

# Study on Evaluation of Knowledge, Attitude, and Practice of Sri Lankan Traffic Police Officers Related to Examination of Drunk Drivers, in Two Most Populated Districts of Sri Lanka

Yalini Thivaharan , Indira Deepthi Gamage Kitulwatte, Thanushan Muthulingam, Maleesha Jayasundara, Nirmal Borukgama, Udaya Prageeth, Dumith Senevirathna, Deshan Kulathunga, and Sandamini Aththanayaka

## ABSTRACT

**Introduction:** Driving under the influence (DUI) of alcohol is one of the substantial predisposing factors for mishaps among road users. A traffic police officer will be the first authoritative personnel a drunk driver encounters in the legal system. The absence of accurate skills and knowledge of these officers impedes the structuring of legal procedures and may lead to miscarriage of justice. **Objective:** To assess the knowledge, attitude and practice of Sri Lankan traffic police in handling and managing an alleged case of driving under influence of alcohol. **Methods:** This was a descriptive cross sectional study carried on a sample of 384 traffic police officers attached to the districts of Colombo and Gampaha, through a questionnaire. **Results:** Out of 384, only 75 of police officers knew the correct preliminaries to perform before administering a breathalyzer test. 79.7% knew the correct instructions for using a breathalyzer, but only 3.4% knew the colour changes of the breathalyzer. Significantly poor attitude was observed among the police officers, regarding the importance of producing a drunk driver for medico-legal examination ( $P = 0.001$ ) Only 222 (57.8%) answered correctly that a drunk driver needs to be subjected to a medico-legal examination as early as possible. Significantly poor practice and attitude was observed in officers with longer service duration but no significant association was observed between ranks of officers and attitude and practice ( $P = 0.199$ ). **Conclusions:** The results of our study demonstrate that the knowledge attitude and practice on efficiently handling a case of DUI among traffic police officers is poor, even though all of them are engaged in DUI duties irrespective of their service duration. The need for continuous professional development programmes was highlighted.

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#### COMPLIANCE WITH ETHICAL STANDARDS AND CONSENT

Permission to obtain data was obtained from the deputy inspector general of the relevant police division. Informed written consent was obtained from the police officers prior to data collection. The questionnaire did not include any personal details or details which denotes the identity. Collected questionnaires were secured as it were stored by the investigators and used only for the research purpose. Ethical approval was obtained from Ethics Review Committee, Faculty of Medicine, University of Kelaniya, Sri Lanka.

#### ETHICAL APPROVAL

This article does not contain any experimental work with human participants or animals performed by the authors. Hence, the ethical standard certification is not required.

#### PREVIOUS PRESENTATIONS

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## INTRODUCTION

Deaths following road traffic incidents play a crucial role in the statistics of casualties among road users of Sri Lanka. With the rapid development of technology of the modern transportation, ironically the morbidity and mortality rates appear to be in the rise. In the year 2011, according to the statistics published by the Sri Lankan police department, 2721 deaths of road users were reported, of which 1203 (44.2%) belonged to the category of drivers/riders and 898 (33%) were pedestrians (1). There is a clear association of blood alcohol concentration on road fatalities among vulnerable road users of Sri Lanka (2).

Traffic Offenses listed in 2011 affirms a number of 30 117 offences due to driving having consumed alcohol or drugs—of which Colombo North, South and Central, Mt. Lavinia, and Nugegoda holds 5478 (18.2%) and Gampaha district holds 2929 (9.7%) (3).

Laws of Sri Lanka play a critical role in controlling the road traffic incidents and offenses. The Motor Traffic Act of Sri Lanka has undergone a series of amendments and revisions to be on par with the modern issues (4). Implementation of such amendments is dependent on the awareness and attitudes of the police personnel, road users, and the legislation.

Driving under the influence (DUI) of alcohol is one of the substantial predisposing factors for mishaps among road users. For the European population between the ages of 15 and 29, DUI is among the prime causes of mortality (5). Therefore, the need to establish the drunkenness of the alleged perpetrator has become unavoidable.

Under regulations gazette by the Inspector General of Police (IGP) under regulations 7 of the Democratic Socialist Republic of Sri Lanka, Gazette No-45 of 17/07/1979 at pages 594, only a police officer is empowered to perform the “breathalyzer test” by using a device approved by the IGP. However, at present, the Sri Lankan police uses a breathalyzer that will only indicate the blood level of 80 mg/dL or above. No

further quantifications are possible with this machine. There are reported cases with positive breathalyzer test kept in the police custody resulting in a death on the following morning (6). Thus, the best practice is not only to assess whether the individual is above legal limits but also to decide his fitness to detain and fitness to be in charge of a vehicle. However, the value of medical examination in confirming drunkenness as well as in determining fitness to drive or to detain is not appreciated by most of the police officers.

The knowledge and practice is somewhat inestimable and depends on various factors such as the education level, the years in service, and personal demands at the time of duty, external influences from the hierarchy, and so on. But knowledge and attitude could be inculcated through education programs, constructive criticisms, and constant evaluation of the practical skills.

