International Journal of Social Science and Human Research

ISSN (print): 2644-0679, ISSN (online): 2644-0695

Volume 08 Issue 09 September 2025

DOI: 10.47191/ijsshr/v8-i9-31, Impact factor- 8.007

Page No: 6979-6988

Road Insecurity in Abidjan: Qualitative Analysis of Risky Car Driving Among Informal Public Transport Drivers (Côte D'ivoire)

KOUADIO Kouadio Antoine[1], DJAKO Logon Albert Thierry[2], TIEFFI Hassan Guy Roger[3]

[1]Assistant Professor, Université Félix Houphouët Boigny, 22 BP 23 Abidjan 22

[2]Assistant Professor Université Félix Houphouët Boigny

[3]Associate Professor Université Félix Houphouët Boigny:Centre Ivoirien d'Étude et de Recherche en Psychologie Appliquée (CIERPA),22 BP 159 Abidjan 22.

ABSTRACT: Road traffic accidents constitute a major public health concern in low- and middle-income countries, where informal collective transport plays a central role in urban mobility. In Abidjan, the rapid expansion of this sector has been accompanied by recurrent risky driving behaviours, which remain insufficiently documented in the scientific literature. This study aims to describe and analyse such behaviours among drivers of informal collective transport vehicles.

An exploratory qualitative design was employed, drawing on semi-structured interviews with 31 participants, including 14 drivers, 4 representatives of the OSER, and 13 police officers. Data were subjected to thematic analysis. Four major categories of traffic offences emerged: reckless driving (25.6%), indiscipline on public roads (19.3%), improper stopping and parking in breach of the Highway Code (16.9%), and non-compliance with traffic signage (14.5%). These behaviours are discussed with reference to Siegrist's (1996) *Effort–Reward Imbalance* model and the self-regulation theory of Lazuras et al. (2022).

The findings not only shed light on the psychosocial and regulatory dimensions of risky driving within the informal transport sector but also provide evidence to guide awareness-raising and preventive strategies targeting drivers in Abidjan.

KEYWORDS: road accidents, risky driving behaviours, informal collective transport, drivers

I. INTRODUCTION AND PROBLEM STATEMENT

Risky driving behaviours constitute a major public health concern on a global scale. According to the World Health Organization (WHO, 2023), road traffic accidents cause approximately 1.19 million deaths annually, with 53% of fatalities occurring among vulnerable groups, including pedestrians, cyclists, and motorcyclists. The infringing behaviours underlying these fatalities include excessive speed, driving under the influence of psychoactive substances (alcohol and drugs), fatigue, driver distraction (mobile phone use), failure to wear seatbelts/helmets, and intentional violations of traffic rules (Adès & Lejoyeux, 2004; Freydier, 2014; Hu et al., 2021; Özkan & Lajunen, 2005; Rashmi & Marisamynathan, 2023).

The highest prevalence of risky driving behaviours is observed among professional drivers, particularly heavy goods vehicle operators and public transport drivers. Indeed, these professional drivers are highly exposed due to time pressure and the long hours of intensive work on the road (Useche et al., 2021).

Risky driving behaviours result in numerous deaths. According to the WHO (2022), Africa records approximately 226,000 road deaths annually, corresponding to a mortality rate of 26.6 deaths per 100,000 inhabitants the highest in the world. In contrast, Europe records the lowest mortality rate worldwide, with 9.3 deaths per 100,000 inhabitants.

This phenomenon also entails significant economic consequences, reflected in health expenditures (emergency care and rehabilitation of the injured), productivity losses due to absenteeism, worker fatalities, and indirect costs associated with insurance, repairs, and traffic congestion, estimated at 3% of global GDP (WHO, 2018). Environmental consequences are not excluded, as accidents often generate massive traffic jams, which increase CO_2 emissions and thus exacerbate pollution. Furthermore, there are social consequences manifested in the thousands of orphans, broken families, and psychological trauma, including post-traumatic stress disorder among survivors and witnesses of serious accidents on the roads.

The general factors influencing risky driving behaviours are diverse. Some authors largely attribute them to the lack of safe infrastructures or deteriorated road conditions (Ziebel, 2011), vehicle non-compliance, and weak law enforcement, especially in low-income countries (Rashmi & Marisamynathan, 2023). Other authors link the phenomenon to drivers' socio-demographic characteristics, revealing that risky driving is more frequent among young men with low educational attainment (Sánchez-López et al., 2024; Tarlochan et al., 2022; Teye-Kwadjo, 2019; Zhai & Xi, 2023). Yet others highlight affective and cognitive aspects, such

as anger while driving, impulsivity, and comparative optimism (Causse, 2003; Lazuras et al., 2022). Finally, other scholars blame social determinants, such as cultural norms that valorise risk-taking as a symbol of masculinity (Damodariya & Patel, 2021; Perez-Diaz, 2000), institutional or legal weaknesses, corruption, and limited police enforcement (Shandhana & Marisamynathan, 2023).

