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**ROLE OF TRAFFIC SIGNS & SYMBOLS AS NONVERBAL  
COMMUNICATION IN ROAD ACCIDENTS: A CASE OF DISTRICT  
MALAKAND**

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**Abstract:**

World Health Organization (2015) reported that 20-50 million people got injured and 1.5 million died in accidents in the world. The aim of this study was to find out the level of understanding of drivers about nonverbal communication. In this regard the researchers studied the understanding of them through traffic signs and symbols. For this purpose, the researchers based their study only on Mandatory instead of informative and regulatory signs and symbols. Survey research was used, while data was collected from 300 districts Dir Lower and Swat based drivers randomly through questionnaire. SPSS version 21 was applied for statistical analysis. Findings of the study explored that both the District drivers have poor understanding regarding roadside signs and symbols. The results disclosed that only 25% drivers hailing from district Dir lower, while more than 70% drivers belong to district Swat have understood and recognition of roadside signs and symbols. It is concluded that age and driving experience also the factors for lack of roadside signs and symbols in the area. It is recommended to the license issuing

authorities to make sure tests for drivers for getting license to make sure recognition of signs and symbols as well as to overcome road accidents in the area.

### **Introduction:**

This study analyzed the understating of the Swat and Dir based drivers regarding roadside mandatory signs and symbols. The derivers of these areas are passing through both areas e.g. plain and zigzag roads, where, it is very important for them to know about the roadside signs and symbols.

Road side signs and symbols understanding could overcome the accidents and hazards situations as Akpan. U.U, Senam.N and Elijah. P. P (2015) said that signs help to instruct the road users about risks and threats without using of words. These signs also give information to road users about their safety and give other directions which reduce hazards. While on the other side roadside signs and symbols are communicating information to road users which help to decrease the number of accidents on roads.

They argued that if traffic signs and symbols would simple and understandable for the road users and drivers, it would helpful in the reduction of accidents. It is also important that the drivers should know about the meanings of these signs and symbols, if they don't know, it would lead them to unwanted situation.

According to Business dictionary (2016) "Communication which occurs without the use of speech and which is understandable for everyone. Nonverbal communication consists of speed, tone, pitch, volume of voice, facial expressions, gestures, body posture, proximity, eye movements and contact and dress and appearance".

Research showed that communication is affected 45 percent by the tone, only 5 percent by spoken words and 50 percent by body language, eye contact, movement etc.

### **Objectives:**

1. To investigate the understating to drivers regarding roadside signs and symbols.
2. To study the use of roadside signs and symbols by the drivers.
3. To know about nonverbal communication understanding on the base of roadside signs and symbols.

### **Hypotheses:**

**H1:** District Swat based drivers have better understanding regarding mandatory signs than District Dir Lower.

**H2:** Experienced drivers are using more traffic laws as compared to less experienced drivers.

**H3:** Young age drivers are not using more traffic signs than old age drivers in the areas.

### **Review of Literature:**

Ogunmola. A, A. (2013)explained that traffic signs can communicate a specific message to the drivers. The basic aim of these signs is to decrease accidents and give instruction to the road users. He further explored that a lot of drivers are familiar with roads and driving so they cannot give proper attention to the signs and symbols in Nigeria. He said that specific signs are selected to take the opinion of the motorist. He further said that the study also examined the

relation between the signs and linguistics and its effectiveness on communication. He found that the most of the Nigerian drivers didn't pay attention to these signs. He concluded that a lot of efforts are required for the authorities of Nigerian road safety to over this problem.

Makinde, Oluyemisi. O, Opeyemi, David A (2012) has been done this research to study the knowhow of the drivers of Akure city regarding traffic signs and symbols. Twenty regulatory and warning signs were examined in the study. Two hundred questionnaires were given to the drivers. The result showed that the understanding of drivers of Akure were low. The understanding of warning signs of the drivers were sixty seven percent, while fifty eight percent of the drivers know about prohibitory signs. Result showed that there is a strong relation between the understanding of signs and education, age and driving experience of the drivers. While, sex and marital status showed no effect on the driving.

