

**How to Cite:**

Hadjab, M., & Mezghiche, A. (2024). The contribution of non-profit organizations specialized in traffic safety in promoting traffic knowledge through awareness campaigns: A study of a sample of drivers. *International Journal of Economic Perspectives*, 18(12), 2199–2214. Retrieved from <https://ijeponline.org/index.php/journal/article/view/767>

# **The contribution of non-profit organizations specialized in traffic safety in promoting traffic knowledge through awareness campaigns: A study of a sample of drivers**

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**Abstract**--This research aims to determine the effectiveness of awareness campaigns within the traffic safety sector in deepening their impact on drivers and consistently increasing their awareness, thereby instilling traffic culture. It also explores the long-term effects of such campaigns. The study covers theoretical concepts related to traffic accidents, awareness campaigns, and includes several theories explaining the phenomenon. In the practical aspect, the research analyzes responses from a questionnaire designed to assess the impact of the awareness message on drivers, specifically in terms of improving their driving performance, traffic knowledge, and increasing their traffic awareness and culture. The study concludes that there is a strong correlation between the awareness campaign and traffic awareness and culture. However, the survey also reveals shortcomings on the part of the campaign organizers (the associations), particularly in terms of the quality of the awareness models used and the drivers' limited engagement.

**Keywords**--Awareness campaigns, traffic awareness, traffic culture, traffic safety.

**Introduction**

Traffic accidents have become one of the most costly phenomena for countries, with varying degrees of damage that affect many sectors. The insurance sector is

at the forefront, suffering considerable losses despite the increasing involvement of various traffic safety bodies, executive authorities, and local and national associations. In addition, there has been a rise in awareness campaigns. However, traffic accidents remain a severe crisis impacting both the economy and individuals, with traffic accident fatalities increasing by 35% over just three years, from 2016 to 2019.

Experts attribute traffic accidents to many factors, such as climatic conditions, geographic and topographic factors, and vehicle-related technical issues. However, the human factor remains the leading cause. Specialized traffic safety bodies have launched continuous awareness programs aimed at increasing road safety awareness and instilling a traffic culture among Algerian drivers through civil society.

### **Problem Statement:**

With the growing number of associations active in the field of road safety, the frequency of awareness messages about traffic accidents has increased, yet traffic accident rates have continued to rise despite the geographical and temporal distribution of these messages. To deeply assess the impact of awareness campaigns on traffic safety, prevention, and adherence to traffic laws, as well as to measure the extent to which traffic culture has been integrated into drivers' behaviors, the following research question is raised: **Do awareness campaigns have a clear impact on strengthening road safety awareness and instilling a traffic culture in drivers?**

The following questions are also posed:

- ✓ Does the direct message of awareness campaigns play an adequate role in enhancing drivers' knowledge of traffic regulations?
- ✓ Do awareness campaigns contribute to the development of a sense of responsibility among drivers?
- ✓ Do awareness campaigns help to enrich drivers' traffic experience?

### **Hypotheses:**

To address the research problem and answer the sub-questions, the study is based on three hypotheses:

- **Hypothesis 1:** The direct message of awareness campaigns plays an adequate role in enhancing drivers' knowledge of the traffic sector.
- **Hypothesis 2:** Awareness campaigns contribute to the development of a sense of responsibility among drivers.
- **Hypothesis 3:** Awareness campaigns contribute to enriching drivers' traffic experience.

### **Objectives of the Study:**

This study aims to:

- ✓ Present the current situation of driver compliance with traffic laws at the national level.

- ✓ Determine the relationship between the level of compliance with traffic laws and the frequency of awareness campaigns.
- ✓ Provide recommendations that support the traffic safety sector and road security.

### **Significance of the Study:**

The significance of this study lies in:

- ✓ The importance of aligning the traffic safety sector with scientific measurement and analysis to achieve its goals.
- ✓ The traffic culture derived from various awareness campaigns.
- ✓ Adapting traditional strategic goals to modern ones for the development of this sector.
- ✓ Identifying the role of academic research in guiding the traffic safety sector.

### **Methodology:**

The study uses a descriptive approach to present the study's literature based on relevant laws, reports, and research that contribute to the study. The analytical approach is also employed, utilizing statistical tools to present the study framework, test hypotheses, and obtain clear logical results from the practical study.

