling its intention to turn left and not take account of the blind spot of a car or truck.

#### 4.4. Socio-Economic Profile of Drivers and Errors

The opinion of drivers about errors is differing with their socio-economic profile. The relationship between socio-economic profile and their opinion about errors was analysed and the results are hereunder presented. The distribution of drivers on the basis of their opinion about errors was analysed and the results are presented in Table 4.7. The responses of drivers about errors has been classified into low level, moderate level and high level based on "Mean  $\pm$  SD" criterion. The mean score is 27.16 and the SD is 6.92.

**Table-4.7. Distribution of Drivers on the Basis of Their Opinion about Errors**

Sl. No.	Level of Errors	Number of Drivers	Percentage
1.	Low	74	14.80
2.	Moderate	370	74.00
3.	High	56	11.20
	<b>Total</b>	<b>500</b>	<b>100.00</b>

Source: Primary Data

The results indicate that 74.00 per cent of drives opined that the level of errors at moderate level followed by low level (14.80 per cent) and high level (11.20 per cent).

#### 4.4.1 Age Group and Errors

The relationship between age group of drivers and errors was analysed and the results are presented in Table 4.8.

**Table-4.8. Age Group and Errors**

Sl. No.	Age Group	Level of Errors			Total	Chi Square value & d.f.	P
		Low	Moderate	High			
1.	Less than 20 years	5 (13.51)	28 (75.68)	4 (10.81)	<b>37</b> <b>(7.40)</b>	<b>13.673, 8</b>	<b>0.006</b>
2.	20 – 29 years	21 (10.66)	155 (78.68)	21 (10.66)	<b>197</b> <b>(39.40)</b>		
3.	30 – 39 years	36 (25.18)	95 (66.43)	12 (8.39)	<b>143</b> <b>(28.60)</b>		
4.	40 – 49 years	9 (12.68)	51 (71.83)	11 (15.49)	<b>71</b> <b>(14.20)</b>		
5.	More than 50 years	3 (5.77)	41 (78.85)	8 (15.38)	<b>52</b> <b>(10.40)</b>		
	<b>Total</b>	<b>74</b> <b>(14.80)</b>	<b>370</b> <b>(74.00)</b>	<b>56</b> <b>(11.20)</b>	<b>500</b> <b>(100.00)</b>		

Source: Primary Data

The figures in the parentheses are per cent to total

H0: There is no association between age of the drivers and the errors

Out of 37 drivers in the age group of less than 20 years, 75.68 per cent of drives opined that the level of errors at moderate level followed by low level (13.51 per cent) and high level (10.81 per cent).

Out of 197 drivers in the age group of 20 – 29 years, 78.68 per cent of drives opined that the level of errors at moderate level followed by both low level and high level (10.66 per cent).

Out of 143 drivers in the age group of 30 – 39 years, 66.43 per cent of drives opined that the level of errors at moderate level followed by low level (25.18 per cent) and high level (8.39 per cent).

Out of 71 drivers in the age group of 40 – 49 years, 71.83 per cent of drives opined that the level of errors at moderate level followed by high level (15.49 per cent) and low level (12.68 per cent).

Out of 52 drivers in the age group of more than 50 years, 78.85 per cent of drives opined that the level of errors at moderate level followed by high level (15.38 per cent) and low level (5.77 per cent).

In order to examine the association between age group of drivers and errors, chi-square test has been used and the results are presented in Table 4.8.

The chi-square value of 13.673 is significant at one per cent level indicating that there is significant association between age group of drivers and errors at one per cent level because 0.006. Hence, the null hypothesis of there is no significant

association between age group of drivers and errors is rejected. It implies there is significance association with errors based on the age. It is further observed from the frequency that the error is decreasing with increase in age.

#### 4.4.2 Educational Qualification and Errors

The relationship between educational qualification of drivers and errors was analysed and the results are presented in Table 4.9.

**Table-4.9. Educational Qualification and Errors**

Sl. No.	Educational Qualification	Level of Errors			Total	Chi-square value & d.f.	P
		Low	Moderate	High			
1.	Illiterate	22 (12.43)	145 (81.92)	10 (5.65)	<b>177</b> <b>(35.40)</b>	13.707	.001
2.	Primary	37 (20.00)	132 (71.35)	16 (8.65)	<b>185</b> <b>(37.00)</b>		
3.	Intermediate	6 (9.84)	42 (68.85)	13 (21.31)	<b>61</b> <b>(12.20)</b>		
4.	Secondary	7 (14.89)	28 (59.58)	12 (25.53)	<b>47</b> <b>(9.40)</b>		
5.	University	2 (6.67)	23 (76.66)	5 (16.67)	<b>30</b> <b>(6.00)</b>		
	<b>Total</b>	<b>74</b> <b>(14.80)</b>	<b>370</b> <b>(74.00)</b>	<b>56</b> <b>(11.20)</b>	<b>500</b> <b>(100.00)</b>		

Source: Primary Data

The figures in the parentheses are per cent to total

H0: There is no association between education level and errors

Out of 177 drivers who are illiterates, 81.92 per cent of drivers opined that the level of errors at moderate level followed by low level (12.43 per cent) and high level (5.65 per cent).

Out of 185 drivers who have primary education, 71.35 per cent of drivers opined that the level of errors at moderate level followed by low level (20.00 per cent) and high level (8.65 per cent).

Out of 61 drivers who have intermediate education, 68.85 per cent of drivers opined that the level of errors at moderate level followed by high level (21.31 per cent) and low level (9.84 per cent).

Out of 47 drivers who have secondary education, 59.58 per cent of drivers opined that the level of errors at moderate level followed by high level (25.53 per cent) and low level (14.89 per cent).

Out of 30 drivers who have university education, 76.66 per cent of drivers opined that the level of errors at moderate level followed by high level (16.67 per cent) and low level (6.67 per cent).

In order to examine the association between educational qualification of drivers and errors, chi-square test has been used and the results are presented in Table 4.9.

The chi-square value of 13.707 is significant at one per cent level indicating that there is significant association between educational qualification of drivers and errors. Hence, the null hypothesis of there is no significant association between educational qualification of drivers and errors is rejected. The higher the qualification the lower the error is observed.

#### 4.4.3 Occupation and Errors

The relationship between occupation of drivers and errors was analysed and the results are presented in Table 4.10.

**Table-4.10. Occupation and Errors**

Sl. No.	Occupation	Level of Errors			Total	Chi-square value	p
		Low	Moderate	High			
1.	Sedentary	25 (13.30)	150 (79.79)	13 (6.91)	<b>188</b> <b>(37.60)</b>	13.676	.001
2.	Manual	29 (16.76)	131 (75.72)	13 (7.52)	<b>173</b> <b>(34.60)</b>		
3.	Business	9 (14.52)	39 (62.90)	14 (22.58)	<b>62</b> <b>(12.40)</b>		
4.	Student	3 (7.14)	29 (69.05)	10 (23.81)	<b>42</b> <b>(8.40)</b>		
5.	Retired	8 (22.86)	21 (60.00)	6 (17.14)	<b>35</b> <b>(7.00)</b>		
	<b>Total</b>	<b>74</b> <b>(14.80)</b>	<b>370</b> <b>(74.00)</b>	<b>56</b> <b>(11.20)</b>	<b>500</b> <b>(100.00)</b>		

Source: Primary Data

The figures in the parentheses are per cent to total

H0: Occupation and errors are not associated

Out of 188 drivers who have occupation of sedentary, 79.79 per cent of drives opined that the level of errors at moderate level followed by low level (13.30 per cent) and high level (6.91 per cent).

Out of 173 drivers who have occupation of manual, 75.72 per cent of drives opined that the level of errors at moderate level followed by low level (16.76 per cent) and high level (7.52 per cent).