Nasr. M (2006) explored that in developing countries like Pakistan, road accidents are major problem and causing deaths. The problem is increasing with the passage of time, and it is link with roads and people from the past years. This review plans to study this problem in Pakistan over the previous decade. The thought went to the author's when he saw an accident on in April, 2008 in front of COMSATS Institute of Technology Islamabad. One of student was hit by a fast auto that vanished from Allama Iqbal Road quickly hitting the student. He stayed alive, but government didn't help in the treatment of the student. More than 35 million individuals were injured in 2002 around the world, 1.2 million were died and the numbers of disable people were about 5 million. Special attention is given by developed countries to decrease traffic accidents. The numbers of deaths in France were decrease 20 percent in 2003, and intended to reduce 30 percent before 2020. Unluckily, 80 percent of the accidents are happening in developing countries.

Traffic accidents led people not only to death or any unwanted situation but it also waste resources like hospital facilities it may be used for other patients. The aim of the research is to study the tendency traffic accidents in Pakistan. We also thinking to use the Artificial Neural Network (ANN) way to study, and both of the methods to know which methodology is better and help to control traffic accidents in Pakistan in 2020.

Khan.A.A and Fatmi. Z, (2014) revealed that large number of death in young age is causing by road accidents. The use of system approach framework reviewed the present preventive policies to control road crashes in Pakistan. Ten studies were found in Pakistan on the prevention strategies. First Road Traffic Injuries Research Network system for road crashes were established in Karachi and the number of

The primary Road Traffic Injuries Research Network observation framework for street movement wounds was set up in urban city (Karachi) in Pakistan has indicated guarantee for harm control and ought to be scaled up to different urban communities. Authorization of activity laws on safety belt and protective cap wearing is poor. National Highway and Motorway Police Ordinance (2000) was one of only a handful couple of administrative measure so far taken in Pakistan. Utilizing SAF, endeavors are required to execute intercessions focusing on human, vehicle plan furthermore making environment more secure for street clients.

Chakrabarty. N, Gupta. K, and Bhatnagar, A. (2013) they conducted this research to highlight the importance of correct training amongst drivers. They asked different questions from

102 drivers about the road signs and symbols. They explored that large number of road mishaps is link with large number of vehicles; some of them are aggressive road drivers who commit accidents. They argued that immature drivers sometimes feel anxiety due to lack of skills.

The study revealed that the drivers know about slope streets (89%), street markings (27%) safety belts utilization during driving (89%), how to stop the vehicle in emergency (40%), right place of the parking of the car (39%). Generally, drivers have indicated normal or more normal level of awareness 52% to 77%.

Kharola.P.S, Tiwari.G. and Mohan. D. (2010) found that accidents are increasing day by day in the growing cities of India. The researchers conducted the research in Bengaluru, India. They said that a large number of researchers exists in which they toss light on the issue, but it needed positive steps to overcome accidents. They stated that buses are the main source of public transport in many cities of India. Open transport system is the primary method of transport in many parts of India. About 12 to 20 percent of deadly crashes in Indian urban communities are happening through buses due to not understanding of road signs. The results recommended that buses having mechanical doors, separated way for pedestrian and bicycle lanes can reduce a large number of accidents.

### Research Method:

The researchers used survey research design for this study, while questionnaire was used as research tool for data collection. The questionnaire was comprised on 40 questions regarding mandatory signs and symbols. Data was collected through random sampling method from District Dir Lower and District Swat based drivers. Data was collected from 350, whereas, as the ratio of response was 89% of district Dir Lower and 93% of district Swat respectively. Total 300 responded data was analyzed after cleaning and screening the data to find out the results.

The questionnaire lead with the demographic characteristics followed by mandatory signs and symbols items. The test of reliability on the Cronbach's Alpha generated 0.78 for questionnaire items. the results show reliability of the questionnaire used for this study. To answer the hypotheses of the study, the researchers used descriptive statistics, while Statistical package for social sciences (SPSS: version: 21) used for this operation.

### Findings:

**Table 1. Understanding about the sign of "road closed"**

	Swat		Dir Lower	
	F	%	F	%
No entry	33	22.0	85	56.7
Road closed	72	48.0	40	26.7
Overtaking not allowed	45	30.0	25	16.7
Total	150	100.0	150	100.0

In table 1. 48% of the drivers marked the sign of road closed, 30% marked the sign of overtaking is not allowed while 22% of them select the sign of no entry by District Swat drivers, on the other hand, only 26.7% of the drivers of District Dir selected the road closed sign, 56.7 % of them marked no entry sign while 16.7 % respondents respondent overtaking is not allowed.