## OBJECTIVES

### General Objective

To assess the knowledge, attitude and practice of Sri Lankan traffic police in handling an alleged case of driving under influence of alcohol and their contribution toward the entire process till the alleged individual is produced before the legal system.

### Specific Objective

- Evaluate the knowledge, attitude, and practice of the officers regarding the importance of clinical examination in assessing the drunk drivers.
- Evaluate the knowledge, attitude, and practice of the officers regarding the correct procedure in breath test.
- To compare the knowledge, attitude, and practice between officers of different ranks regarding clinical examination for assessing drunken drivers.

## METHODS

This was descriptive cross-sectional study carried among traffic police officers attached to the 2 most

populated districts of Sri Lanka—Colombo and Gampaha (2 304 833—11.3% of total population) (<http://www.statistics.gov.lk/Population/StaticalInformation/CPH2011/CensusPopulationHousing2012-FinalReport>).

The Colombo district consists of 25 police stations to which 1009 traffic police officers are attached, whereas there are 14 police stations within the range of Gampaha district that contains 179 traffic police officers. Total of randomly selected 386 traffic police officers attached to these 2 districts with different duration of service experience and ranks were included in this study. Data were gathered through a self-administered questionnaire (printed in both Sinhala and Tamil languages—the police officers were allowed to choose the language of their choice) that contained true and false type of questions and case scenarios to cover the knowledge, attitude, and practices of these traffic police officers.

The sample size formula used is as follows:

$$d = \frac{z \sqrt{pq}}{n}$$

$$n = \frac{z^2 \times pq}{d^2}$$

% frequency of outcome factor in the population hypothesized as (p): 50% ± 5

% of 100 (absolute ± %) as confidence limits d: 5%  
z = 1.96

q = 1 – p

n = 384

### Ethical Considerations

Permission to obtain data was obtained from the deputy inspector general of the relevant police division. Informed written consent was obtained from the police officers prior to data collection. The questionnaire did not include any personal details or details that denotes the identity. Collected questionnaires were secured as it were stored by the investigators and used only for the

research purpose. Ethical approval was obtained from Ethics Review Committee, Faculty of Medicine, University of Kelaniya.

### Data Analysis

Multiple-choice questions of true and false type and histories were marked manually according to answers and marking scheme that was made by referring standard guidelines and by discussing with supervisors. Each question was marked of 5 and marks obtained by the participant to each section were entered into Microsoft Excel. Data analysis was done using percentages with Statistical Package for Social Sciences—Version 16 (SPSS-Version 16).

## RESULTS

### Study Population and Characteristics

A total of 485 questionnaires were distributed, of which 101 were excluded because of the absence of extensional data. Consequently, 384 participants were studied of which 85 (22.1%) had one to five years of work experience, 96 (25%), 112 (29.2%), and 91 (23.7%) had 5 to 10 years, 10 to 20 years, and more than 20 years of work experience, respectively. The characteristics of study participants including their ranks and districts they are attached to are summarized in Table 1.

A number of questions were designed to assess the knowledge the traffic police officers have, when attending to a case of DUI and when using a breathalyzer. These questions assessed the accurate instructions to be given to a drunk driver when using a breathalyzer, the specifications of a breathalyzer apparatus, factors affecting the color change in a breathalyzer, knowledge about the importance and the steps of a medicolegal examination of drunkenness, and the knowledge about factors mimicking a state of drunkenness (Table 2).

A question was designed to assess whether the traffic police officers on DUI duty knew which medical officer is eligible to conduct medicolegal examination of drunkenness in an allegedly drunk driver. Five of 5

**Table 1: Characteristics of Study Participants.**

Variable		Frequency	Percentage
Years of work experience	1-5	85	22.1
	5-10	96	25
	10-20	112	29.2
	>20	91	23.7
	Total	384	100
Current Post	Police Constable	167	43.5
	Police Sergeant	120	31.3
	Sergeant Major	11	2.9
	Sub Inspector of Police	55	14.3
	Inspector of Police	22	5.7
	Chief Inspector of Police	4	1
	Other	3	0.8
	Total	384	100
District attached to	Colombo	207	53.9
	Gampaha	177	46.1
	Total	384	100

**Table 2: Overall Knowledge About Handling a Case of DUI.**

Knowledge assessed	No. giving correct answer	Percentage
1. Instructions given to a drunk driver before administering a breathalyzer	306	79.7
2. The correct sequence of color change in Breathalyzer	30	7.8
3. Factors affecting color change in a breathalyzer	16	4.2
4. To which Government Medical Officer would you produce the accused for examination?	72	18.8
5. What is the knowledge you have regarding the alcohol examination conducted by a medical officer	44	11.5
6. An alleged person under the influence of alcohol can refuse a breathalyzer test and request to be produced before a Government medical practitioner	304	79.2
7. An alleged person with drunkenness can be only having a breath smelling of alcohol and not be under the influence of alcohol	144	37.5
8. An alleged person under the influence of alcohol, who refuses to be examined for drunkenness, will be ruled by the Court to be under influence of alcohol, by default.	124	32.3
9. Only a police officer is empowered to perform the breathalyzer test using a device approved by the IGP.	193	50.3
10. What is the legal limit of blood alcohol concentration (BAC) for driving, in Sri Lanka?	329	85.7
11. Conditions that can mimic drunkenness	45	11.7

Abbreviations: DUI, driving under the influence; IGP, Inspector General of Police.