Out of 62 drivers who are businessmen, 62.90 per cent of drives opined that the level of errors at moderate level followed by high level (22.58 per cent) and low level (14.52 per cent).

Out of 42 drivers who are students, 69.05 per cent of drives opined that the level of errors at moderate level followed by high level (23.81 per cent) and low level (7.14 per cent).

Out of 35 drivers who are retired persons, 60.00 per cent of drives opined that the level of errors at moderate level followed by low level (22.86 per cent) and high level (17.14 per cent).

In order to examine the association between occupation of drivers and errors, chi-square test has been used and the results are presented in Table 4.10.

The chi-square value of 13.676 is significant at one per cent level indicating that there is significant association between occupation of drivers and errors. Hence, the null hypothesis of there is no significant association between occupation of drivers and errors is rejected. It is least among students.

#### 4.4.4 Driving Experience and Errors

The relationship between occupation of drivers and errors was analysed and the results are presented in Table 4.11.

**Table-4.11. Driving Experience and Errors**

Sl. No.	Driving Experience	Level of Errors			Total	Chi-square Value & d.f.	p
		Low	Moderate	High			
1.	Less than 2 years	46 (20.18)	169 (74.12)	13 (5.70)	<b>228</b> <b>(45.60)</b>	28.559	<b>0.001</b>
2.	2 – 5 years	10 (6.75)	126 (85.14)	12 (8.11)	<b>148</b> <b>(29.60)</b>		
3.	5 – 10 years	13 (17.81)	45 (61.64)	15 (20.55)	<b>73</b> <b>(14.60)</b>		
4.	More than 10 years	5 (9.80)	30 (58.83)	16 (31.37)	<b>51</b> <b>(10.20)</b>		
	<b>Total</b>	<b>74</b> <b>(14.80)</b>	<b>370</b> <b>(74.00)</b>	<b>56</b> <b>(11.20)</b>	<b>500</b> <b>(100.00)</b>		

Source: Primary Data

The figures in the parentheses are per cent to total

H0: Driving experience and the errors are not associated significantly.

Out of 228 drivers who have driving experience of less than two years, 74.12 per cent of drives opined that the level of errors at moderate level followed by low level (20.18 per cent) and high level (5.70 per cent).

Out of 148 drivers who have driving experience of 2 – 5 years, 85.14 per cent of drives opined that the level of errors at moderate level followed by high level (8.11 per cent) and low level (6.75 per cent).

Out of 73 drivers who have driving experience of 5 – 10 years, 61.64 per cent of drives opined that the level of errors at moderate level followed by high level (20.55 per cent) and low level (17.81 per cent).

Out of 51 drivers who have driving experience of more than 10 years, 58.83 per cent of drives opined that the level of errors at moderate level followed by high level (31.37 per cent) and low level (9.80 per cent).

In order to examine the association between driving experience of drivers and errors, chi-square test has been used and the results are presented in Table 4.11.

The chi-square value of 28.559 is significant at one per cent level indicating that there is significant association between driving experience of drivers and errors. Hence, the null hypothesis of there is no significant association between

driving experience of drivers and errors is rejected. More the experience lesser is the error.

#### 4.4.5 Vehicles Used by Drivers and Errors

The relationship between vehicles used by drivers and errors was analysed and the results are presented in Table 4.12.

**Table-4.12. Vehicles Used by Drivers and Errors**

Sl. No.	Vehicles Used by Drivers	Level of Errors			Total	Chi-square value & d.f.	P
		Low	Moderate	High			
1.	Car	45 (19.74)	174 (76.32)	9 (3.94)	<b>228</b> <b>(45.60)</b>	20.732 8	.001
2.	Van	13 (11.02)	87 (73.73)	18 (15.25)	<b>118</b> <b>(23.60)</b>		
3.	Bus	3 (5.26)	44 (77.19)	10 (17.55)	<b>57</b> <b>(11.40)</b>		
4.	Lorry	9 (14.75)	38 (62.30)	14 (22.95)	<b>61</b> <b>(12.20)</b>		
5.	Auto	4 (11.11)	27 (75.00)	5 (13.89)	<b>36</b> <b>(7.20)</b>		
	<b>Total</b>	<b>74</b> <b>(14.80)</b>	<b>370</b> <b>(74.00)</b>	<b>56</b> <b>(11.20)</b>	<b>500</b> <b>(100.00)</b>		

Source: Primary Data

The figures in the parentheses are per cent to total

H0: Type of vehicle divers and errors are not associated significantly.

Out of 228 drivers who have used car, 76.32 per cent of drives opined that the level of errors at moderate level followed by low level (19.74 per cent) and high level (3.94 per cent).

Out of 118 drivers who have used van, 73.73 per cent of drives opined that the level of errors at moderate level followed by high level (15.25 per cent) and low level (11.02 per cent).

Out of 57 drivers who have used bus, 77.19 per cent of drives opined that the level of errors at moderate level followed by high level (17.55 per cent) and low level (5.26 per cent).

Out of 61 drivers who have used lorry, 62.30 per cent of drives opined that the level of errors at moderate level followed by high level (22.95 per cent) and low level (14.75 per cent).

Out of 36 drivers who have used auto, 75.00 per cent of drives opined that the level of errors at moderate level followed by high level (13.89 per cent) and low level (11.11 per cent).

In order to examine the association between vehicles used by drivers and errors, chi-square test has been used and the results are presented in Table 4.12.

The Chi-square value of 20.732 is significant at one per cent level indicating that there is significant association between vehicles used by drivers

and errors. Hence, the null hypothesis of there is no significant association between vehicles used by drivers and errors is rejected. It is found that the error is high with lorry and cars compared to other vehicle drivers.

#### 4.5. LAPSES OF DRIVERS

The lapses of drivers was analysed and the results are presented in Table 4.13.

**Table-4.13. Lapses of Drivers**

<b>Sl. No.</b>	<b>Lapses</b>	<b>Mean</b>	<b>Standard Deviation</b>
1.	Misread the signs correctly, and exit from a roundabout on the wrong road	2.15	1.17
2.	Not notice a traffic sign telling you that the road is temporarily closed	2.32	1.29
3.	Not switch on the lights when it is dark	2.38	1.20
4.	Not notice that the light that allows you to turn off is green	2.26	1.34
5.	Not notice that you should ride on the carriageway rather than on the cycle lane	2.34	1.34
6.	Not notice that the light turns green	2.42	1.36
7.	Realise that you have no clear recollection of the road along which you have just been travelling	2.21	1.33
8.	Forget that your lights are on full beam while you enter a well-lit area	2.29	1.32

<b>Sl. No.</b>	<b>Lapses</b>	<b>Mean</b>	<b>Standard Deviation</b>
9.	Intending to ride to destination A, you 'wake up' to find yourself en route to B, where the latter is the more usual journey	2.12	1.25
10.	Forget where you parked your moped	2.04	1.20
11.	Get into the wrong lane approaching a crossing	2.14	1.25

Source: Primary Data

The results show that the drivers are rarely misread the signs correctly, and exit from a roundabout on the wrong road, not notice a traffic sign telling them that the road is temporarily closed, not switch on the lights when it is dark, not notice that the light that allows them to turn off is green, not notice that they should ride on the carriageway rather than on the cycle lane, not notice that the light turns green, realise that they have no clear recollection of the road along which they have just been traveling, forget that their lights are on full beam while they enter a well-lit area, intending to ride to destination a, they 'wake up' to find themselves en route to b, where the latter is the more usual journey, forget where they parked your moped and get into the wrong lane approaching a crossing.

#### **4.6. Socio-Economic Profile of Drivers and Lapses**

The opinion of drivers about lapses is varying with their socio-economic profile. The relationship between socio-economic profile and their opinion about lapses was analysed and the results are hereunder presented. The distribution of

drivers on the basis of their opinion about lapses was analysed and the results are presented in Table 4.14. The responses of drivers about lapses has been classified into low level, moderate level and high level based on “ Mean  $\pm$  SD” criterion. The mean score is 24.68 and the SD is 5.84.