### **Study Population and Sample:**

The study sample consists of drivers who were surveyed and selected randomly, including university professors, merchants, and other individuals who own and regularly drive vehicles. These drivers use various national and expressways requiring specific driving expertise.

### **Study Tool:**

A questionnaire was designed to address the study variables. It included personal information about the sample (e.g., gender, age, educational qualification, years of driving experience, and type of vehicle). The questionnaire contained 20 items divided into two sections representing the study variables: one section about the awareness campaigns (independent variable) with 10 items, and another about traffic awareness and culture (dependent variable) with 10 items. The Likert Scale was used to analyze the responses, with the following scoring system:

- Strongly Disagree: 1
- Disagree: 2
- Neutral: 3
- Agree: 4
- Strongly Agree: 5
- The following interpretation of scores was used:
- 1 to 1.79: Strongly Disagree
- 1.80 to 2.59: Disagree
- 2.60 to 3.39: Neutral
- 3.40 to 4.19: Agree

- 4.20 to 5: Strongly Agree

### Statistical Tools Used:

The data was analyzed using the SPSS 25 software, and reliability was tested through the Cronbach's Alpha coefficient. Descriptive statistics (frequencies, mean, and standard deviation) were used to analyze the questionnaire items. The items were ordered using a One Sample T-test and tested for hypotheses with Pearson's correlation to measure the relationship between the variables.

The significance level used in this study is 0.05, which is commonly employed in research. The null hypothesis (H0) is accepted if the p-value is greater than 0.05 and rejected if it is less than 0.05, indicating statistical significance.

### Study Framework:

The study framework is illustrated as follows, with the independent variable (awareness campaigns) and the dependent variable (traffic awareness and culture) linked through an awareness-raising process involving various phases: an initial, second, and third phase of awareness campaigns, leading to the cultivation of traffic awareness and culture in drivers.

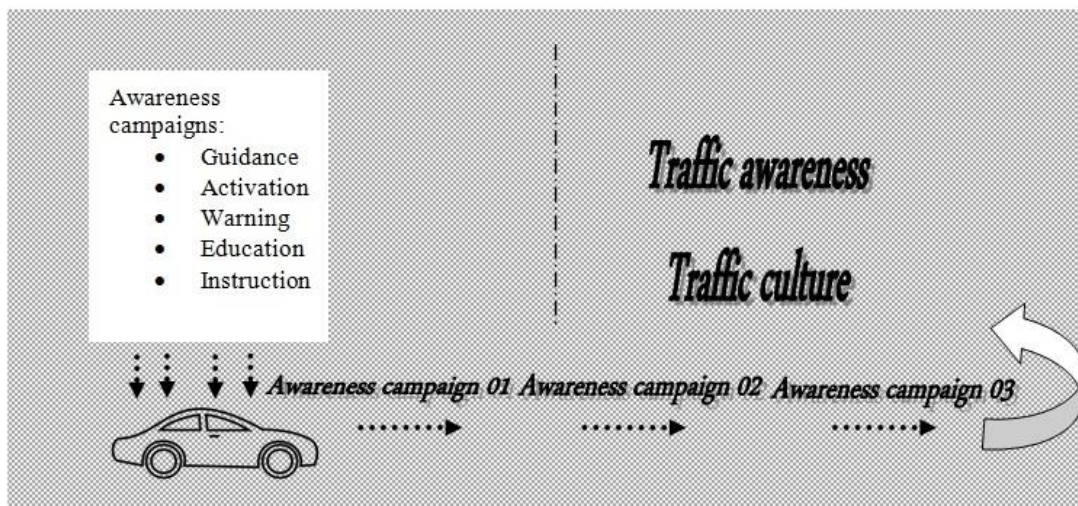


Figure 1: Research Framework - Independent Variable (Awareness Campaigns) and Dependent Variable (Traffic Awareness and Culture)

Source: Prepared by the researchers.

### Theoretical Aspect

In this section, we will present the key concepts and theoretical approaches related to the independent and dependent variables of the study: traffic laws and green marketing, based on scientific research in the form of books and articles. We will also provide our own clear conceptualization and analysis that reflect our perspective on the research aspects and their contents.