**Table 2. Opinion about the sign more than “16 feet & 6 inches vehicles not allowed”**

	Swat		Dir Lower	
	F	%	F	%
Road closed	0	0.0	22	14.7
More than 9 meter long vehicles not allowed	4	2.7	9	6.0
Height limit	146	97.3	119	79.3
Total	150	100.0	150	100.0

In table 2. 97.3% of the drivers of District Swat respond height limit sign, 2.7% marked the sign of more than 9 meter long vehicles are not allowed no body selected the sign road is closed. In comparison, 79.3% of District Dir respondents selected the option of road closed sign, 14.7% of them marked the sign of road is closed and 6% selected more than 9 meter long vehicles are not allowed.

**Table 3. Knowledge about the sign of “go straight or right side”**

	Swat		Dir Lower	
	F	%	F	%
Turn right	28	18.7	83	55.3
Go straight or right	119	79.3	63	42.0
Right reverse band	3	2.0	4	2.7
Total	150	100.0	150	100.0

In table 3. 79.3% of District Swat drivers chosen go straight or right side sign, 18.7% selected the sign of turn right and only 2% of the drivers selected right reverse band sign. In contrast, the respondents of District Dir the ratio of go straight or right side sign was 42%, 55.3% selected the sign of turn right, while right reverse band sign was selected by 2.7% of the drivers.

**Table 4. Judgment about the sign of “lane control sign board”**

	Swat		Dir Lower	
	F	%	F	%
Lane control sign board	61	40.7	62	41.3
End of dual carriage way	83	55.3	66	44.0
Go Left	6	4.0	22	14.7
Total	150	100.0	150	100.0

In table 4. In District Swat, lane control sign board option was selected by 40.7%, 55.3% of the drivers marked the sign offend of dual carriage way and 6% of them choose the sign of go left. On the other hand, the drivers of District Dir who selected lane control sign board was 41.3%, end of dual carriage way sign were selected by 44% and go left sign were selected by 14.7% of the drivers.

**Table 5. View about the sign of “end of speed limit”**

	Swat		Dir Lower	
	F	%	F	%
Load limit sign	17	11.3	3	2.0
Over taking allowed for goods vehicles	31	20.7	26	17.3
End of speed limit	102	68.0	121	80.7
Total	150	100.0	150	100.0

In table 5. 68% of the drivers replied by marking end of speed limit sign by District Swat drivers, 20.7% of them selected the sign of overtaking allowed for goods vehicles and the sign of load limit sign were chosen by 11.3%. The respondents of District Dir the ratio of sign of end of speed limit was 80.7%, 17.3% of the drivers selected the sign of overtaking allowed for goods vehicles while 2% of them marked the sign of load limit sign.

**Table 6. Judgment about the sign of “no parking on the road”**

	Swat		Dir Lower	
	F	%	F	%
Stop	46	30.7	65	43.3
No parking on the road	64	42.7	46	30.7
No entry	40	26.7	39	26.0
Total	150	100.0	150	100.0

In table 6. In District Swat, 42.7% of the drivers selected no parking on the road sign, stop sign were chosen by 30.7% and the sign of no entry were marked by 26.7%. On the other hand, the ratio of no parking on the road option was 30.7%, 43.3% of the respondents marked the sign of stop, while no entry sign was selected by 26% amongst the drivers of District Dir.

**Table 7. Knowing the sign of “turn to right side is not allowed”**

	Swat		Dir Lower	
	F	%	F	%
Don't turn right	66	44.0	58	38.7
Don't turn left	76	50.7	83	55.3
Overtaking of heavy vehicles are not allowed	8	5.3	9	6.0
Total	150	100.0	150	100.0

In table 7. The drivers of District Swat selected turn to right side is not allowed was 44%, sign of don't turn left is selected by 50.7% and 5.3% of the respondents marked the sign overtaking of heavy vehicles are not allowed. While in District Dir, 38.7% of the respondents marked the option of turn to right side is not allowed, don't turn left sign were selected by 55.3% and the sign of overtaking of heavy vehicles are not allowed were chosen by 6%.