**Table-4.14. Distribution of Drivers on the Basis of Their Opinion about Lapses**

<b>Sl. No.</b>	<b>Level of Lapses</b>	<b>Number of Drivers</b>	<b>Percentage</b>
1.	Low	83	16.60
2.	Moderate	357	71.40
3.	High	60	12.00
	<b>Total</b>	<b>500</b>	<b>100.00</b>

Source: Primary Data

The results indicate that 71.40 per cent of drives opined that the level of lapses at moderate level followed by low level (16.60 per cent) and high level (12.00 per cent).

#### **4.6.1 Age Group and Lapses**

The relationship between age group of drivers and lapses was analysed and the results are presented in Table 4.15.

**Table-4.15. Age Group and Lapses**

Sl. No.	Age Group	Level of Lapses			Total	Chi-square value & d.f.	p
		Low	Moderate	High			
1.	Less than 20 years	4 (10.81)	25 (67.57)	8 (21.62)	<b>37</b> <b>(7.40)</b>	1.557 8	.185
2.	20 – 29 years	43 (21.83)	128 (64.97)	26 (13.20)	<b>197</b> <b>(39.40)</b>		
3.	30 – 39 years	22 (15.38)	108 (75.53)	13 (9.09)	<b>143</b> <b>(28.60)</b>		
4.	40 – 49 years	7 (9.86)	53 (74.65)	11 (15.49)	<b>71</b> <b>(14.20)</b>		
5.	More than 50 years	7 (13.46)	43 (82.69)	2 (3.85)	<b>52</b> <b>(10.40)</b>		
	<b>Total</b>	<b>83</b> <b>(16.60)</b>	<b>357</b> <b>(71.40)</b>	<b>60</b> <b>(12.00)</b>	<b>500</b> <b>(100.00)</b>		

Source: Primary Data

The figures in the parentheses are per cent to total

H0: The age groups of drivers are not significantly associated with lapses.

Out of 37 drivers in the age group of less than 20 years, 67.57 per cent of drives opined that the level of lapses at moderate level followed by high level (21.62 per cent) and low level (10.81 per cent).

Out of 197 drivers in the age group of 20 – 29 years, 64.97 per cent of drives opined that the level of lapses at moderate level followed by low level (21.83 per cent) and high level (13.20 per cent).

Out of 143 drivers in the age group of 30 – 39 years, 75.53 per cent of drives opined that the level of lapses at moderate level followed by low level (15.38 per cent) and high level (9.09 per cent).

Out of 71 drivers in the age group of 40 – 49 years, 74.65 per cent of drives opined that the level of lapses at moderate level followed by high level (15.49 per cent) and low level (9.86 per cent).

Out of 52 drivers in the age group of more than 50 years, 82.69 per cent of drives opined that the level of lapses at moderate level followed by low level (13.46 per cent) and high level (3.85 per cent).

In order to examine the association between age group of drivers and lapses, chi-square test has been used and the results are presented in Table 4.15.

The chi-square value of 1.557 is not statistically significant indicating that there is no significant association between age group of drivers and lapses. Hence, the null hypothesis of there is no significant association between age group of drivers and lapses is accepted. Age and lapses are not associated.

#### 4.6.2 Educational Qualification and Lapses

The relationship between educational qualification of drivers and lapses was analysed and the results are presented in Table 4.16.

**Table-4.16. Educational Qualification and Lapses**

Sl. No.	Educational Qualification	Level of Lapses			Total	Chi-square value & d.f.	p
		Low	Moderate	High			
1.	Illiterate	39 (22.03)	117 (66.10)	21 (11.87)	<b>177</b> <b>(35.40)</b>	1.573 8	0.180
2.	Primary	28 (15.14)	133 (71.89)	24 (12.97)	<b>185</b> <b>(37.00)</b>		
3.	Intermediate	6 (9.84)	50 (81.97)	5 (8.19)	<b>61</b> <b>(12.20)</b>		
4.	Secondary	7 (14.89)	34 (72.34)	6 (12.77)	<b>47</b> <b>(9.40)</b>		
5.	University	3 (10.00)	23 (76.67)	4 (13.33)	<b>30</b> <b>(6.00)</b>		
	<b>Total</b>	<b>83</b> <b>(16.60)</b>	<b>357</b> <b>(71.40)</b>	<b>60</b> <b>(12.00)</b>	<b>500</b> <b>(100.00)</b>		

Source: Primary Data

The figures in the parentheses are per cent to total

H0: There is no association between education level and lapses of the drivers.

Out of 177 drivers who are illiterates, 66.10 per cent of drivers opined that the level of lapses at moderate level followed by low level (22.03 per cent) and high level (11.87 per cent).

Out of 185 drivers who have primary education, 71.89 per cent of drivers opined that the level of lapses at moderate level followed by low level (15.14 per cent) and high level (12.97 per cent).

Out of 61 drivers who have intermediate education, 81.97 per cent of drivers opined that the level of lapses at moderate level followed by low level (9.84 per cent) and high level (8.19 per cent).

Out of 47 drivers who have secondary education, 72.34 per cent of drivers opined that the level of lapses at moderate level followed by low level (14.89 per cent) and high level (12.77 per cent).

Out of 30 drivers who have university education, 76.67 per cent of drivers opined that the level of lapses at moderate level followed by high level (13.33 per cent) and low level (10.00 per cent).

In order to examine the association between educational qualification of drivers and lapses, test has been used and the results are chi-square presented in Table 4.16.

The chi-square value of 1.573 is not statistically significant indicating that there is no significant association between educational qualification of drivers and

lapses. Hence, the null hypothesis of there is no significant association between educational qualification of drivers and lapses is accepted. Lapses are same among all categories.

#### 4.6.3 Occupation and Lapses

The relationship between occupation of drivers and lapses was analysed and the results are presented in Table 4.17.

**Table-4.17. Occupation and Lapses**

Sl. No.	Occupation	Level of Lapses			Total	Chi-square value & d.f.	P
		Low	Moderate	High			
1.	Sedentary	39 (20.74)	129 (68.62)	20 (10.64)	<b>188</b> <b>(37.60)</b>	.369 8	.831
2.	Manual	25 (14.45)	123 (71.10)	25 (14.45)	<b>173</b> <b>(34.60)</b>		
3.	Business	11 (17.74)	45 (72.58)	6 (9.68)	<b>62</b> <b>(12.40)</b>		
4.	Student	2 (4.76)	35 (83.33)	5 (11.91)	<b>42</b> <b>(8.40)</b>		
5.	Retired	6 (17.14)	25 (71.43)	4 (11.43)	<b>35</b> <b>(7.00)</b>		
	<b>Total</b>	<b>83</b> <b>(16.60)</b>	<b>357</b> <b>(71.40)</b>	<b>60</b> <b>(12.00)</b>	<b>500</b> <b>(100.00)</b>		

Source: Primary Data

The figures in the parentheses are per cent to total

H0: Occupation and lapses are not significantly associated.

Out of 188 drivers who have occupation of sedentary, 68.62 per cent of drives opined that the level of lapses at moderate level followed by low level (20.74 per cent) and high level (10.64 per cent).

Out of 173 drivers who have occupation of manual, 71.10 per cent of drives opined that the level of lapses at moderate level followed by low level and high level (14.45 per cent).

Out of 62 drivers who are businessmen, 72.58 per cent of drives opined that the level of lapses at moderate level followed by low level (17.74 per cent) and high level (9.68 per cent).

Out of 42 drivers who are students, 83.33 per cent of drives opined that the level of lapses at moderate level followed by high level (11.91 per cent) and low level (4.76 per cent).