## 1. Theories Explaining Traffic Accidents:

The phenomenon of traffic accidents is a global issue that has been analyzed from various perspectives, with different approaches to understanding their causes, estimating their impact, and proposing solutions to avoid or reduce their damage. Many viewpoints focus on the technical factor related to the type and age of the vehicle, which determines the response of its parts, wheel alignment, and driving conditions indicated by the dashboard. Therefore, our initial assessment of traffic accidents is based on the human factor, which consists of three dimensions: psychological, physical, and behavioral. At the same time, technical factors, infrastructure issues, transportation networks, and regional geography are also significant causes of driving disruptions. All of these factors are presented in the following table:

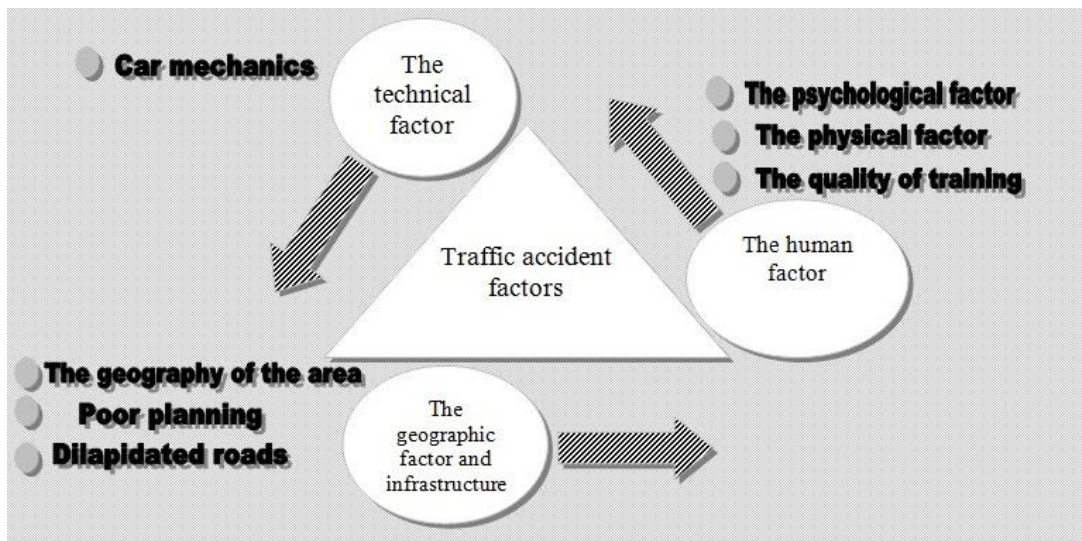


Figure 2: Factors of Traffic Accidents.

Source: Prepared by the researchers.

Many theories have explained the causes of traffic accidents in relation to all the previous dimensions, but most of them link the cause of the accident to the human factor and its psychological, physical, and behavioral aspects. Some theories even view it as a fate that inevitably affects both the person and the vehicle. Below are some of these theories (Taha, 1988, p. 290):

- ❖ **Fatalistic Theory:** Proponents of this theory argue that accidents are predestined and occur as a result of chance. Many supporters cite religious arguments, such as the Quranic verse: "Indeed, Allah alone has knowledge of the Hour; He sends down rain, and He knows what is in the wombs. No soul knows what it will earn tomorrow, and no soul knows in which land it will die. Indeed, Allah is Knowing and Acquainted." (Surah Luqman, 31:34).
- ❖ **Psychoanalytic Theory:** Some have deepened the notion of the "reward" the person seeks in society or with themselves, which this theory addresses. According to this view, the cause of the accident is not just a physical or physiological explanation but can also reflect a level of

aggression in the driver. The harm caused by the accident is seen as satisfying a need for the driver, almost as though the driver requires the harm to be inflicted upon themselves.

- ❖ **3. Biological (Organic) Theory:** This theory is prevalent in explaining traffic accidents. It focuses on the physical qualifications of the driver and their ability to control the vehicle, such as the steering wheel, gear shift, visibility, mirrors, and the ability to respond to emergencies. All these elements can impact the likelihood of an accident. Sometimes physical or neurological disorders prevent the driver from properly controlling the vehicle during the incident.

## 2. Awareness Campaigns

Humans have always communicated with one another, influencing and being influenced, since the creation of the earth and all that it contains. This is part of human nature to build a social environment through a series of continuous messages sent by individuals within society, which are then received by others. This philosophy is the closest to addressing a problem or embedding a concept, system, or other related components in an individual. Since traffic accidents are one of the deadliest phenomena affecting human life, those responsible for road safety have turned to awareness campaigns. These campaigns aim to promote road safety messages across various roads, with the goal of instilling traffic culture and increasing road safety awareness.