**Table 8. Understanding about the sign of “parking is not allowed”**

	Swat		Dir Lower	
	F	%	F	%
Danger	1	0.7	29	19.3
Parking not allowed	140	93.3	81	54.0
Warning sign	9	6.0	40	26.7
Total	150	100.0	150	100.0

In table 8. 93.3% of the respondents of District Swat answered by the marking, parking is not allowed sign, warning sign were selected by 6% and only 0.7% of them marked the sign of danger. On the other hand, the drivers of District Dir replied to this question by choosing the sign of parking is not allowed by 54%, warning sign by 26.7 and sign of danger by 19.3 %.

**Table 9. Knowledge about the sign of “stop or give way to other vehicles”**

	Swat		Dir Lower	
	F	%	F	%
Give way to others	26	17.3	39	26.0
Stop police check post	26	17.3	54	36.0
Danger	98	65.3	57	38.0
Total	150	100.0	150	100.0

In table 9. 17.3% of the drivers marked stop or give way to other vehicles sign by the respondents of District Swat, danger and give way to others sign was selected by 65.3% and 17.3% respectively. On the other hand, stop or give way to others, danger and stop police check post signs were marked by 26%, 38% and 36% respectively by the respondents of District Dir.

**Table 10. Illustration about the sing of “overtaking is not allowed for goods vehicles”**

	Swat		Dir Lower	
	F	%	F	%
Over taking is not allowed for heavy vehicles	110	73.3	100	66.7
Hand cart entry not allowed	17	11.3	39	26.0
No entry for motors	23	15.3	11	7.3
Total	150	100.0	150	100.0

In table 10. In District Swat, 73.3% of the respondents marked overtaking is not allowed for goods vehicles, hand cart entry not allowed sign by 11.3% and sign no entry for motors by 15.3%. In contrast, over taking is not allowed for heavy vehicles, hand cart entry not allowed and no entry for motors signs were chosen by 66.7%, 26% and 7.3% by the drivers of Dir respectively.

**Table 11. Recognition about the sign of “steep ascent”**

	Swat		Dir Lower	
	F	%	F	%
More than 9 meter long vehicles not allowed	10	6.7	4	2.7
Steep ascent	130	86.7	133	88.7
No entry for motors	10	6.7	13	8.7
Total	150	100.0	150	100.0

In table 11. 86.7% of the respondents of District Swat answered steep ascent sign to this question. Both signs more than 9 meter long vehicles not allowed and no entry for motors by 10% each. 88.7% of Dir drivers marked steep ascent, no entry for motors by 8.7% and 2.7% selected more than 9 meter long vehicles not allowed sign.

**Table 12. Judgment about the “overtaking forbidden”**

	Swat		Dir Lower	
	F	%	F	%
Don't stop	1	0.7	5	3.3
Follow the lane	64	42.7	72	48.0
Overtaking forbidden	85	56.7	73	48.7
Total	150	100.0	150	100.0

In table 12. Overtaking forbidden sign was selected by 56.7% of the respondents of District Swat, 42.7% follow the lane sign and 0.7% marked don't stop sign. On the other hand, 48.7% of the drivers of Dir marked overtaking forbidden answer to the question, 48% overtaking not allowed while 3.3% selected don't stop signs.

**Table 13. Understanding about the sign of “horn is not allowed”**

	Swat		Dir Lower	
	F	%	F	%
Danger	1	0.7	1	0.7
Horn not allowed	147	98.0	145	96.7
Don't stop	2	1.3	4	2.7
Total	150	100.0	150	100.0

In table 13. Horn not allowed sign was selected by 98% of the drivers of District Swat, 1.3% don't stop and 0.7% danger signs. While, in Dir the ratio of marking horn is not allowed answer was 96.7%, don't stop and danger signs by 2.7% and 0.7% respectively.

**Table 14. Recognition about the sign of “compulsory roundabout”**

Swat			Dir Lower	
	F	%	F	%
Compulsory roundabout	126	84.0	101	67.3
Road closed	23	15.3	26	17.3
No entry for motors	1	0.7	23	15.3



Total	150	100.0	150	100.0
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In table 14.inDistrict Swat, the ratio of compulsory roundabout mark was 84%, 15.3 selected road closed and 0.7% selected no entry sign. While, 67.3% of the drivers of Dir selected sign of compulsory roundabout, 17.3% road closed and 15.3% no entry sign.