**Table 3: Knowledge About Medicolegal Examination of Drunkenness With Work Service Experience.**

Service experience	Marks out of 5					Total	<i>p</i> = 0.001
	1	2	3	4	5		
1-5	15 (17.6%)	7 (8.2%)	20 (23.5%)	24 (28.2%)	19 (22.4%)	85	
5-10	12 (12.5%)	25 (26.0%)	23 (24%)	25 (26%)	11 (11.5%)	96	
10-20	18 (16.1%)	24 (21.4%)	36 (32.1%)	22 (19.6%)	12 (10.7%)	112	
>20	15 (16.5%)	16 (17.6%)	44 (48.4%)	14 (15.4%)	2 (2.2%)	91	
Total	60	72	123	85	44	384	

marks for this question was obtained only by 72 (18.8%) of the 384 officers, while 204 (53.1%) knew that a drunk driver should be produced to a Government Medical Officer, who has the capacity to fill a MLEF Police 20 Form. A large number of police officers, 365 (95.1%) of 384 of the police officers, were under the impression that the drunk drivers can be examined by Government Medical Officers in their private practices and similarly 96.6% thought that Registered Medical Practitioners and Assistant Medical Practitioners of the area can subject the drunk drivers to medicolegal examination.

When assessing the police officers' knowledge about the medicolegal examination of drunkenness, conducted by medical officers, only 125 (32.6%) of 384 knew that a consent of the allegedly drunk driver is required by the medical officer, prior to such examinations.

Only 16 (4.2%) of 384 officers knew that there were other factors such as certain disease conditions, and certain treatments for illnesses that can elicit a color change in a breathalyzer, despite the alcohol status of the accused.

Of 384, 55 (14.3%) of the police officers who were regularly engaged in DUI duties did not know that 80 mg% was the legal limit of blood alcohol concentration for driving in Sri Lanka.

### Knowledge About the Importance of Medicolegal Examination of Drunkenness

In all, 74.1% of the police officers with service experience one to five years followed by 66% of the police

officers with service experience of more than 20 years had scored more than 60% for the section which assessed their knowledge about the steps of a medicolegal examination of drunkenness. There was statistically significant difference observed in better knowledge in relation to service experience regarding medicolegal examination where officers with shorter service experience obtaining higher marks (*p* = 0.001; Table 3).

However, the poor knowledge regarding medicolegal examination carried out by the medical officers did not have any significant association with the rank of the officer (*p* = 0.199) or the number of cases of drunkenness they encountered in a month (*p* = 0.686).

Factors such as certain preexisting medical conditions and certain treatment measures taken for certain diseases can cause the breath to contain acetone or ethyl alcohol, thereby affecting the results of a breathalyzer test, even in a sober person. A question assessing this knowledge was marked of 5 marks. Knowledge on other factors affecting color change in a breathalyzer was significantly low among the officers with shorter service experience (*p* = 0.022). However, the officers with work experience between 10 and 20 years were better in their knowledge regarding this, than the officers with more than 20 years of service experience (Table 4).

However, there was no significant difference of knowledge on factors affecting change in the color of the breathalyzer according to the rank of the officer (*p* = 0.951), but the knowledge on factors affecting the

**Table 4: Knowledge on Factors Affecting Color Change in a Breathalyzer.**

Service experience	Marks out of 5						Total	<i>p</i> = 0.022
	0	1	2	3	4	5		
1-5 years	0 (0.0%)	4 (4.7%)	24 (28.2%)	29 (34.1%)	25 (29.4%)	3 (3.5%)	85	
5-10 years	1 (1.0%)	2 (2.1%)	21 (21.9%)	31 (32.3%)	39 (40.6%)	2 (2.1%)	96	
10-20 years	2 (1.8%)	1 (0.9%)	17 (15.2%)	40 (35.7%)	45 (40.2%)	7 (6.3%)	112	
>20 years	0 (0.0%)	1 (1.1%)	18 (19.8%)	31 (34.1%)	37 (40.7%)	4 (4.4%)	91	
Total	3 (0.8%)	8 (2.1%)	80 (20.8%)	131 (34.1%)	146 (38.0%)	16 (4.2%)	384	