However, it is noticeable that despite the increasing number of organizations responsible for these campaigns, including government agencies, departments, and associations, the rate of traffic accidents continues to rise. The global death toll due to traffic accidents exceeds 1,000 in some countries—figures comparable to those of war casualties. In Algeria, the death toll reached a staggering 700 in 2022, compared to 650 in 2021 (Hoekstra & Wegman, 2011, p. 81).

Many national and local associations are active in the field of road safety, such as the Traffic Safety Academy and Road Security Academy, as well as other associations involved in this sector. Awareness campaigns are the most commonly used method by these associations to raise awareness about specific phenomena, explain their components, and address their various dimensions. These campaigns are an essential tool for guiding or presenting the results of a particular issue, often coordinated with religious or seasonal events or based on the needs of specific high-risk locations, known as “black spots” that are identified by experts and relevant authorities, such as the National Gendarmerie and National Police. The campaigns cover various themes and messages, based on the indicators set out in Article 2 of the Executive Order No. 09-03, dated July 22, 2009. These are presented in the following table:

The road	Any public lane open to vehicle traffic	Directed to the driver and the pedestrian
The intersection	The point where two or more roads meet, regardless of the angle of their axes	Directed to the driver

Stopping	Temporary stay of a vehicle with its engine running on the road for a specific period due to the need to stop	Directed to the driver
Parking	Parking a vehicle on the road under conditions that are not typical for stopping, with the engine turned off	Directed to the driver
The highway	A road that cannot be intersected by other roads or railways and may be restricted for certain categories of users	Directed to the driver
The expressway	A road designed for the fast movement of cars	Directed to the driver
Emergency stopping lane	Part of the shoulder located next to the middle of the highway and the vehicle	Directed to the driver
Authorized weight with load	The vehicle's weight combined with its load	Directed to the driver

Source: Prepared by the researchers based on Article 2 of the Traffic Law, Chapter on Organizing Traffic Movement and Ensuring Road Safety and Security.

Most associations conduct awareness campaigns in a single phase, which is ineffective. Experts attribute the failure of the message to reach its intended audience to the sender's reliance on a single phase or stage, which leaves the message vague and unclear to the recipient. Awareness campaigns should be viewed as a multi-phase message that requires a structured approach in three stages: awareness, legislation, and follow-up. By organizing the campaign into these stages, it becomes an effective persuasive communication model that achieves depth and broad targeting.

These phases are centered around the "Three T's Theory," which is illustrated in the following diagram:

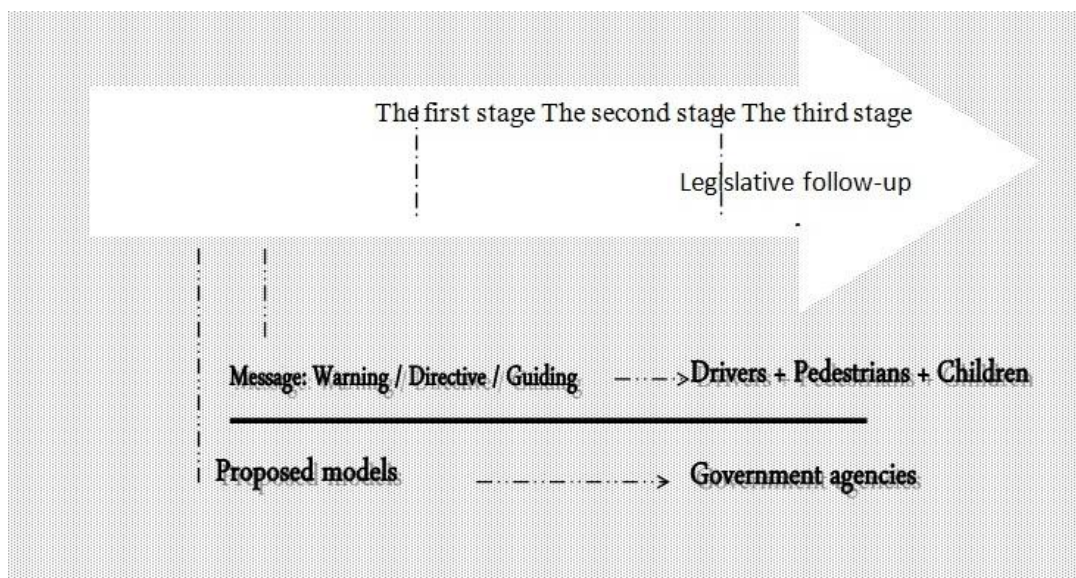


Figure 2: Research Framework – Between the Independent Variable (Awareness Campaigns) and Dependent Variable (Traffic Culture and Awareness)