Out of 35 drivers who are retired persons, 71.43 per cent of drives opined that the level of lapses at moderate level followed by low level (17.14 per cent) and high level (11.43 per cent).

In order to examine the association between occupation of drivers and lapses, chi-square test has been used and the results are presented in Table 4.17.

The chi-square value of 0.369 is not statistically significant indicating that there is no significant association between occupation of drivers and lapses.

Hence, the null hypothesis of there is no significant association between occupation of drivers and lapses is accepted. Lapses levels are same among all the categories.

#### 4.6.4 Driving Experience and Lapses

The relationship between occupation of drivers and lapses was analysed and the results are presented in Table 4.18.

**Table-4.18. Driving Experience and Lapses**

Sl. No.	Driving Experience	Level of Lapses			Total	Chi-square value & d.f.	p
		Low	Moderate	High			
1.	Less than 2 years	52 (22.81)	151 (66.23)	25 (10.96)	<b>228</b> <b>(45.60)</b>	4.478 8	.004
2.	2 – 5 years	21 (14.19)	103 (69.59)	24 (16.22)	<b>148</b> <b>(29.60)</b>		
3.	5 – 10 years	6 (8.22)	61 (83.56)	6 (8.22)	<b>73</b> <b>(14.60)</b>		
4.	More than 10 years	4 (7.84)	42 (82.35)	5 (9.81)	<b>51</b> <b>(10.20)</b>		
	<b>Total</b>	<b>83</b> <b>(16.60)</b>	<b>357</b> <b>(71.40)</b>	<b>60</b> <b>(12.00)</b>	<b>500</b> <b>(100.00)</b>		

Source: Primary Data

The figures in the parentheses are per cent to total

H0: Experience of the drivers is not significantly associated with lapses.

Out of 228 drivers who have driving experience of less than two years, 66.23 per cent of drivers opined that the level of lapses at moderate level followed by low level (22.81 per cent) and high level (10.96 per cent).

Out of 148 drivers who have driving experience of 2 – 5 years, 69.59 per cent of drivers opined that the level of lapses at moderate level followed by high level (16.22 per cent) and low level (14.19 per cent).

Out of 73 drivers who have driving experience of 5 – 10 years, 83.56 per cent of drivers opined that the level of lapses at moderate level followed by high level and low level (8.22 per cent).

Out of 51 drivers who have driving experience of more than 10 years, 82.35 per cent of drivers opined that the level of lapses at moderate level followed by high level (9.81 per cent) and low level (7.84 per cent).

In order to examine the association between driving experience of drivers and lapses, chi-square test has been used and the results are presented in Table 4.18.

The chi-square value of 4.478 is significant at one per cent level indicating that there is significant association between driving experience of drivers and lapses. Hence, the null hypothesis of there is no significant association between driving experience of drivers and lapses is rejected. It was observed that when experience increased lapses found to decrease.

#### 4.6.5 Vehicles Used by Drivers and Lapses

The relationship between vehicles used by drivers and lapses was analysed and the results are presented in Table 4.19.

**Table-4.19. Vehicles Used by Drivers and Lapses**

Sl. No.	Vehicles Used by Drivers	Level of Lapses			Total	Chi-square value & d.f.	p
		Low	Moderate	High			
1.	Car	54 (23.69)	148 (64.91)	26 (11.40)	<b>228</b> <b>(45.60)</b>	3.917 8	.004
2.	Van	13 (11.02)	87 (73.73)	18 (15.25)	<b>118</b> <b>(23.60)</b>		
3.	Bus	6 (10.53)	43 (75.44)	8 (14.03)	<b>57</b> <b>(11.40)</b>		
4.	Lorry	4 (6.56)	52 (85.25)	5 (8.19)	<b>61</b> <b>(12.20)</b>		
5.	Auto	6 (16.67)	27 (75.00)	3 (8.33)	<b>36</b> <b>(7.20)</b>		
	<b>Total</b>	<b>83</b> <b>(16.60)</b>	<b>357</b> <b>(71.40)</b>	<b>60</b> <b>(12.00)</b>	<b>500</b> <b>(100.00)</b>		

Source: Primary Data

The figures in the parentheses are per cent to total

H0: There is no association between the occupation and lapses.

Out of 228 drivers who have used car, 64.91 per cent of drives opined that the level of lapses at moderate level followed by low level (23.69 per cent) and high level (11.40 per cent).

Out of 118 drivers who have used van, 73.73 per cent of drives opined that the level of lapses at moderate level followed by high level (15.25 per cent) and low level (11.02 per cent).

Out of 57 drivers who have used bus, 75.44 per cent of drives opined that the level of lapses at moderate level followed by high level (14.03 per cent) and low level (10.53 per cent).

Out of 61 drivers who have used lorry, 85.25 per cent of drives opined that the level of lapses at moderate level followed by high level (8.19 per cent) and low level (6.56 per cent).

Out of 36 drivers who have used auto, 75.00 per cent of drives opined that the level of lapses at moderate level followed by low level (16.67 per cent) and high level (8.33 per cent).

In order to examine the association between vehicles used by drivers and lapses, the chi-square test has been used and the results are presented in Table 4.19.

The chi-square value of 3.917 is significant at one per cent level indicating that there is significant association between vehicles used by drivers and lapses.

Hence, the null hypothesis of there is no significant association between vehicles used by drivers and lapses is rejected. Lapses were high among car and lorry drivers.

#### 4.7. VIOLATIONS OF DRIVERS

The violations of drivers was analysed and the results are presented in Table 4.20.

**Table-4.20. Violations of Drivers**

<b>Sl. No.</b>	<b>Violations</b>	<b>Mean</b>	<b>Standard Deviation</b>
1.	Deliberately drive too fast in build-up areas to overtake	2.21	1.22
2.	Deliberately drive too fast in build-up areas when little traffic	2.22	1.26
3.	Deliberately drive too fast in build-up areas to follow the traffic	2.13	1.24
4.	Deliberately drive close to someone in front of you	2.08	1.23
5.	Ride on the sidewalk in build-up areas to avoid a long way round	2.09	1.22
6.	Cross an intersection knowing that the traffic lights have already turned against you	2.04	1.21
7.	Drive especially close to someone in front as a signal for that driver to go faster or get out of your way	2.03	1.24
8.	Deliberately drive a one-way street the wrong way down	2.20	1.17

<b>Sl. No.</b>	<b>Violations</b>	<b>Mean</b>	<b>Standard Deviation</b>
9.	Deliberately disregard the speed limits outside build-up areas when there is little traffic	2.21	1.20
10.	Overtake a car or moped that reduces speed because you approach an area with lower speed limits	2.31	1.18
11.	Accelerate when approaching a traffic light at a green/yellow phase	2.12	1.23
12.	Riding your moped when you know you have drunk more alcohol than legally allowed	2.08	1.23
13.	Get involved in unofficial 'races' with other drivers	2.16	1.17
14.	Riding your moped when you suppose you have drunk more alcohol than legally allowed	2.15	1.24
15.	Ride on a crossing while you notice that someone coming from the right has priority	2.27	1.21
16.	Ride on a crossing while you see that a cyclists comes from the right and has priority	2.25	1.20
17.	Angered by another driver's behaviour, you give chase with the intention of giving him/her a piece of your mind	2.46	2.27
18.	Deliberately turn onto a main road just in front of an oncoming vehicle although no other traffic is approaching	2.25	1.20
19.	Not wearing a safety helmet when riding short distances	2.23	1.20

Source: Primary Data

The results show that the drivers are rarely deliberately drive too fast in build-up areas to overtake, deliberately drive too fast in build-up areas when little traffic, deliberately drive too fast in build-up areas to follow the traffic, deliberately drive close to someone in front of them, ride on the sidewalk in build-up areas to avoid a long way round, cross an intersection knowing that the traffic lights have already turned against them, drive especially close to someone in front as a signal for that driver to go faster or get out of their way, deliberately drive a one-way street the wrong way down, deliberately disregard the speed limits outside build-up areas when there is little traffic, overtake a car or moped that reduces speed because they approach an area with lower speed limits, accelerate when approaching a traffic light at a green/yellow phase, riding their moped when they know they have drunk more alcohol than legally allowed, get involved in unofficial 'races' with other drivers, riding their moped when they suppose they have drunk more alcohol than legally allowed, ride on a crossing while they notice that someone coming from the right has priority, ride on a crossing while they see that a cyclist comes from the right and has priority, angered by another driver's behaviour, they give chase with the intention of giving him/her a piece of their mind, deliberately turn onto a main road just in front of an oncoming vehicle although no other traffic is approaching and not wearing a safety helmet when riding short distances.