**Table 5: Knowledge on Factors Affecting Color Change With Number of Cases Encountered in a Month.**

Service experience	Cases/month	Marks out of 5						Total	<i>p</i> = 0.048
		0	1	2	3	4	5		
	0-10/month	1 (0.5%)	6 (2.8%)	37 (17.3%)	69 (32.4%)	89 (41.8%)	11 (5.2%)	213	
	10-20/month	0 (0.0%)	1 (1.5%)	17 (25%)	26 (38.2%)	24 (35.3%)	0 (0.0%)	68	
	20-30/month	1 (2%)	0 (0.0%)	9 (18.4%)	19 (38.8%)	18 (36.7%)	2 (4.1%)	49	
	30-40/month	0 (0.0%)	0 (0.0%)	3 (21.4%)	6 (42.8%)	5 (35.7%)	0 (0.0%)	14	
	40-50/month	1 (4.5%)	0 (0.0%)	8 (36.4%)	2 (9.1%)	9 (40.9%)	2 (9.1%)	22	
	>50/month	0 (0.0%)	1 (5.5%)	6 (33.3%)	9 (50%)	1 (5.5%)	1 (5.5%)	18	
Total		3 (0.8%)	8 (2.1%)	80 (20.8%)	131 (34.1%)	146 (38.0%)	16 (4.2%)	384	

color change was better among the officers who encounter few cases per month compared to officers who encounter more cases (Table 5). The association was statistically significant ( $p = 0.048$ ).

### Knowledge About Conditions That Can Mimic Drunkenness

Officers with short service experience has had a better knowledge compared to officers with longer service experience in answering the question on conditions that can mimic drunkenness. There was a significant association of shorter service duration with better knowledge regarding conditions mimicking ethanol intoxication ( $p = 0.000$ ; Table 6).

However, there was no such association regarding the knowledge on conditions mimicking ethanol intoxication according to their rank ( $p = 0.080$ ). But according

to the number of cases they encountered in a month, there appeared to be a significant association where it was observed that higher the number of cases they encounter the knowledge on conditions mimicking was high ( $p = 0.005$ ).

### Attitude

Majority of police officers in study sample, 314 (81.7%) scored less than 60% on the question that assessed their attitude toward the importance of producing a drunk driver for medicolegal examination (Table 7). Further, this attitude was deteriorating with the service experience where among the officers who had obtained 1 mark majority were with higher service experience either 11 years or more, while among the officers who had obtained at least 3 marks majority were of service experience 10 or less (Figure 1).

**Table 6: Knowledge About Conditions That Can Mimic Drunkenness.**

Years of service experience	Marks out of 5						Total	<i>p</i> = 0.000
	0	1	2	3	4	5		
1-5 years	2 (2.4%)	15 (17.6%)	11 (12.9%)	12 (14.1%)	25 (20.4%)	20 (23.5%)	85	
5-10 years	5 (5.2%)	30 (31.3%)	13 (13.5%)	23 (24.0%)	13 (13.5%)	12 (12.5%)	96	
10-20 years	2 (1.8%)	51 (45.5%)	24 (21.4%)	22 (19.6%)	5 (4.5%)	8 (7.1%)	112	
>20 years	7 (7.7%)	44 (48.4%)	16 (17.6%)	15 (16.5%)	4 (4.4%)	5(5.5%)	91	
Total	16 (4.2%)	140 (36.5%)	64 (16.7%)	72 (18.8%)	47 (12.2%)	45 (11.7%)	384	

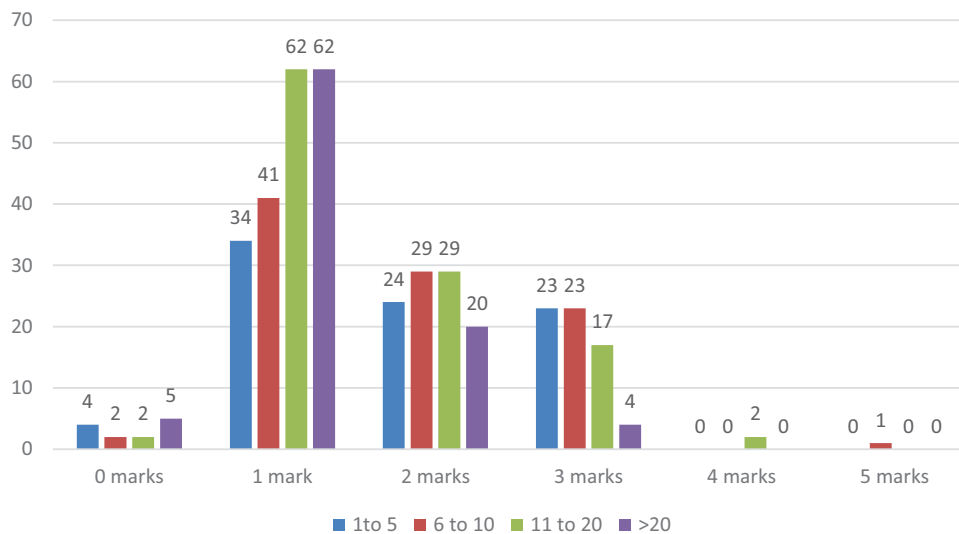
**Table 7: Attitude Toward the Importance of Medicolegal Examination for Drunkenness.**

Service experience	Frequency	Percentage
0 mark	13	3.4
1 mark	199	51.8
2 marks	102	26.6
3 marks	67	17.4
4 marks	2	.5
5 marks	1	.3
Total	384	100.0

There is a statistically significant poor attitude toward the importance of medicolegal examination of a drunk driver with increasing work experience (*p* = 0.001).