- ❖ **Awareness:** This involves persuasive verbal mechanisms and direct communication with the driver using clear language, supported by evidence and arguments. The goal is to leave a lasting impact on the driver's thinking and driving experience. Awareness campaigns are conducted in stages according to a specific timeline and location, often using pamphlets, brochures, schedules with guidance, and information about the dangers of traffic accidents, speed limits, and other relevant awareness topics.
- ❖ **Legislation:** In many cases, the awareness message alone may not be sufficient, leading to a shift toward the legislative framework. This phase involves laws that regulate behavior (e.g., load weight, speed limits, seat belts, etc.). Media outlets, such as radio and television, are used to achieve widespread media coverage and social resonance, highlighting the necessity of moving to this legislative stage.
- ❖ **Follow-up:** This phase involves assessing the impact of the awareness message and determining the degree of its effectiveness. Many failures in awareness campaigns arise from a lack of follow-up and failure to measure the effect on drivers. It is essential for the sender of the message to understand and assess the impact of this phase. The goal is to continue disseminating the awareness message to the recipient without interruption, beginning from the first phase.

### Practical Aspect

In this section, we will examine the nature of awareness campaigns, their message components, and their impact, as conducted by associations and their partners, including the National Gendarmerie and National Police. We will analyze how these campaigns affect the increase in traffic awareness among drivers on national and expressways, and whether they achieve their goals, as measured by the traffic accident rates and violations in specific geographical areas, or a reduction in speeding.

### First: Analysis of the Reliability and Validity of the Survey Items

The reliability and validity of each section of the survey were tested using the Cronbach's alpha coefficient. The results are shown in the following table:

Table 1: Reliability and Validity Values of the Survey

Validity coefficient	Cronbach's Alpha reliability coefficient	Number of items	The axis
%95,17	%90,58	10	<b>Awareness campaigns</b>
%92,19	%84,99	10	<b>Traffic awareness</b>
<b>%96,47</b>	<b>%93,07</b>	<b>20</b>	<b>The previous axes together</b>

Source: Survey results based on SPSS.

It is evident that the reliability coefficient for the survey across all its sections is very high, ranging from 85% to 90%, which exceeds the acceptable threshold of

70% for the total sections. This indicates the consistency of its items and sections. Additionally, it has a very high validity coefficient (the square root of the reliability coefficient) exceeding 92%, which reflects the accuracy of its data.

### **Second: Analysis of the Personal and Professional Data of the Study Sample**

The responses of 73 participants were analyzed, including a significant number of executives from the unit. The characteristics of their personal data are as follows:

- ✓ Gender Variable: 56.16% of the respondents are male, while 43.84% are female. This indicates a strong presence of women in the traffic environment as drivers, and their proportion has been steadily increasing in recent years.
- ✓ Age Variable: 20.55% are between 20 and 29 years old, 39.72% are between 30 and 39 years old, 26.03% are between 40 and 49 years old, and 13.70% are between 50 and 60 years old. These percentages show that the majority of drivers are in the youth stage, which reflects positively on their driving performance.
- ✓ Educational Qualification Variable: 17.81% have a secondary level of education, 75.34% have a university degree, while 6.85% have completed higher education (Master's degree). These figures indicate that Algerian drivers have reached an educational level that enables them to enhance their traffic knowledge and awareness.
- ✓ Years of Driving Experience: 16.44% have less than 5 years of driving experience, 27.39% have between 6 to 10 years, 19.18% have between 11 to 15 years, 21.92% have between 16 to 20 years, 9.59% have between 21 to 25 years, and 5.48% have between 26 to 30 years. This shows that a significant proportion of drivers have considerable experience and have lived through many events, laws, and other components of the traffic environment.