#### 4.8. Socio-Economic Profile of Drivers and Violations

The opinion of drivers about violations is differing with their socio-economic profile. The relationship between socio-economic profile and their opinion about violations was analysed and the results are hereunder presented. The distribution of drivers on the basis of their opinion about violations was analysed and the results are presented in Table 4.21. The responses of drivers about violations has been classified into low level, moderate level and high level based on “ Mean  $\pm$  SD” criterion. The mean score is 41.49 and the SD is 9.68.

**Table-4.21. Distribution of Drivers on the Basis of Their Opinion about Violations**

Sl. No.	Level of Violations	Number of Drivers	Percentage
1.	Low	68	13.60
2.	Moderate	367	73.40
3.	High	65	13.00
	<b>Total</b>	<b>500</b>	<b>100.00</b>

Source: Primary Data

The results indicate that 73.40 per cent of drives opined that the level of violations at moderate level followed by low level (13.60 per cent) and high level (13.00 per cent).

#### 4.8.1 Age Group and Violations

The relationship between age group of drivers and violations was analysed and the results are presented in Table 4.22.

**Table-4.22. Age Group and Violations**

Sl. No.	Age Group	Level of Violations			Total	Chi-square value & d.f.	p
		Low	Moderate	High			
1.	Less than 20 years	3 (8.11)	26 (70.27)	8 (21.62)	<b>37</b> <b>(7.40)</b>	4.381 8	.002
2.	20 – 29 years	28 (14.21)	150 (76.14)	19 (9.65)	<b>197</b> <b>(39.40)</b>		
3.	30 – 39 years	28 (19.58)	98 (68.53)	17 (11.89)	<b>143</b> <b>(28.60)</b>		
4.	40 – 49 years	5 (7.04)	52 (73.24)	14 (19.72)	<b>71</b> <b>(14.20)</b>		
5.	More than 50 years	4 (7.69)	41 (78.85)	7 (13.46)	<b>52</b> <b>(10.40)</b>		
	<b>Total</b>	<b>68</b> <b>(13.60)</b>	<b>367</b> <b>(73.40)</b>	<b>65</b> <b>(13.00)</b>	<b>500</b> <b>(100.00)</b>		

Source: Primary Data

The figures in the parentheses are per cent to total

H0: Age and violations by drivers are not significantly associated.

Out of 37 drivers in the age group of less than 20 years, 70.27 per cent of drives opined that the level of violations at moderate level followed by high level (21.62 per cent) and low level (8.11 per cent).

Out of 197 drivers in the age group of 20 – 29 years, 76.14 per cent of drives opined that the level of violations at moderate level followed by low level (14.21 per cent) and high level (9.65 per cent).

Out of 143 drivers in the age group of 30 – 39 years, 68.53 per cent of drives opined that the level of violations at moderate level followed by low level (19.58 per cent) and high level (11.89 per cent).

Out of 71 drivers in the age group of 40 – 49 years, 73.24 per cent of drives opined that the level of violations at moderate level followed by high level (19.72 per cent) and low level (7.04 per cent).

Out of 52 drivers in the age group of more than 50 years, 78.85 per cent of drives opined that the level of violations at moderate level followed by high level (13.46 per cent) and low level (7.69 per cent).

In order to examine the association between age group of drivers and violations, the chi-square test has been used and the results are presented in Table 4.22.

The chi-square value of 4.381 is significant at one per cent level indicating that there is significant association between age group of drivers and violations.

Hence, the null hypothesis of there is no significant association between age group of drivers and violations is rejected. It was the highest with middle of experience drivers than their juniors and seniors.

#### 4.8.2 Educational Qualification and Violations

The relationship between educational qualification of drivers and violations was analysed and the results are presented in Table 4.23.

**Table-4.23. Educational Qualification and Violations**

Sl. No.	Educational Qualification	Level of Violations			Total	Chi-square value & d.f.	p
		Low	Moderate	High			
1.	Illiterate	29 (16.38)	133 (75.14)	15 (8.48)	<b>177</b> <b>(35.40)</b>	5.002	.001
2.	Primary	28 (15.14)	134 (72.43)	23 (12.43)	<b>185</b> <b>(37.00)</b>		
3.	Intermediate	6 (9.84)	43 (70.49)	12 (19.67)	<b>61</b> <b>(12.20)</b>		
4.	Secondary	3 (6.38)	36 (76.60)	8 (17.02)	<b>47</b> <b>(9.40)</b>		
5.	University	2 (6.67)	21 (70.00)	7 (23.33)	<b>30</b> <b>(6.00)</b>		
	<b>Total</b>	<b>68</b> <b>(13.60)</b>	<b>367</b> <b>(73.40)</b>	<b>65</b> <b>(13.00)</b>	<b>500</b> <b>(100.00)</b>		

Source: Primary Data

The figures in the parentheses are per cent to total

H<sub>0</sub>: Education level of drivers is not associated with violations.

Out of 177 drivers who are illiterates, 75.14 per cent of drivers opined that the level of violations at moderate level followed by low level (16.38 per cent) and high level (8.48 per cent).

Out of 185 drivers who have primary education, 72.43 per cent of drivers opined that the level of violations at moderate level followed by low level (15.14 per cent) and high level (12.43 per cent).

Out of 61 drivers who have intermediate education, 70.49 per cent of drivers opined that the level of violations at moderate level followed by high level (19.67 per cent) and low level (9.84 per cent).

Out of 47 drivers who have secondary education, 76.60 per cent of drivers opined that the level of violations at moderate level followed by high level (17.02 per cent) and low level (6.38 per cent).

Out of 30 drivers who have university education, 70.00 per cent of drivers opined that the level of violations at moderate level followed by high level (23.33 per cent) and low level (6.67 per cent).

In order to examine the association between educational qualification of drivers and violations, chi-square test of association has been used and the results are presented in Table 4.23.

The chi-square value of 5.002 is significant at one per cent level indicating that there is significant association between educational qualification of drivers and violations. Hence, the null hypothesis of there is no significant association between educational qualification of drivers and violations is rejected. It is found that the violation was highest among the lowest qualified drivers.

#### 4.8.3 Occupation and Violations

The relationship between occupation of drivers and violations was analysed and the results are presented in Table 4.24.

**Table-4.24. Occupation and Violations**

Sl. No.	Occupation	Level of Violations			Total	Chi-square value & d.f.	p
		Low	Moderate	High			
1.	Sedentary	28 (14.89)	144 (76.60)	16 (8.51)	<b>188</b> <b>(37.60)</b>	2.355 8	.053
2.	Manual	22 (12.72)	132 (76.30)	19 (10.98)	<b>173</b> <b>(34.60)</b>		
3.	Business	9 (14.52)	40 (64.51)	13 (20.97)	<b>62</b> <b>(12.40)</b>		
4.	Student	7 (16.67)	27 (64.28)	8 (19.05)	<b>42 (8.40)</b>		
5.	Retired	2 (5.71)	24 (68.57)	9 (25.72)	<b>35 (7.00)</b>		
	<b>Total</b>	<b>68</b> <b>(13.60)</b>	<b>367</b> <b>(73.40)</b>	<b>65</b> <b>(13.00)</b>	<b>500</b> <b>(100.00)</b>		

Source: Primary Data

The figures in the parentheses are per cent to total

Ho: Occupation and violations are not significantly associated.