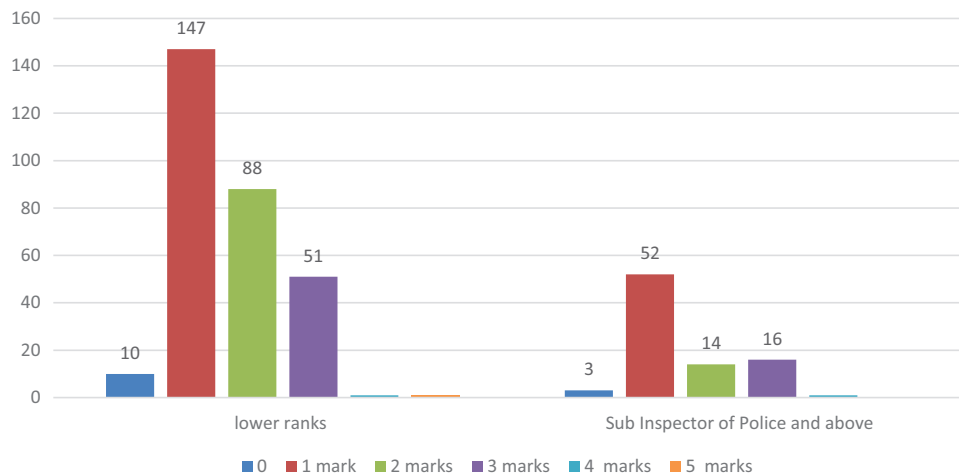
However, there was no significant association of poor attitude among different ranks of the officers (*p* = 0.199) or with regard to the number of cases they have encountered at work per month (*p* = 0.686).

Among the lower ranked officers attitude toward the importance of medicolegal examination was better than officers above sub-inspector (Figure 2-4). However, the association was not significant (*p* = 0.992).



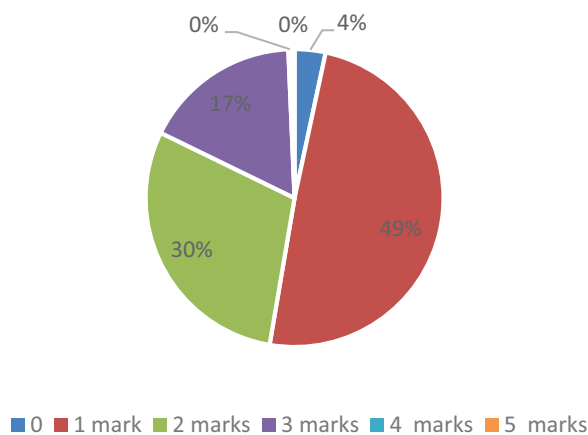
**Figure 1: Marks obtained regarding the question on attitude toward the importance of producing a drunk driver for medicolegal examination with the service experience**





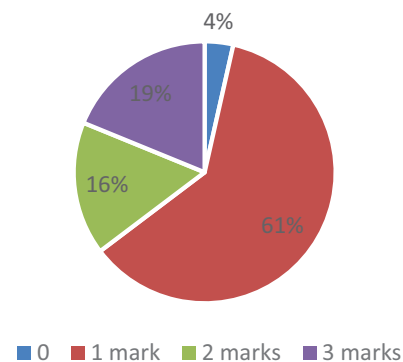
**Figure 2:** Current post versus marks obtained for attitude on the importance of getting a person examined by a medical officer for drunkenness.

Lower ranked officers



**Figure 3:** Percentage distribution of lower ranked officers according to the obtained marks.

Sub Inspector of Police and above



**Figure 4:** Percentage distribution of higher ranked officers according to the obtained marks.

Similarly, the majority of traffic police officers, 87 (22.7%) considered that their efficiency in handling a case of DUI, was satisfactory. Whereas 280 (72.9%) of police officers considered that their efficiency was good or very good (Table 8).

Two case scenarios were given mainly to assess the attitude of the traffic police officers in handling a case

of drunkenness, and the responses are displayed in Table 9.

Considering the responses in Table 9, attitude of police officers toward immediate hospitalization of an injured driver was 88%, despite his state of drunkenness. Of 384, the majority of police officers, 331 (86%), understood the importance of a person to be conscious and rational in order to obtain his consent to draw blood for further investigations needed for legal procedures;

3.6% of the police officers thought that a lady driver being subjected to breathalyzer tests was prohibited by the law. There were 6.8% of the police officers who thought that a driver’s breath smelling of alcohol is sufficient to prove that he is under influence of alcohol. But of 384, only 120 (31.3%) of the officers knew the importance of rinsing the mouth of a drunk person, especially after he has vomited, before subjecting him/her to a breathalyzer test.