**Table 15. Knowledge about the sign of “dual carriage way ends”**

	Swat		Dir Lower	
	F	%	F	%
Road closed	6	4.0	26	17.3
Dual carriage way is ahead	92	61.3	74	49.3
Dual carriage way ends	52	34.7	50	33.3
Total	150	100.0	150	100.0

In table 15.34.7% of the drivers of District Swat picked dual carriage way ends option, 61.3% dual carriage way is ahead sign while road closed sign was selected by 4%. In DistrictDir, 33.3% of the respondents answered dual carriage way ends, 49.3% dual carriage way is ahead and 17.3% road closed sign.

**Table 16. Perception about the sign of “30km/hour area ends”**

	Swat		Dir Lower	
	F	%	F	%
Maximum speed	21	14.0	26	17.3
30km/hour area ends	119	79.3	114	76.0
No entry for motors	10	6.7	10	6.7
Total	150	100.0	150	100.0

In table 16. 30km/hour area ends answer was given by the respondents of District Swat were 79.3%, maximum speed sign by 14% and sign of no entry by 6.7%. While, 76% of Dir drivers selected 30km/hour area ends sign, 17.3% maximum speed and 6.7% no entry signs.

**Table 17. Judgment about the sign of “overtaking prohibition is ended”**

	Swat		Dir Lower	
	F	%	F	%
All prohibition ended	34	22.7	45	30.0
Overtaking prohibition ended	86	57.3	59	39.3
No entry for motors	30	20.0	46	30.7
Total	150	100.0	150	100.0

In table 17. 57.3% of the drivers of District Swat respondents responded overtaking prohibition is ended to this question correctly, 22.7% marked all prohibition ended while no entry signed was marked by 20% of the drivers. While in DistrictDir, the ratio of marking

overtaking prohibition is ended option was 39.3%, 30.7% marked no entry sign and all prohibition ended signed was marked by 30%.

**Table 18. Opinion about the sign of “entry to 30km/hour area”**

	District Swat		DistrictDir Lower	
	F	%	F	%
Maximum speed	7	4.7	21	14.0
30km/hour area ends	44	29.3	57	38.0
entry to 30km/hour area	99	66.0	72	48.0
Total	150	100.0	150	100.0

In table 18. In District Swat, 66% of the respondents replied this question by marking 30km/hour area option, 29.3% selected the sign of 30km/hour area ends and maximum speed sign was marked by 4.7%. On the other hand, in District Dir 48% of the drivers marked the sign of 30km/hour area, 30km/hour area ends signed selected by 38% and 14% respondents respond the sign of maximum speed.

**Table 19. View about the sign of “maximum speed”**

	Swat		Dir Lower	
	F	%	F	%
Maximum speed	81	54.0	67	44.7
30km/hour area ends	56	37.3	67	44.7
No entry for motors	13	8.7	16	10.7
Total	150	100.0	150	100.0

In table 19. Maximum speed sign was marked 54% of the respondents of District Swat, 37.3% selected 30km/hour area ends and 10.7% marked the sign of no entry. In DistrictDir, 44.7% of the drivers responded this question by selecting maximum speed and 30km/hour area ends sign, while 10.7% selected no entry for motors sign.

**Table 20. Understanding about the sign of “entry is not allowed”**

	Swat		Dir Lower	
	F	%	F	%
No entry	62	41.3	41	27.3
Road closed	60	40.0	53	35.3
No entry for motors	28	18.7	56	37.3
Total	150	100.0	150	100.0

In table20. In District Swat, 41.3% of the drivers gave their opinion by answering entry is not allowed sign, 40% marked road closed sign while no entry for motor sign marked by 18.7%. In comparison, ratio of entry is not allowed sign in District Dir was 27.3%, road close sign by 35.3% and 37.3% respondents marked the sign of no entry for motors.

**Table 21. Knowing about the sign of “agriculture vehicles are not allowed”**

	Swat		Dir Lower	
	F	%	F	%
Animals drawn vehicles not allowed	14	9.3	14	9.3
Agriculture vehicles not allowed	135	90.0	130	86.7
No entry for motors	1	0.7	6	4.0
Total	150	100.0	150	100.0

In table 21. The ratio of marking option of agriculture vehicles are not allowed of this question was 90% in District Swat, 9.3% marked animals drawn vehicles not allowed and 0.7% selected the sign of no entry for motors. In District Dir, 86.7% of the respondents marked the sign of agriculture vehicles are not allowed, 9.3% selected option animals drawn vehicles not allowed while no entry for motors sign was chosen by 4% of the drivers.