To address this phenomenon, corrective measures have been implemented. In France, Villieux (2007) noted that speed limits, mandatory seatbelt use, and zero tolerance for alcohol led to a 20% reduction in accidents. Awareness campaigns targeting young people have improved attitudes in the United States (Padilla et al., 2020). However, the effectiveness of such measures remains limited in countries with weak law enforcement (Ziebel, 2011).

In Côte d'Ivoire, particularly in Abidjan, public transport modes such as minibuses, commonly called *gbaka*, and shared taxis, locally referred to as *woro-woro*, are characterised by informal, poorly organised working environments, often negatively perceived by the population (Kouadio, 2015). Drivers of these collective transport modes are generally precarious young workers aged 18 to 35, operating under difficult conditions and sometimes consuming alcohol (INS Report, 2023). According to the Ivorian Ministry of Transport (2024), 40% of the 1,200 annual road fatalities recorded in Côte d'Ivoire are attributable to public transport.

Data from the Office of Road Safety (OSER) indicate that in 2023, 34.93% of reported road accidents in Abidjan were caused by *gbaka*, *woro-woro*, and meter taxis. Furthermore, the four most recurrent traffic offences leading to these accidents were, in descending order of occurrence: driver recklessness, loss of control, dangerous parking, and excessive speed. In fact, these drivers are subject to a major constraint: the obligation to meet a daily financial quota set by their employers, while hoping to secure a personal profit.

Siegrist's (1996) Effort–Reward Imbalance Model emphasises that individuals evaluate their actions in terms of costs–efforts and rewards. Persistent imbalance, whereby high efforts are met with low rewards, generates chronic stress, which may translate into dysfunctional behaviours, including risk-taking. Moreover, the driving style theory developed by Taubman-Ben-Ari et al. (2020) stresses that driving styles interact with external factors to amplify or mitigate risks. For instance, an impatient driver stuck in traffic may engage in hazardous overtaking. A driver combining multiple styles, such as anger and impatience, faces multiplied risks of committing offences. Thus, the fact that drivers of informal public transport in Abidjan are characterised by frequently mismanaged cognitive overload may underpin their propensity to engage in risky behaviours.

Since 17 March 2023, within the framework of the implementation of the National Road Safety Strategy 2021–2025 (SNSR)—aimed at reducing fatalities by 25% by 2025 and 50% by 2030—the Ivorian government has introduced several reforms. These include the establishment of a licence withdrawal commission, the fight against incivility, the creation of a Special Road Safety Police, video-based traffic enforcement, and the introduction of a points-based driving licence. The traffic offences subject to video enforcement include vehicle documentation irregularities, failure to comply with traffic signals, violation of maximum authorised speed limits, and non-compliance with road safety standards for all vehicles in circulation.

According to Bamba (2023), the introduction of video enforcement in Abidjan enables real-time access to transport procedures and improves, among other things, the collection of reliable accident data and the management of traffic offences. This measure enhances traffic flow and reduces the number of road accidents. However, Sey (2021) notes that public awareness-raising initiatives on road safety remain insufficient. Furthermore, Okou and Zamblé (2024) emphasise that persistent acts of incivility by drivers and road users, as well as police corruption, undermine the effectiveness of road safety policies. This situation fosters a form of laxity that sustains the occurrence of road accidents in Abidjan.

Consequently, this research seeks to address the following question: **What are the risky driving behaviours characteristic of informal public transport drivers?** The present study therefore aims to describe the risky driving behaviours observed among drivers of meter taxis, minibuses (*gbaka*), and shared taxis (*woro-woro*).

II. METHODOLOGY

The methodology adopted in this study is structured into three subsections: participants, research instrument, and data processing.

2.1 Participants

The participants of the study were divided into two categories of actors, namely professional private drivers in public transport and key informants responsible for road safety in Abidjan.

The first category comprised individuals directly concerned with the adoption of risky driving behaviours, i.e., professional drivers. The second category consisted of professionals involved either in traffic regulation (police officers) or in reducing road accident risks (staff of the Office of Road Safety, OSER). Each of these two groups of actors was selected through multiple case sampling. This technique is particularly suited to qualitative studies, aiming specifically to provide an overall picture of the phenomenon under investigation. According to Pirès (1997), its principle is to include participants with highly diverse characteristics in order to achieve data saturation. Pirès (1997) suggests ensuring diversity within the sample based on general variables (common to all studies), such as age, gender, and marital status, as well as specific variables (varying from one study to another).