### **Third: Analysis of the Study's Section Items**

We will now analyze the results of the responses to the items in each section:

#### **1. Analysis of the First Section Items:**

The first section represents the nature of awareness campaigns and includes 10 items, which are summarized in the following table:

Table 2: Review of Items in the First Section

<b>Item number</b>	<b>Item statement</b>
01	• Awareness campaigns set traffic objectives at all stages of the awareness activity.
02	• Associations aim to integrate traffic knowledge within the core of the awareness message.
03	• Associations try to direct their strategic vision to reinforce traffic knowledge.
04	• Associations define the framework for traffic responsibility in their entire traffic message.
05	• Associations require scientific and cognitive qualifications for awareness tasks.

<b>Item number</b>	<b>Item statement</b>
06	• The scope of supervision over awareness activities in associations is broad.
07	• Associations have developed mechanisms to monitor and evaluate the results of awareness activities.
08	• Reports of awareness campaigns are subject to academic studies.
09	• Associations attempt to develop simulation systems to assess traffic activities through the awareness campaign.
10	• The traffic review system in associations is comprehensive, covering all outcomes, decisions, and laws.

Source: The survey prepared by the researcher.

Using statistical tools, the items of the first section were analyzed. The following table presents the results of this analysis:

Table 3: Analysis of the Items in the First Section.

<b>Item number</b>	<b>Mean</b>	<b>Standard deviation</b>	<b>Degree of agreement</b>	<b>T-test value</b>	<b>Significance level</b>	<b>The decision</b>	<b>Rank</b>
<b>01</b>	3,34	1,14	Neutral	2,555	0,013	The statement is achieved	01
<b>02</b>	3,11	1,09	Neutral	0,861	0,392	The statement is not achieved	06
<b>03</b>	3,32	1,09	Neutral	2,467	0,016	The statement is achieved	02
<b>04</b>	3,26	1,26	Neutral	1,767	0,081	The statement is not achieved	04
<b>05</b>	3,16	1,19	Neutral	1,180	0,242	The statement is not achieved	05
<b>06</b>	3,29	1,17	Neutral	2,097	0,040	The statement is achieved	03
<b>07</b>	2,81	1,25	Neutral	-1,306	0,196	The statement is not achieved	09
<b>08</b>	3,07	1,03	Neutral	0,567	0,572	The statement	07

						is not achieved	
<b>09</b>	2,66	1,02	Neutral	-2,878	0,005	The statement is not achieved	10
<b>10</b>	2,88	1,09	Neutral	-0,964	0,338	The statement is not achieved	08
The first axis.	<b>3,09</b>	<b>0,84</b>	<b>Neutral</b>	<b>0,910</b>	<b>0,366</b>	The message of traffic awareness campaigns is insufficient and needs improvement.	

Source: Survey results based on SPSS.

The numbers from the previous table allow us to identify several key findings, which are listed as follows:

- ✓ Traffic awareness campaigns set their traffic-related objectives at all stages of the awareness activity, which is a strategic step that enhances the effectiveness of the campaign.
- ✓ Awareness campaigns do not fully integrate traffic knowledge into the content of the message, which makes the message somewhat lacking in traffic-related substance. This is a serious issue that prevents the message from reaching the driver.
- ✓ Awareness campaigns have a clear strategic vision of the traffic environment in which they operate, helping them identify the target audience and the approach used in the campaign.
- ✓ Awareness campaigns do not define the scope of traffic responsibility in their message, leading to a clear gap between the campaign's goal and its recipient.
- ✓ Awareness campaigns do not require specific scientific or cognitive qualifications from those responsible for them, which threatens their effectiveness and success.
- ✓ The scope of supervision of awareness activities within associations is broad, reflecting the organizational capability of those running these campaigns.
- ✓ Awareness campaigns have not developed mechanisms for monitoring and evaluating campaign outcomes, i.e., the follow-up stage, which weakens the effectiveness and shortens the life of the message.
- ✓ Awareness campaign reports are not subjected to academic studies for unknown reasons, while international research labs active in this field have achieved significant outcomes that have reduced the severity of traffic phenomena.
- ✓ Associations do not use simulation systems to evaluate traffic activities through awareness campaigns. These systems are somewhat costly but essential in providing a virtual environment and preparing the driver psychologically, cognitively, and legally.

- ✓ Associations do not have a traffic review system within their awareness messages that covers all results, decisions, and current laws, relying instead on general guidelines.