**Practice**

Even though 57.1% of the police officers who took part in this study claimed that they have a good and

excellent supply of breathalyzers, only 9.4% appear to be using a breathalyzer when they encounter a drunk driver; 92.4% knew that they should ask the driver to wash his mouth before blowing into a breathalyzer. Only 75 (19.5%) of the police officers scored 5 of 5 marks for the question that assessed their practice on preliminaries required before administering a breathalyzer test to a drunk driver; 70.3% said that they produced a drunk driver for medicolegal examination in the absence of a breathalyzer, 77.3% produced a drunk driver before a medical officer, when the allegedly drunk person refused a breathalyzer test, whereas only 56% practiced the important procedure of taking a drunk person to a medical officer, when they noticed injuries on that person (Table 10).

**Table 8: Police Officers' Consideration About Their Efficiency in Handling a Case of DUI.**

Service experience	Number	Percentage
Very poor	6	1.6
Poor	11	2.8
Satisfactory	87	22.7
Good	219	57.0
Very good	61	15.9
Total	384	99.2

Abbreviation: DUI, driving under the influence.

Decreasing practice (obtaining 5 of 5 marks) was observed when asked about the importance of immediately subjecting an alleged drunk driver to a medical officer for medicolegal assessment, with increasing service experience. However, the association was not statistically significant ( $p = 0.320$ ) (Table 11).

A question was designed to understand the practical issues faced by police officers in producing a drunk driver to a doctor for medicolegal examination and are displayed in Figure 5. Of 384, 107 (28%) were reluctant to produce the driver for medicolegal examination

**Table 9: Attitude of Police Officers in Handling a Case of DUI (Based on Case Scenarios).**

Attitude	Number	Percentage
A drunk driver vomits only because they are terribly drunk	17	4.4
When the opposite party in an accident is dead, the driver of the vehicle is at fault by default	8	2.1
An injured, but conscious driver in an accident, need not be hospitalized	18	4.7
Immediate hospitalization is mandatory when a driver is hurt, despite his state of drunkenness	337	87.8
If the driver is a woman, she cannot be subjected to alcohol tests	14	3.6
The injured driver should be subjected to breathalyzer test immediately	21	5.5
Injured driver should be immediately subjected to breathalyzer test, as hospitalization and investigations would delay testing	25	6.5
Delay breathalyzer testing for 10 minutes, after allowing the driver to rinse her mouth with water	120	31.3
The driver’s breath smelling of alcohol is sufficient to prove drunkenness	26	6.8
Allegedly drunk driver’s consent is important to the doctor to draw blood for alcohol analysis	331	86.2

Abbreviation: DUI, driving under the influence.

**Table 10: Overall Practices Among Police Officers During a Case of DUI.**

Practical aspects assessed		Number	Percentage
Supply of breathalyzers for a month	Excellent supply	136	35.2
	Good supply	84	21.9
	Moderate supply	117	30.5
	Poor supply	37	9.6
	Breathalyzers are not available in my division	4	1
How do you attend to a drunk driver?	Use a breathalyzer	36	9.4
	Produce before a Government Medical Officer	144	37.5
	Both breathalyzer and medicolegal examination	147	38.3
Preliminaries to be performed before administering a breathalyzer	Advise him to wash the mouth	355	92.4
	Advise him to take a deep breath	132	34.4
When do you produce an allegedly drunk person to a Government Medical Officer?	When I have no breathalyzer in my possession	270	70.3
	When the allegedly drunk person refuses to blow into the breathalyzer	297	77.3
	When the allegedly drunk person requests to be produced before a doctor	223	58.1
	When I notice injuries in the allegedly drunk person	215	56.0

Abbreviation: DUI, driving under the influence.

**Table 11: Practice of Immediately Producing a Drunk Driver for Medicolegal Examination.**

Service experience	Marks out of 5					Total	p = 0.320
	1	2	3	4	5		
1-5	0 (0.0%)	18 (21.2%)	13 (15.3%)	27 (31.8%)	27 (31.8%)	85	
5-10	2 (2.1%)	17 (17.7%)	18 (18.8%)	33 (34.4%)	26 (27.1%)	96	
10-20	0 (0.0%)	23 (20.5%)	27 (24.1%)	38 (33.9%)	24 (21.4%)	112	
>20	1 (1.1%)	38 (41.8%)	15 (16.5%)	16 (17.6%)	21 (23.1%)	91	
Total	3	96	73	114	98	384	