Out of 188 drivers who have occupation of sedentary, 76.60 per cent of drives opined that the level of violations at moderate level followed by low level (14.89 per cent) and high level (8.51 per cent).

Out of 173 drivers who have occupation of manual, 76.30 per cent of drives opined that the level of violations at moderate level followed by low level (12.72 per cent) and high level (10.98 per cent).

Out of 62 drivers who are businessmen, 64.51 per cent of drives opined that the level of violations at moderate level followed by high level (20.97 per cent) and low level (14.52 per cent).

Out of 42 drivers who are students, 64.28 per cent of drives opined that the level of violations at moderate level followed by high level (19.05 per cent) and low level (16.67 per cent).

Out of 35 drivers who are retired persons, 68.57 per cent of drives opined that the level of violations at moderate level followed by high level (25.72 per cent) and low level (5.71 per cent).

In order to examine the association between occupation of drivers and violations, chi-square test has been used and the results are presented in Table 4.24.

The chi-square value of 2.355 is not significant at five per cent level indicating that there is no significant association between occupation of drivers and violations. Hence, the null hypothesis of there is no significant association between occupation of drivers and violations is accepted. The violation attitude is the same among all the categories of drives

#### 4.8.4 Driving Experience and Violations

The relationship between occupation of drivers and violations was analysed and the results are presented in Table 4.25.

**Table-4.25. Driving Experience and Violations**

Sl. No.	Driving Experience	Level of Violations			Total	Chi-square value & d.f.	p
		Low	Moderate	High			
1.	Less than 2 years	46 (20.18)	155 (67.98)	27 (11.84)	<b>228</b> <b>(45.60)</b>	3.250 8	.022
2.	2 – 5 years	12 (8.11)	121 (81.76)	15 (10.13)	<b>148</b> <b>(29.60)</b>		
3.	5 – 10 years	8 (10.96)	50 (68.49)	15 (20.55)	<b>73</b> <b>(14.60)</b>		
4.	More than 10 years	2 (3.92)	41 (80.39)	8 (15.69)	<b>51</b> <b>(10.20)</b>		
	<b>Total</b>	<b>68</b> <b>(13.60)</b>	<b>367</b> <b>(73.40)</b>	<b>65</b> <b>(13.00)</b>	<b>500</b> <b>(100.00)</b>		

Source: Primary Data

The figures in the parentheses are per cent to total

H0: Experience in driving is not significantly associated with violation.

Out of 228 drivers who have driving experience of less than two years, 67.98 per cent of drives opined that the level of violations at moderate level followed by low level (20.18 per cent) and high level (11.84 per cent).

Out of 148 drivers who have driving experience of 2 – 5 years, 81.76 per cent of drives opined that the level of violations at moderate level followed by high level (10.13 per cent) and low level (8.11 per cent).

Out of 73 drivers who have driving experience of 5 – 10 years, 68.49 per cent of drives opined that the level of violations at moderate level followed by high level (20.55 per cent) and low level (10.96 per cent).

Out of 51 drivers who have driving experience of more than 10 years, 80.39 per cent of drives opined that the level of violations at moderate level followed by high level (15.69 per cent) and low level (3.92 per cent).

In order to examine the association between driving experience of drivers and violations, the chi-square test has been used and the results are presented in Table 4.25

The chi-square value of 3.250 is significant at five per cent level indicating that there is significant association between driving experience of drivers and violations. Hence, the null hypothesis of there is no significant association

between driving experience of drivers and violations is rejected. Violations were high among less experienced drivers.

#### 4.8.5 Vehicles Used by Drivers and Violations

The relationship between vehicles used by drivers and violations was analysed and the results are presented in Table 4.26.

**Table-4.26. Vehicles Used by Drivers and Violations**

Sl. No.	Vehicles Used by Drivers	Level of Violations			Total	Chi-square value & d.f.	p
		Low	Moderate	High			
1.	Car	45 (19.74)	167 (73.24)	16 (7.02)	<b>228</b> <b>(45.60)</b>	7.602 8	.000
2.	Van	8 (6.78)	97 (82.20)	13 (11.02)	<b>118</b> <b>(23.60)</b>		
3.	Bus	1 (1.75)	43 (75.44)	13 (22.81)	<b>57</b> <b>(11.40)</b>		
4.	Lorry	10 (16.39)	36 (59.02)	15 (24.59)	<b>61</b> <b>(12.20)</b>		
5.	Auto	4 (11.11)	24 (66.67)	8 (22.22)	<b>36</b> <b>(7.20)</b>		
	<b>Total</b>	<b>68</b> <b>(13.60)</b>	<b>367</b> <b>(73.40)</b>	<b>65</b> <b>(13.00)</b>	<b>500</b> <b>(100.00)</b>		

Source: Primary Data

The figures in the parentheses are per cent to total

H0: Vehicles and violations are not significantly associated.

Out of 228 drivers who have used car, 73.24 per cent of drivers opined that the level of violations at moderate level followed by low level (19.74 per cent) and high level (7.02 per cent).

Out of 118 drivers who have used van, 82.20 per cent of drivers opined that the level of violations at moderate level followed by high level (11.02 per cent) and low level (6.78 per cent).

Out of 57 drivers who have used bus, 75.44 per cent of drivers opined that the level of violations at moderate level followed by high level (22.81 per cent) and low level (1.75 per cent).

Out of 61 drivers who have used lorry, 59.02 per cent of drivers opined that the level of violations at moderate level followed by high level (24.59 per cent) and low level (16.39 per cent).

Out of 36 drivers who have used auto, 66.67 per cent of drivers opined that the level of violations at moderate level followed by high level (22.22 per cent) and low level (11.11 per cent).

In order to examine the association between vehicles used by drivers and violations, the chi-square test has been used and the results are presented in Table 4.26.

The chi-square value of 7.602 is significant at one per cent level indicating that there is significant association between vehicles used by drivers and violations. Hence, the null hypothesis of there is no significant association between vehicles used by drivers and violations is rejected. It is found that violation is highest among car and lorry drivers.

#### 4.9. TRAFFIC AWARENESS OF DRIVERS

The traffic awareness of drivers was analysed and the results are presented in Table 4.27.

**Table-4.27. Traffic Awareness of Drivers**

<b>Sl. No.</b>	<b>Traffic Awareness</b>	<b>Mean</b>	<b>Standard Deviation</b>
1.	Awareness about maintaining minimum distance between two cars while driving	2.61	1.26
2.	General awareness about parking place	2.64	1.23
3.	Awareness about drinking driving	2.72	1.27
4.	Awareness about seat belt usage	2.73	1.26
5.	Right of way of the vehicle while driving on hill roads	2.74	1.31
6.	Awareness about white continuous or Broken lines	2.63	1.24
7.	Awareness about by left lane on road volume	2.77	1.23
8.	Awareness about starting the vehicle on road during high traffic	2.71	1.18
9.	Safety awareness for pedestrians during rainy seasons	2.74	1.25

<b>Sl. No.</b>	<b>Traffic Awareness</b>	<b>Mean</b>	<b>Standard Deviation</b>
10.	Awareness about right way of using horn	2.81	1.21
11.	Awareness about right way of Emergency stopping	2.74	1.19
12.	Awareness about controlling speed while descending	2.71	1.22
13.	Awareness about use of hazard lights	3.12	2.38
14.	Awareness about use of mobile	3.08	1.47
15.	Road sign major road ahead	3.01	1.40
16.	Road sign about steep decent	3.06	1.47
17.	Road sign about give way	3.16	1.44
18.	Road sign about vehicle prohibited on both direction	3.17	1.46
19.	Road sign about no crossing	3.13	1.46

Source: Primary Data

The results show that the drivers sometimes aware about maintaining minimum distance between two cars while driving, parking place, drinking driving, seat belt usage, right of way of the vehicle while driving on hill roads, white continuous or broken lines, by left lane on road volume, starting the vehicle on road during high traffic, safety awareness for pedestrians during rainy seasons, right way of using horn, right way of emergency stopping, controlling speed while descending, use of hazard lights, use of mobile, road sign about steep decent, road sign about give way road sign about vehicle prohibited on both direction and road sign about no crossing.