It is clear from the analysis of the first section that there is insufficient attention to the development of the awareness message within the traffic sector. The campaign only provides a limited presentation of the message without following up on it, and there is no comprehensive understanding of its meaning or content, nor are academic measures used. Its philosophy seems disconnected from the future prospects of the sector, both in the short and long term.

## 2- Analysis of the Second Section Items:

The second section represents the second variable, which is the level of traffic awareness and culture among drivers, and includes 10 items, which are presented in the following table:

Table 4: Review of Items in the Second Section

<b>Item number</b>	<b>Item statement</b>
<b>01</b>	All drivers adhere to traffic laws.
<b>02</b>	The driver starts their traffic experience with unknown traffic goals.
<b>03</b>	The driver establishes a system for anticipating hazards based on their traffic knowledge.
<b>04</b>	The driver tries to acquire traffic culture.
<b>05</b>	The driver participates in occasional cognitive and scientific training programs.
<b>06</b>	The driver contributes to reinforcing traffic culture through awareness activities.
<b>07</b>	A low level of traffic knowledge does not pose a significant danger to the driver.
<b>08</b>	The driver acquires traffic knowledge from previous traffic experiences.
<b>09</b>	The driver works to attract a group of drivers through traffic guidance.
<b>10</b>	The driver links the analysis of their traffic performance to scientific tools.

Source: Survey prepared by the researcher.

Using statistical tools, the items of the second section were analyzed. The following table presents the results of this analysis:

Table 5: Analysis of the Items in the Second Section.

Item number	Mean	Standard deviation	Degree of agreement	T-test value	Significance level	The decision	Rank
<b>01</b>	3,00	0,99	Neutral	0,000	1,000	The statement is not achieved	05
<b>02</b>	3,55	0,88	Agree	5,305	0,000	The statement is achieved	01
<b>03</b>	3,60	1,06	Agree	4,841	0,000	The statement is achieved	02
<b>04</b>	3,07	1,11	Neutral	0,527	0,600	The statement is not achieved	04
<b>05</b>	2,86	1,20	Neutral	-0,971	0,335	The statement is not achieved	06
<b>06</b>	2,79	1,04	Neutral	-1,688	0,096	The statement is not achieved	07
<b>07</b>	2,67	1,12	Neutral	-2,511	0,014	The statement is not achieved	08
<b>08</b>	3,07	1,03	Neutral	0,567	0,572	The statement is not achieved	03
<b>09</b>	2,45	1,07	Disagree	-4,385	0,000	The statement is not achieved	09
<b>10</b>	2,26	1,33	Disagree	-4,739	0,000	The statement is not achieved	10
<b>The second axis.</b>	<b>2,93</b>	<b>0,71</b>	Neutral	<b>-0,807</b>	<b>0,423</b>	The level of traffic awareness and culture among Algerian drivers is low.	

Source: Survey results based on SPSS.

The table provided us with important findings that we can present through the following points:

- ✓ Not all drivers adhere to traffic laws, a well-known issue, especially with the rising rates of traffic accidents.
- ✓ The Algerian driver starts their driving experience with unclear traffic objectives, relying on various experiences left to chance.
- ✓ The Algerian driver does not establish a system to foresee traffic hazards, as traffic information is not processed or considered.

- ✓ The Algerian driver does not seek to acquire traffic culture, where the accumulation of traffic knowledge is what would establish this framework.
- ✓ The Algerian driver does not participate in traffic training programs, which is uncommon for them and hinders their response to traffic laws.
- ✓ The Algerian driver does not contribute to reinforcing traffic culture due to its limited awareness.
- ✓ The low level of traffic knowledge poses a significant danger to the driver, especially in determining speed on hazardous roads.
- ✓ The Algerian driver does not acquire traffic knowledge from previous traffic accidents that have occurred on the same road.
- ✓ The Algerian driver does not actively engage with other drivers around them by offering traffic guidance, which proves the lack of traffic awareness.
- ✓ The Algerian driver does not connect their traffic performance analysis with scientific tools, such as simulations or medical, psychological, or physical diagnostics.
- ✓ It is evident from the above points that there is a weak foundation for traffic culture and awareness among Algerian drivers. This awareness can only be achieved through a well-rounded training system, ongoing monitoring, and appropriate penalties. This is highlighted in Article 71 of the Traffic Law:
- ✓ "The driver who commits any of the following traffic violations, resulting in a misdemeanor of accidental injury, shall be punished with imprisonment for a period ranging from six (6) months to two (2) years and a fine between 20,000 DZD and 50,000 DZD:"
- ✓ Excessive speed.
- ✓ Dangerous overtaking.
- ✓ Failure to respect the legal priority.
- ✓ Failure to comply with stop signals.
- ✓ Dangerous maneuvers.
- ✓ Driving in the wrong direction.
- ✓ Driving without lights or signals, or stopping in the middle of the road at night or during fog in areas without public lighting.
- ✓ Using a mobile phone manually or listening with both ears using a listening helmet while driving.
- ✓ Using audiovisual devices while driving.