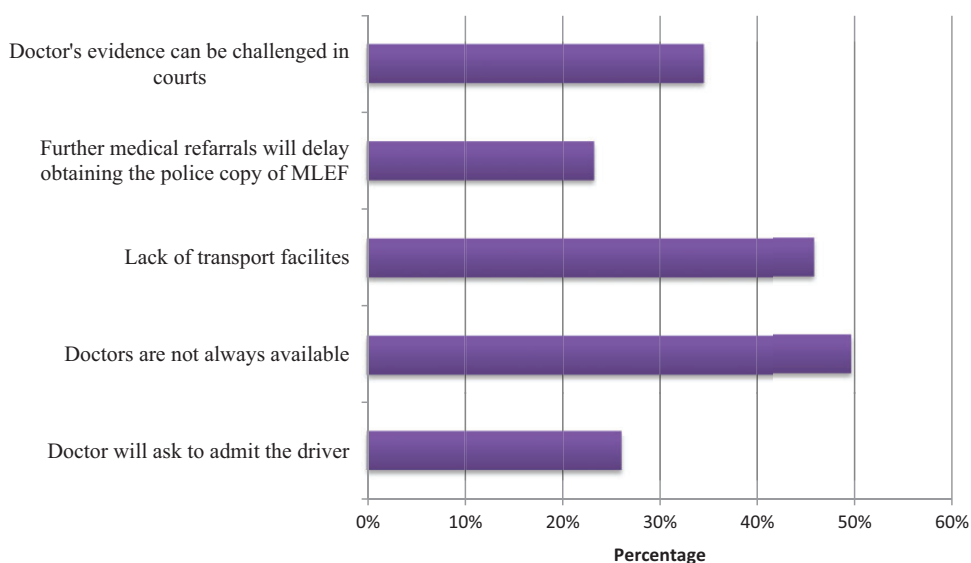
due to the hassle experienced when the examining doctor requests to admit the allegedly drunk driver; 182 (47.4%) had difficulties in taking the driver to the hospital due to lack of transport facilities.

**DISCUSSION**

There has been a dramatic increase in the vehicle population from 0.213 million in 1977 to 1.78 million in 2001. Some studies state that the rise in the rate of road traffic incidents is due to factors such as rapid increase

in the number of vehicles and poor development in the road infrastructure (7). In the current years, apart from these two factors driving under influence (DUI) of alcohol and other drugs has produced alarming rates of road traffic accidents.

A traffic police officer will be first authoritative personnel a drunk driver encounters, and this would be the initial step of the series of processes toward establishing justice. Then, either the accused is subjected to a breathalyzer examination or will be produced to a



**Figure 5.:** Practical issues faced when producing a drunk driver for medicolegal examination.

Government Medical Officer to evaluate for drunkenness.

A breathalyzer could be described as one of the inventions that provides abundance of aid to the law enforcement authority, particularly to the segment that investigates into road rule violations and offences.

In most provinces and territories of Canada and the United States (8), the traffic police personnel who pulls over a vehicle in suspicion of DUI performs a "Field Sobriety Test," in which he subjects the suspect through a series of tests to elicit the cerebellar coordination. The three main tests include walk and turn, one leg stand, and horizontal gaze nystagmus. The aim of performing these tests is to assess the level of impairment irrespective of blood levels. The suspects are required to be in the direct observation of the officer at least for 15 minutes, before the breathalyzer test is carried out. This is to observe whether the suspect vomits, belches, eats, smokes, or eats, which could influence the results of the breathalyzer. And a mandatory second breath test is performed without which the entire evaluation becomes invalid (9). The police officers are trained to the extent that they make no errors in admonishing to the suspect, the consequences

of refusing to take a chemical test; allowing the suspect to choose an alternative test for breath test; obtaining a warrant for a blood draw; and maintaining a chain of custody of the samples obtained. These officers are given adequate training for being in the DUI enforcement and also repeatedly evaluated during their service period. The practiced procedure among the officers of Sri Lankan police is questionable and often criticized leading to reservations in trusting their investigations.

The deficiencies in knowledge and the timely decision-making have caused numerous drawbacks in court cases of DUI (10, 11), in the recent past, failing to establish justice. All these continuing litigations make it vital for such a study in assessing the knowledge, attitude, and practical approaches of traffic police officers in handling cases of drunkenness.

There have been recent studies conducted in Sri Lanka to evaluate the knowledge, attitude, and practice of *doctors* with regard to the alcohol protocol (12, 13), but there have been no studies carried out to evaluate the current knowledge, attitude, and practice of traffic police officers related evaluation of drunkenness. No attention had been paid to assess the errors of procedure or to see whether there are any gaps in

knowledge, attitude, and practice. Thus, we planned this study to evaluate the knowledge, attitude, and practice of police officers of different stages of service experience, related to the DUI enforcement. The educational qualifications of the police officers who took part in this study varied from “Ordinary Level” to Undergraduate levels.