#### 4.10. Socio-Economic Profile of Drivers and Traffic Awareness

The opinion of drivers about traffic awareness is varying with their socio-economic profile. The relationship between socio-economic profile and their opinion about traffic awareness was analysed and the results are hereunder presented. The distribution of drivers on the basis of their opinion about traffic awareness was analysed and the results are presented in Table 4.28. The responses of drivers about traffic awareness has been classified into low level, moderate level and high level based on “ Mean  $\pm$  SD” criterion. The mean score is 54.28 and the SD is 9.86.

**Table-4.28. Distribution of Drivers on the Basis of Their Opinion about Traffic Awareness**

<b>Sl. No.</b>	<b>Level of Traffic Awareness</b>	<b>Number of Drivers</b>	<b>Percentage</b>
1.	Low	74	14.80
2.	Moderate	365	73.00
3.	High	61	12.20
	<b>Total</b>	<b>500</b>	<b>100.00</b>

Source: Primary Data

The results indicate that 73.00 per cent of drives opined that the level of traffic awareness at moderate level followed by low level (14.80 per cent) and high level (12.20 per cent).

#### 4.10.1 Age Group and Traffic Awareness

The relationship between age group of drivers and traffic awareness was analysed and the results are presented in Table 4.29.

**Table-4.29. Age Group and Traffic Awareness**

Sl. No.	Age Group	Level of Traffic Awareness			Total	Chi-square value & d.f.	p
		Low	Moderate	High			
1.	Less than 20 years	1 (2.70)	29 (78.38)	7 (18.92)	<b>37</b> <b>(7.40)</b>	6.264 8	.000
2.	20 – 29 years	33 (16.75)	145 (73.60)	19 (9.65)	<b>197</b> <b>(39.40)</b>		
3.	30 – 39 years	37 (25.87)	93 (65.04)	13 (9.09)	<b>143</b> <b>(28.60)</b>		
4.	40 – 49 years	0 (0.00)	59 (83.10)	12 (16.90)	<b>71</b> <b>(14.20)</b>		
5.	More than 50 years	3 (5.77)	39 (75.00)	10 (19.23)	<b>52</b> <b>(10.40)</b>		
	<b>Total</b>	<b>74</b> <b>(14.80)</b>	<b>365</b> <b>(73.00)</b>	<b>61</b> <b>(12.20)</b>	<b>500</b> <b>(100.00)</b>		

Source: Primary Data

The figures in the parentheses are per cent to total

H0: There is no association between age and traffic awareness

Out of 37 drivers in the age group of less than 20 years, 78.38 per cent of drives opined that the level of traffic awareness at moderate level followed by high level (18.92 per cent) and low level (2.70 per cent).

Out of 197 drivers in the age group of 20 – 29 years, 73.60 per cent of drives opined that the level of traffic awareness at moderate level followed by low level (16.75 per cent) and high level (9.65 per cent).

Out of 143 drivers in the age group of 30 – 39 years, 65.04 per cent of drives opined that the level of traffic awareness at moderate level followed by low level (25.87 per cent) and high level (9.09 per cent).

Out of 71 drivers in the age group of 40 – 49 years, 83.10 per cent of drives opined that the level of traffic awareness at moderate level followed by high level (16.90 per cent).

Out of 52 drivers in the age group of more than 50 years, 75.00 per cent of drives opined that the level of traffic awareness at moderate level followed by high level (19.23 per cent) and low level (5.77 per cent).

In order to examine the association between age group of drivers and traffic awareness, the chi-square test has been used and the results are presented in Table 4.29.

The chi-square value of 6.264 is significant at one per cent level indicating that there is significant association between age group of drivers and traffic

awareness. Hence, the null hypothesis of there is no significant association between age group of drivers and traffic awareness is rejected. It is seen from the frequency the traffic awareness is lower among elder people and youngsters are aware of it much better.

#### 4.10.2 Educational Qualification and Traffic Awareness

The relationship between educational qualification of drivers and traffic awareness was analysed and the results are presented in Table 4.30.

**Table-4.30. Educational Qualification and Traffic Awareness**

Sl. No.	Educational Qualification	Level of Traffic Awareness			Total	Chi-square value & d.f.	p
		Low	Moderate	High			
1.	Illiterate	33 (18.64)	128 (72.32)	16 (9.04)	<b>177</b> <b>(35.40)</b>	6.718 8	.000
2.	Primary	37 (20.00)	129 (69.73)	19 (10.27)	<b>185</b> <b>(37.00)</b>		
3.	Intermediate	2 (3.28)	49 (80.33)	10 (16.39)	<b>61</b> <b>(12.20)</b>		
4.	Secondary	2 (4.26)	36 (76.59)	9 (19.15)	<b>47</b> <b>(9.40)</b>		
5.	University	0 (0.00)	23 (76.67)	7 (23.33)	<b>30</b> <b>(6.00)</b>		
	<b>Total</b>	<b>74</b> <b>(14.80)</b>	<b>365</b> <b>(73.00)</b>	<b>61</b> <b>(12.20)</b>	<b>500</b> <b>(100.00)</b>		

Source: Primary Data

The figures in the parentheses are per cent to total

H0: The traffic awareness is not associated with the education level of drivers

Out of 177 drivers who are illiterates, 72.32 per cent of drivers opined that the level of traffic awareness at moderate level followed by low level (18.64 per cent) and high level (9.04 per cent).

Out of 185 drivers who have primary education, 69.73 per cent of drivers opined that the level of traffic awareness at moderate level followed by low level (20.00 per cent) and high level (10.27 per cent).

Out of 61 drivers who have intermediate education, 80.33 per cent of drivers opined that the level of traffic awareness at moderate level followed by high level (16.39 per cent) and low level (3.28 per cent).

Out of 47 drivers who have secondary education, 76.59 per cent of drivers opined that the level of traffic awareness at moderate level followed by high level (19.15 per cent) and low level (4.26 per cent).

Out of 30 drivers who have university education, 76.67 per cent of drivers opined that the level of traffic awareness at moderate level followed by high level (23.33 per cent). In order to examine the association between educational qualification of drivers and traffic awareness, the chi-square test has been used and the results are presented in Table 4.30.

The chi-square value of 6.718 is significant at one per cent level indicating that there is significant association between educational qualification of drivers

and traffic awareness. Hence, the null hypothesis of there is no significant association between educational qualification of drivers and traffic awareness is rejected. It is further observed that the traffic association is high with higher level of education.

#### 4.10.3 Occupation and Traffic Awareness

The relationship between occupation of drivers and traffic awareness was analysed and the results are presented in Table 4.31.

**Table-4.31. Occupation and Traffic Awareness**

Sl. No.	Occupation	Level of Traffic Awareness			Total	Chi-square value & d.f.	p
		Low	Moderate	High			
1.	Sedentary	34 (18.09)	132 (70.21)	22 (11.70)	<b>188</b> <b>(37.60)</b>	4.970 8	.001
2.	Manual	35 (20.23)	122 (70.52)	16 (9.25)	<b>173</b> <b>(34.60)</b>		
3.	Business	4 (6.45)	48 (77.42)	10 (16.13)	<b>62</b> <b>(12.40)</b>		
4.	Student	1 (2.38)	35 (83.33)	6 (14.29)	<b>42</b> <b>(8.40)</b>		
5.	Retired	0 (0.00)	28 (80.00)	7 (20.00)	<b>35</b> <b>(7.00)</b>		
	<b>Total</b>	<b>74</b> <b>(14.80)</b>	<b>365</b> <b>(73.00)</b>	<b>61</b> <b>(12.20)</b>	<b>500</b> <b>(100.00)</b>		

Source: Primary Data

The figures in the parentheses are per cent to total

H0: There is no association between occupation of the respondents and traffic awareness.