#### **Fourth: Testing the Research Hypotheses**

Now, we will attempt to test the hypotheses of the study:

##### **1. Testing and Analyzing the First Hypothesis:**

From Table 3, it is clear that the first hypothesis is not fulfilled in the studied unit. The level and nature of the awareness campaigns are insufficient and need policies and objectives that support their presence in the traffic environment. The campaigns need to develop their guiding elements, as their role seems superficial and lacking deep, meaningful messages for the driver. Despite the availability of analytical tools, especially with the use of advanced smartphone applications, the conditions and tools required to deliver traffic knowledge to the drivers are present, but not effectively utilized.

## 2. Testing and Analyzing the Second Hypothesis:

From Table 5, it is clear that the second hypothesis is not fulfilled in the studied unit. The level of traffic culture and awareness among Algerian drivers is weak and requires comprehensive training, which includes adjustments to the training system to align with the development of these two components—traffic knowledge and traffic awareness.

## 3. Testing and Analyzing the Third Hypothesis:

To test this hypothesis, it is necessary to measure the correlation between the independent variable (nature of the awareness campaigns) and the dependent variable (traffic awareness and compliance) using the correlation coefficient. This is clarified in the following table:

Table 6: Correlation Analysis Between Study Variables

<b>Dependent variable</b>	<b>Correlation coefficient with the independent variable</b>	<b>Significance level</b>	<b>The decision</b>
Development of traffic culture and awareness.	78,72	0,000	There is a strong positive correlation.

Source: Survey results based on SPSS.

From Table 6, it is clear that the third hypothesis is confirmed. The creation of awareness campaigns based on thorough studies derived from academic research with profound results, effective methodology, and preparations that include organizational and legal frameworks, as well as adequate role distribution, contribute effectively to increasing traffic culture and awareness. This can lead to steps aimed at advancing the road safety sector. This is because most traffic associations, regardless of their diversity, do not use scientific tools, where quality in this field can be achieved by developing forecasting and monitoring systems for awareness campaigns and improving the messages within the road safety sector.

## Conclusions and Recommendations

### First: Conclusions

- The study, through previous measurements and analysis, reached the following conclusions:
- The awareness system faces a barrier, despite the increasing number of associations active in the road safety sector, raising questions about their close connection to this sector.
- Traffic laws dedicated to guiding and monitoring the traffic environment lack continuous application mechanisms through media outlets, which serve as a continuous deterrent to offenders, a method commonly used globally.
- Traffic training and education are in decline, especially with the rise in the number of driving schools, which leads us to shift towards exceptional training before implementing the point-based driving license system.

- There is no system simulating driving conditions, even though technology costs have decreased, and it is possible to generalize such experiences among drivers.

### **Second: Recommendations**

- ✓ Develop and implement advanced awareness campaigns by introducing a sample of drivers into virtual simulations of traffic accident situations, so that drivers can acquire field reactions. These models are currently applied by global associations to enhance driving skills, with the involvement of academic experts to improve the results of these experiences with accuracy, quality, and to offer potential solutions.
- ✓ Reevaluate the structure of associations active in the road safety sector and oblige them to increase their training rates to achieve effective results.
- ✓ Target not only drivers but also school children, incorporating road safety courses into educational curricula.
- ✓ Organize large-scale events and activities that aim to attract drivers most at risk, ensuring deep distribution of the awareness message and guaranteeing its continuity and integration within society.
- ✓ Encourage active associations in the road safety sector to propose models to private organizations, contributing to the promotion of this important sector, which will help protect lives and the national economy.
- ✓ Integrate road safety into the academic sector, with universities supervising this field to ensure ongoing research and education related to traffic safety.

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