**Table 22. Recognition about the sign of “animal drawn vehicles are not allowed”**

	Swat		Dir Lower	
	F	%	F	%
Animals drawn vehicles not allowed	128	85.3	131	87.3
Agriculture vehicles not allowed	14	9.3	11	7.3
No entry for motors	8	5.3	8	5.3
Total	150	100.0	150	100.0

In table 22. In District Swat, animal drawn vehicles are not allowed answer was given by 85.3%, 9.3% marked the sign of agriculture vehicles not allowed while no entry signed was marked by 5.3%. On the other hand, 87.3% of the respondents selected animal drawn vehicles are not allowed by the drivers of District Dir, 7.3% marked agriculture vehicles not allowed and no entry signed was marked by 5.3%.

**Table 23. Knowledge about the sign of “hand carts are not allowed”**

	Swat		Dir Lower	
	F	%	F	%
Animals drawn vehicles not allowed	6	4.0	21	14.0
Agriculture vehicles not allowed	12	8.0	9	6.0
No entry for hand carts	132	88.0	120	80.0
Total	150	100.0	150	100.0

In table 23. In District Swat, 88% of the drivers picked option of hand carts are not allowed, agriculture vehicles not allowed by 8% and 4% animals drawn vehicles not allowed. In contrast, District Dir respondents chosen hand carts are not allowed answer by 80%, 14% marked the sign of animals drawn vehicles not allowed and 6% marked the sign of agriculture vehicles not allowed.

**Table 24. Perception about the sign of “no entry for vehicles”**

	Swat		Dir Lower	
	F	%	F	%
Animals drawn vehicles not allowed	8	5.3	4	2.7
Agriculture vehicles not allowed	8	5.3	22	14.7
No entry for motors	134	89.3	124	82.7
Total	150	100.0	150	100.0

In table 24. The ratio of no entry for vehicles option given by District Swat drivers were 89.3%, animals drawn vehicles not allowed sign and agriculture vehicles not allowed marked by 5.3% each. While in District Dir, 82.7% of the respondents picked no entry for vehicles option, 14.7% agriculture vehicles not allowed and animals drawn vehicles not allowed sign by 2.7%.

**Table 25. Judgment about the sign of “pedestrians are not allowed”**

	Swat		Dir Lower	
	F	%	F	%
Pedestrians not allowed	131	87.3	86	57.3
Bicycle crossing	4	2.7	4	2.7
Pedestrians crossing	15	10.0	60	40.0
Total	150	100.0	150	100.0

In table25. In District Swat, 87.3% of the respondents preferred pedestrians are not allowed answer, 10% selected pedestrians crossing and bicycle crossing option was chosen by 2.7%. On the other hand, 57.3% of the drivers of District Dir marked pedestrians are not allowed option, Pedestrians crossing and bicycle crossing selected 40% and 2.7% respectively.

**Table 26. Opinion about the sign of “more than 10meters long vehicles are not allowed”**

	Swat		Dir Lower	
	F	%	F	%
More than 10-meter-long vehicles not allowed	129	86.0	115	76.7
More than 9-meter-long vehicles not allowed	13	8.7	16	10.7
Maximum height	8	5.3	19	12.7

Total	150	100.0	150	100.0
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In table 26. More than 10meters long vehicles are not allowed option was chosen by 86% of the respondents of District Swat, 8.7% marked the sign of more than 9 meter long vehicles not allowed while maximum height sign was marked by 5.3%. On the other hand, the ratio of the option of more than 10meters long vehicles are not allowed in District Dir drivers were 76.7%, 12.7% marked the sign of maximum sign and more than 9 meter long vehicles not allowed sign was chosen by 10.7%.

**Table 27. View about the sign of “don’t turn to left side”**

	Swat		Dir Lower	
	F	%	F	%
Don’t turn left	41	27.3	29	19.3
Don’t turn right	98	65.3	76	50.7
Overtaking not allowed	11	7.3	45	30.0
Total	150	100.0	150	100.0

In table 27. In District Swat, don’t turn to left side answer was given by 27.3%, don’t turn right sign by 65.3% and 7.3% marked the sign of overtaking not allowed. In comparison, the drivers of District Dir, 19.3% preferred don’t turn to left side option, don’t turn right was selected by 50.7% and sign of overtaking not allowed was marked by 30%.