Out of 188 drivers who have occupation of sedentary, 70.21 per cent of drives opined that the level of traffic awareness at moderate level followed by low level (18.09 per cent) and high level (11.70 per cent).

Out of 173 drivers who have occupation of manual, 70.52 per cent of drives opined that the level of traffic awareness at moderate level followed by low level (20.23 per cent) and high level (9.25 per cent).

Out of 62 drivers who are businessmen, 77.42 per cent of drives opined that the level of traffic awareness at moderate level followed by high level (16.13 per cent) and low level (6.45 per cent).

Out of 42 drivers who are students, 83.33 per cent of drives opined that the level of traffic awareness at moderate level followed by high level (14.29 per cent) and low level (2.38 per cent).

Out of 35 drivers who are retired persons, 80.00 per cent of drives opined that the level of traffic awareness at moderate level followed by high level (20.00 per cent).

In order to examine the association between occupation of drivers and traffic awareness, the chi-square test has been used and the results are presented in Table 4.31.

The chi-square value of 4.970 significant at one per cent level indicating that there is significant association between occupation of drivers and traffic awareness. Hence, the null hypothesis of there is no significant association between occupation of drivers and traffic awareness is rejected. Sedentary group has the minimum level of awareness.

#### 4.10.4 Driving Experience and Traffic Awareness

The relationship between occupation of drivers and traffic awareness was analysed and the results are presented in Table 4.32.

**Table-4.32: . Driving Experience and Traffic Awareness**

Sl. No.	Driving Experience	Level of Traffic Awareness			Total	Chi-square value & d.f.	p
		Low	Moderate	High			
1.	Less than 2 years	41 (17.98)	165 (72.37)	22 (9.65)	<b>228</b> <b>(45.60)</b>	9.203 8	.001
2.	2 – 5 years	28 (18.92)	106 (71.62)	14 (9.46)	<b>148</b> <b>(29.60)</b>		
3.	5 – 10 years	1 (1.37)	57 (78.08)	15 (20.55)	<b>73</b> <b>(14.60)</b>		
4.	More than 10 years	4 (7.84)	37 (72.55)	10 (19.61)	<b>51</b> <b>(10.20)</b>		
	<b>Total</b>	<b>74</b> <b>(14.80)</b>	<b>365</b> <b>(73.00)</b>	<b>61</b> <b>(12.20)</b>	<b>500</b> <b>(100.00)</b>		

Source: Primary Data

The figures in the parentheses are per cent to total

Ho: There is no association between experiences of the respondents with their traffic awareness.

Out of 228 drivers who have driving experience of less than two years, 72.37 per cent of drives opined that the level of traffic awareness at moderate level followed by low level (17.98 per cent) and high level (9.65 per cent).

Out of 148 drivers who have driving experience of 2 – 5 years, 71.62 per cent of drives opined that the level of traffic awareness at moderate level followed by low level (18.92 per cent) and high level (9.46 per cent).

Out of 73 drivers who have driving experience of 5 – 10 years, 78.08 per cent of drives opined that the level of traffic awareness at moderate level followed by high level (20.55 per cent) and low level (1.37 per cent).

Out of 51 drivers who have driving experience of more than 10 years, 72.55 per cent of drives opined that the level of traffic awareness at moderate level followed by high level (19.61 per cent) and low level (7.84 per cent).

In order to examine the association between driving experience of drivers and traffic awareness, chi-square test has been used and the results are presented in Table 4.32.

The chi-square value of 9.203 is significant at one per cent level indicating that there is significant association between driving experience of drivers and traffic awareness. Hence, the null hypothesis of there is no significant association between driving experience of drivers and traffic awareness is rejected. The awareness level is high with high experience.

#### 4.10.5 Vehicles Used by Drivers and Traffic Awareness

The relationship between vehicles used by drivers and traffic awareness was analysed and the results are presented in Table 4.33.

**Table-4.33. Vehicles Used by Drivers and Traffic Awareness**

Sl. No.	Vehicles Used by Drivers	Level of Traffic Awareness			Total	Chi-square value & d.f.	p
		Low	Moderate	High			
1.	Car	49 (21.49)	160 (70.18)	19 (8.33)	<b>228</b> <b>(45.60)</b>	6.869	.000
2.	Van	20 (16.95)	84 (71.19)	14 (11.86)	<b>118</b> <b>(23.60)</b>		
3.	Bus	2 (3.51)	47 (82.46)	8 (14.93)	<b>57</b> <b>(11.40)</b>		
4.	Lorry	3 (4.92)	46 (75.41)	12 (19.67)	<b>61</b> <b>(12.20)</b>		
5.	Auto	0 (0.00)	28 (77.78)	8 (22.22)	<b>36</b> <b>(7.20)</b>		
	<b>Total</b>	<b>74</b> <b>(14.80)</b>	<b>365</b> <b>(73.00)</b>	<b>61</b> <b>(12.20)</b>	<b>500</b> <b>(100.00)</b>		

Source: Primary Data

The figures in the parentheses are per cent to total

H0: There is no association between type of vehicles and traffic awareness.

Out of 228 drivers who have used car, 70.18 per cent of drives opined that the level of traffic awareness at moderate level followed by low level (21.49 per cent) and high level (8.33 per cent)

Out of 118 drivers who have used van, 71.19 per cent of drives opined that the level of traffic awareness at moderate level followed by low level (16.95 per cent) and high level (11.86 per cent).

Out of 57 drivers who have used bus, 82.46 per cent of drives opined that the level of traffic awareness at moderate level followed by high level (14.93 per cent) and low level (3.51 per cent).

Out of 61 drivers who have used lorry, 75.41 per cent of drives opined that the level of traffic awareness at moderate level followed by high level (19.67 per cent) and low level (4.92 per cent).

Out of 36 drivers who have used auto, 77.78 per cent of drives opined that the level of traffic awareness at moderate level followed by high level (22.22 per cent).

In order to examine the difference between vehicles used by drivers and traffic awareness, the chi - square test has been used and the results are presented in Table 4.33.

The chi-square value of 6.869 is significant at one per cent level indicating that there is significant association between vehicles used by drivers and traffic awareness. Hence, the null hypothesis of there is no significant association between vehicles used by drivers and traffic awareness is rejected. Lorry drivers have the least level of awareness.

#### **4.11. Conclusion**

Majority of drivers are in the age group of 20 – 29 years and most of drivers have primary education. Majority of drivers have occupation of sedentary and most of drivers have driving experience of less than two years and majority of drivers have used car.

The results show that 74.00 per cent of drivers opined that the level of errors at moderate level followed by low level (14.80 per cent) and high level (11.20 per cent). There is significant difference between socio-economic profile and their opinion about errors.

The results indicate that 71.40 per cent of drivers opined that the level of lapses at moderate level followed by low level (16.60 per cent) and high level (12.00 per cent). There is significant difference between driving experience of drivers and lapses and vehicles used by drivers and lapses.

The results show that 73.40 per cent of drivers opined that the level of violations at moderate level followed by low level (13.60 per cent) and high level

(13.00 per cent). There is significant difference between socio-economic profile and their opinion about violations.

The results indicate that 73.00 per cent of drives opined that the level of traffic awareness at moderate level followed by low level (14.80 per cent) and high level (12.20 per cent). There is significant difference between socio-economic profile and their opinion about traffic awareness.