The study revealed that 37.5% of the police officers on DUI duty produce a drunk driver to a Government Medical Officer, and 38.3% said that they would subject the drunk driver to both breathalyzer test and medicolegal examination; 9.4% said that they would use a breathalyzer. The rest (15%) did not have a strong opinion on how to attend to a drunk driver under the influence of alcohol. Lack of understanding regarding the sequence of salient events and to evaluate their contribution in providing justice is the major problem. Producing an allegedly drunk driver to a medical officer is not essential only to confirm his state of drunkenness but also to evaluate many prime factors such as fitness to be detained, fitness to be in-charge of a vehicle, need for urgent medical interventions, being under influence of substances other than alcohol, and most importantly to rule out disease conditions mimicking alcohol intoxication (14, 15). According to this study, the knowledge among police officers regarding conditions mimicking drunkenness was found to be significantly low with increasing service experience and better with increasing number of DUI cases encountered in a month. Retaining a drunk person in police custody, without proper assessment by a medical officer, can be hazardous, as deaths in custody have been reported due to alcohol intoxication/dependence (16) and due to exacerbation of existing disease conditions (17). Police can prevent such unfortunate deaths, where they have to carry the entire responsibility, by subjecting a drunk person to medical assessment prior to taking the decision of detention in custody.

There was statistically significant difference observed in better knowledge in relation to service experience regarding medicolegal examination where officers with shorter service experience showing better knowledge ( $p = 0.001$ ). This clearly indicates that even

though drunk drivers are produced for medicolegal examination by traffic police officers, they are following a routine blindly without adequate knowledge about what exactly is assessed in an examination of drunkenness. This can be inter-related to the statistically significant poor attitude toward the importance of medicolegal examination of a drunk driver with increasing work experience ( $p = 0.001$ ) observed in this study. Due to the lack of similar studies worldwide, the results of this study have no comparison.

Further, an accurate and efficient management of a case of DUI cannot be carried out with lack of knowledge about the preliminaries that have to be carried out before administering a breathalyzer test. Only 19.5% had scored full marks. This indicates that there is a remarkable lack of knowledge in correct practices of DUI management, which would cause a significant impingement in the provision of justice.

It was alarming that 92.2% of the traffic police officers who were regularly engaged in DUI duties did not know the sequence of color change in a breathalyzer equipment, and 20.3% were unaware of the correct instructions to be given before asking a drunk driver to blow into a breathalyzer; 14.3% did not know the legal limit of blood alcohol concentration for driving in Sri Lanka, even though police officers are a substantial community of law enforcement in this country. This insufficiency of knowledge indicates that these officers are merely following the routine without proper understanding of the specifications of the apparatus and the legal provisions of the country.

Even though a majority of police officers considered that their knowledge on handling a case of drunkenness was satisfactory and above according to their perception, our study revealed that their practice in this entity was significantly poor with a mean score of 1.61. This indicates the need for continuous monitoring of their work through audits and upgrading of knowledge through educational programs and workshops. And also when the officers from one expertise is changed duties containing another expertise (e.g., crime division to traffic duties and vice versa), we suggest that they should be given a short training

course of at least two weeks duration, in order for them to grab the parameters of the duties they are about to perform. By doing this, we would be able to produce police officers with adequate knowledge, practice, and an ethical and nonjudgmental approach toward drunk persons, thus improving the quality of the valuable service they provide to the nation.

The majority (81.7%) of police officers in study sample scored less than 60% on the question that assessed their attitude toward the importance of producing a drunk driver for medicolegal examination. Further, the attitude was poorer with long service as well as with higher rankers. Thus, it is crucial to address the attitudinal issues of the officers. Most of the parameters assessed by this study have shown poor score with a significant association with increasing work service experience. Especially, the programs should focus on the police officers who have joined the service recently, so that early prevention of adaptation to bad attitudes by following the seniors could be achieved. The programs should also incorporate all sectors of the police community, including officers of various service experience, in order to upgrade their knowledge and for the programs to be efficient and productive.

### Limitations of Study

Even though it was expected to include police officers of all ranks in a uniform manner, officers of Inspector rank and above scarcely participated in this study, except for seven or eight as they were not consenting to participate in the study. Therefore, the evaluation of their knowledge on the procedure of handling an alleged drunk driver was not successfully evaluated.

### CONCLUSION AND RECOMMENDATIONS

The results of our study revealed that there is no significant association between knowledge, attitude, and practice in handling a case of DUI and the ranks of the police officers. Similarly, no significant association was observed between knowledge, attitude, and practice of police officers and the number of DUI cases they encounter in a month. But certain aspects of knowledge, attitude, and practice on handling a

case of drunkenness were not satisfactory among police officers who are engaged in DUI duties, and it deteriorates with longer service duration. This may be partly affected by their substandard attitude toward the gravity of this issue and lack of continuous professional developing schemes within the institutions. Sri Lanka, despite being a small country, has a largely versatile district wise in service provision due to inequality of resource allocation which limits the results of this study to be applied to other districts. Lower supply of breathalyzers, overwhelming working hours, hassle faced by the officers in transporting a drunk driver to a hospital for medicolegal examination, and the undue delay in hospitals may be few of the reasons that may play a conspicuous negative role in efficient dispensation of duties. Thus, we recommend that regular audits and recognition of satisfactory service with early detection of deficiencies is a necessity to improve this paramount sector in efficient provision of justice. Continuous professional development should be aimed to improve the competencies in professional knowledge and skills, improving management and team play, professionalism, interpersonal relationships, technology, teaching, and accountability (18).

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