**Table 28. Understanding about the sign of “don’t stop clearway”**

	Swat		Dir Lower	
	F	%	F	%
No entry	43	28.7	17	11.3
Road closed	36	24.0	87	58.0
Don’t stop	71	47.3	46	30.7
Total	150	100.0	150	100.0

In table 28. The drivers of District Swat who marked don’t stop clearway answer were 47.3%, no entry sign was marked by 28.7% and 24% selected the sign of road closed. In contrast, 30.7% respondents of District Dir answered this question by selecting don’t stop clearway, 58% marked the sign of road closed and no entry sign was chosen by 11.3%.

**Table 29. Knowing about the sign of “overtaking for goods vehicles are not allowed”**

	Swat		Dir Lower	
	F	%	F	%
overtaking for goods vehicles are allowed	11	7.3	11	7.3
Speed limit ended	27	18.0	36	24.0
overtaking of goods vehicles are not allowed	112	74.7	103	68.7

Total	150	100.0	150	100.0
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In table 29. In District Swat the ratio of overtaking for goods vehicles are not allowed option was marked by the respondents were 74.7%, speed limit ended sign by 18% and 7.3% picked the option of overtaking of goods vehicles are allowed. While, in District Dir the respondents selected overtaking for goods vehicles are not allowed sign by 68.7%, speed limit ended sign by 24% and 7.3% picked the option of overtaking of goods vehicles are allowed.

**Table 30. Recognition about the sign of “drive slowly”**

	Swat		Dir Lower	
	F	%	F	%
Road closed	7	4.7	5	3.3
Speed limit ended	14	9.3	8	5.3
Drive slowly	129	86.0	137	91.3
Total	150	100.0	150	100.0

In table 30. Drive slowly option was preferred by the respondents of District Swat was 86%, speed limit ended sign by 9.3% and road closed sign by 4.7%. In contrast, 91.3% of the drivers of District Dir marked the answer of drive slowly, speed limit sign by 5.3% and 3.3% picked the option of road closed.

**Table 31. Knowledge about is the sign of “stop”**

	Swat		Dir Lower	
	F	%	F	%
U-turn not allowed	5	3.3	4	2.7
Two-way traffic	12	8.0	59	39.3
Stop	133	88.7	87	58.0
Total	150	100.0	150	100.0

In table31. Stop sign was selected by the drivers of District Swat were 88.7%, two-way traffic sign marked by 8% and 3.3% selected the sign of U-turn not allowed. In District Dir, the ratio of marking the sign of stop answer was 58%, two-way traffic sign by 39.3% and sign of U-turn not allowed was picked by 2.7%.

## Discussion:

The results of the study revealed that 48% of the respondents of District Swat marked “road closed” sign, while in District Dir, 56% of the drivers didn’t know about the sign. It shows that District Swat drivers are more exposed to the sign and Symbol than District Dir. The outcomes of the study explored that, 97% of the drivers of District Swat knew about the sign “16 feet & 6 inches vehicles not allowed”, On the other hand, 79% of the drivers of District Dir also know about the signs. The outcomes shows that the respondents of District Swat and District Dir lower are using the sign on daily basis.

The results of the study also found that 79% of the respondents of District Swat are known about the symbol of “go straight or right side”. In contrast, 55% of the respondents of District Dir didn’t know about the sign. It means District Dir drivers know more than District

Swat drivers about the sign. The results of the study concluded that 61% of the drivers of District Swat didn't know about the sign "lane control sign board". Whereas, 59% of the drivers of District Dir also didn't understand the sign. Result shows that drivers of both District Swat and District Dir have same knowledge about the signs.

The results of the study explored that 68% of drivers of District Swat knew about the symbol "end of speed limit", while, 80% of the District Dir drivers also understood the use of sign. It demonstrates that the residents of District Dir have more knowledge about the sign as compared to District Swat.

The results of the study revealed that, 58% of the drivers of District Swat didn't recognize the sign "no parking on the road". While, 70% of the respondents of Dir didn't know about the sign. It shows that District Swat drivers have more knowledge about traffic sign.

The results of the study exposed that 56% of the respondents of District Swat didn't know about the sign "turn to right side is not allowed". In contrast, 55% of the drivers of District Dir didn't understand about the sign. Result illustrates that District Swat and District Dir drivers haven't enough knowledge about the sign.

The results of the study concluded that 93% of the drivers of District Swat knew about the symbol "parking is not allowed". In contrast, 54% of the respondents of District Dir also known about the sign. It shows that the drivers of District Swat have more experience than District Dir drivers about the sign.

The results of the study explored that 83% of the drivers of District Swat were understood the sign "stop or give way to other vehicles". Whereas, 74% of the drivers of District Dir also didn't know about the sign. It shows that most of the drivers of District Swat and District Dir has failed to select the sign of "stop or give way to other vehicles".

The results of the study unveiled that 84% of the drivers of District Swat didn't know about the symbol of "danger in advance". While in District Dir, 62% of the respondents also didn't have knowledge about the sign.

The results of the study revealed that 98% of the drivers of District Swat were aware of the sign of "horn is not allowed". In contrast, 96% of the District Dir drivers also knew about this sign. The understanding about the sign is almost same between the drivers of District Swat and District Dir.

The result of the revealed that 89% of the respondents of District Swat knew about the sign of "no entry for vehicles". On the other hand, 82% of the drivers also understood the sign. Result demonstrates that drivers of District Swat recognize the sign more than District Dir.

The result of the found that 87% of the drivers of District Swat understood the sign named "pedestrians are not allowed". Whereas, 57% of the drivers of District Dir also knew the sign. Result shows that most of the drivers of District Swat knew this sign more than District Dir.

The result of the explored that 86% of the respondents of District Swat knew the sign "more than 10 meters long vehicles are not allowed". On the other hand, 76% of the drivers of

District Dir also understood the sign. It shows that the understanding of drivers of District Swat are little more about the sign more than drivers of District Dir.

The result of the found that 65% of the respondents of District Swat didn't know the sign "don't turn to left side". In contrast, 80% of the drivers of District Dir didn't understand the sign. Result demonstrates that a large number of drivers of District Dir and Swat did not know the sign.

The result of the concluded that 53% of the drivers of District Swat didn't understand the sign named "don't stop clearway". In comparison, 80% of the drivers of District Dir didn't know about the sign. Result shows that many drivers from District Swat and Dir didn't recognize the sign.

The result of the revealed that 74% of the drivers of District Swat understood the sign titled "overtaking for goods vehicles are not allowed". While, 68% of the respondents of District Dir also knew the sign. Results find that most of the drivers from District Swat and Dir identified the sign. Results show that more drivers of District Swat know about the sign more than District Dir.

The result of the unveiled that 86% of the drivers of District Swat knew about the sign of "drive slowly". On the other hand, 91% of the respondents of District Dir also understood the sign. Results find that most of the drivers from District Swat and Dir recognize the sign.

The result of the study showed that 89% of the drivers of District Swat knew about the sign "stop". While, 58% of the respondents of District Dir also understood the sign. Result shows that there is a big difference between the understanding about the sign amongst the respondents of District Swat and Dir.

The results of the study approved the assumption **"District Swat based drivers have better understanding mandatory directive signs than District Dir Lower"** that the usage of mandatory signs amongst the drivers of District Swat is more than the respondents of District Dir Lower. The results of the study approved the assumption **"Experienced drivers are using more traffic laws as compare to less experience drivers"** that the more the drivers are experienced the more they are using traffic signs and laws.

The Hypothesis **"Young age drivers are not using traffic symbols instead of old age drivers in the areas"** approved by the research outcomes that young drivers are not using traffic signs and symbols instead of old age drivers.

### **Conclusion:**

It is concluded that most of the drivers haven't understanding about mandatory signs and symbols. In 32 mandatory signs the understanding of respondents of District Swat is 75%, whereas, only 25% of the drivers of District Dir Lower recognize the signs. Most of the drivers of District Swat were lived abroad that's the reason their understanding about the signs are better than District Dir.

The findings proved the assumptions of research that due to lack of understanding most of the accidents occurred in the areas whereas, it is also presumed that the drivers of the areas didn't get their licenses on merit bases, which explored by the findings of current study. It is



recommended to drivers that to take proper driving training and to understand of roadside signs and symbols to overcome the ratio of accidents in the areas. It is suggested to license issued authorities that take different tests while issuing license to the drivers which is rout cause for the road accidents.

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