In this study, the general variables used to ensure diversity among the sample were age, gender, and marital status for both categories of actors. The specific variables used to diversify the sample were licence type, mode of transport, and driving experience among professional drivers, and sector of activity and function among key informants responsible for road safety in Abidjan.

The application of multiple case sampling resulted in the selection of two groups of participants whose characteristics are summarised in the following tables.

Table 1: Characteristics of professional driver participants

Variables	Categories	Frequency	Percentage
Age	21–29 years	2	14%
	30–39 years	8	57%
	40–49 years	4	29%
Marital status	Married	7	50%
	Single	7	50%
Level of education	Primary	6	43%
	Secondary	6	43%
	Tertiary	2	14%
Driving licence	ABCDE	13	93%
	BCDE	1	7%
Driving experience	1–5 years	5	36%
	6–10 years	3	21%
	11–15 years	2	14%
	16–24 years	4	29%
Type of vehicle	Gbaka (minibus)	5	36%
	Meter taxi	4	29%
	Woro-woro (shared taxi)	5	36%

Source: Field survey, 2025.

The 14 professional drivers interviewed, all male, operated within three informal modes of transport (*gbaka*, meter taxi, and *woro-woro*). Their ages ranged from 21 to 49 years, with a majority between 30 and 39 years (57%). An equal proportion were married and single. Regarding educational attainment, 43% had completed primary education, 43% secondary, and 14% tertiary. The majority (93%) held a type ABCDE licence. Driving experience ranged from 1 to 24 years, with the largest subgroup having 1–5 years of experience, followed by those with 16–24 years.

Table 2: Characteristics of key informants responsible for road safety in Abidjan

Variables	Categories	Frequency	Percentage
Gender	Female	4	24%
	Male	13	76%
Age	29–39 years	6	35%
	40–49 years	6	35%
	50–56 years	5	29%
Marital status	Single	4	24%
	Married	13	76%
Sector of activity	Police	13	76%
	OSER (Office of Road Safety)	4	24%
Function	Traffic Regulation Unit officer	4	24%
	General Intelligence officer (police headquarters)	2	12%
	Accident Investigation Service officer	6	35%
	Head of Operations Division, DIPSSR	1	6%
	Head of Driver Training Centre	1	6%
	Head of Statistics Service, OSER	1	6%

Accidentology Officer, OSER	1	6%
IT Officer, OSER	1	6%

Source: Field survey, 2025.

The 17 key informants interviewed were drawn from two sectors directly responsible for road safety in Abidjan: the Office of Road Safety (OSER) and selected units of the police, including the Special Division for Road Safety Police (DIPSSR), General Intelligence, the Traffic Regulation Unit (URC), and the Accident Investigation Service of the Abidjan Police Headquarters. Regarding their socio-demographic characteristics, 76% were men, and 76% were married. Their ages ranged from 29 to 56 years.

2.2 Research Instrument

The research instrument used was a semi-structured interview guide. This tool is particularly appropriate for qualitative studies aimed at obtaining an in-depth description of the phenomenon under study (Aktouf, 1987). The guide was organised into two main themes:

Participants' characteristics.

Risky driving behaviours commonly adopted by professional drivers of informal public transport vehicles.

The second theme was further subdivided into five sub-themes: driving fatigue, driver distraction, traffic code violations, aggressive driving, and the consumption of psychoactive substances.

2.3 Data Processing

The analytical technique employed for processing the verbal data from the interviews was thematic content analysis. This approach is suited to the analysis of verbal or textual data and leads to an objective description of the phenomena.

The application of thematic content analysis to the transcription of interviews followed the six steps recommended by Aktouf (1987):

Careful reading, aimed at grasping the meaning of participants' ideas and identifying the themes around which their discourse was organised. This allowed for the identification of five families of risky driving behaviours: non-compliance with traffic rules, driving while fatigued, use of psychoactive substances, inattention while driving, and competitive or hostile behaviours while driving.

Defining the recording unit, which involved breaking down the participants' discourse into its smallest meaningful elements. In this study, the recording unit was any idea describing a risky driving behaviour.

Defining the context unit, corresponding to a portion of text containing the recording unit and providing its meaning. Here, the context unit was the paragraph.

Defining the enumeration unit, which indicated the method of calculating frequencies and percentages of risky behaviours and categories of risky behaviours. The frequency of a risky behaviour was determined by the number of times it was cited in the interview transcripts. The frequency of a category of risky behaviours was obtained by summing the frequencies of the constituent behaviours.

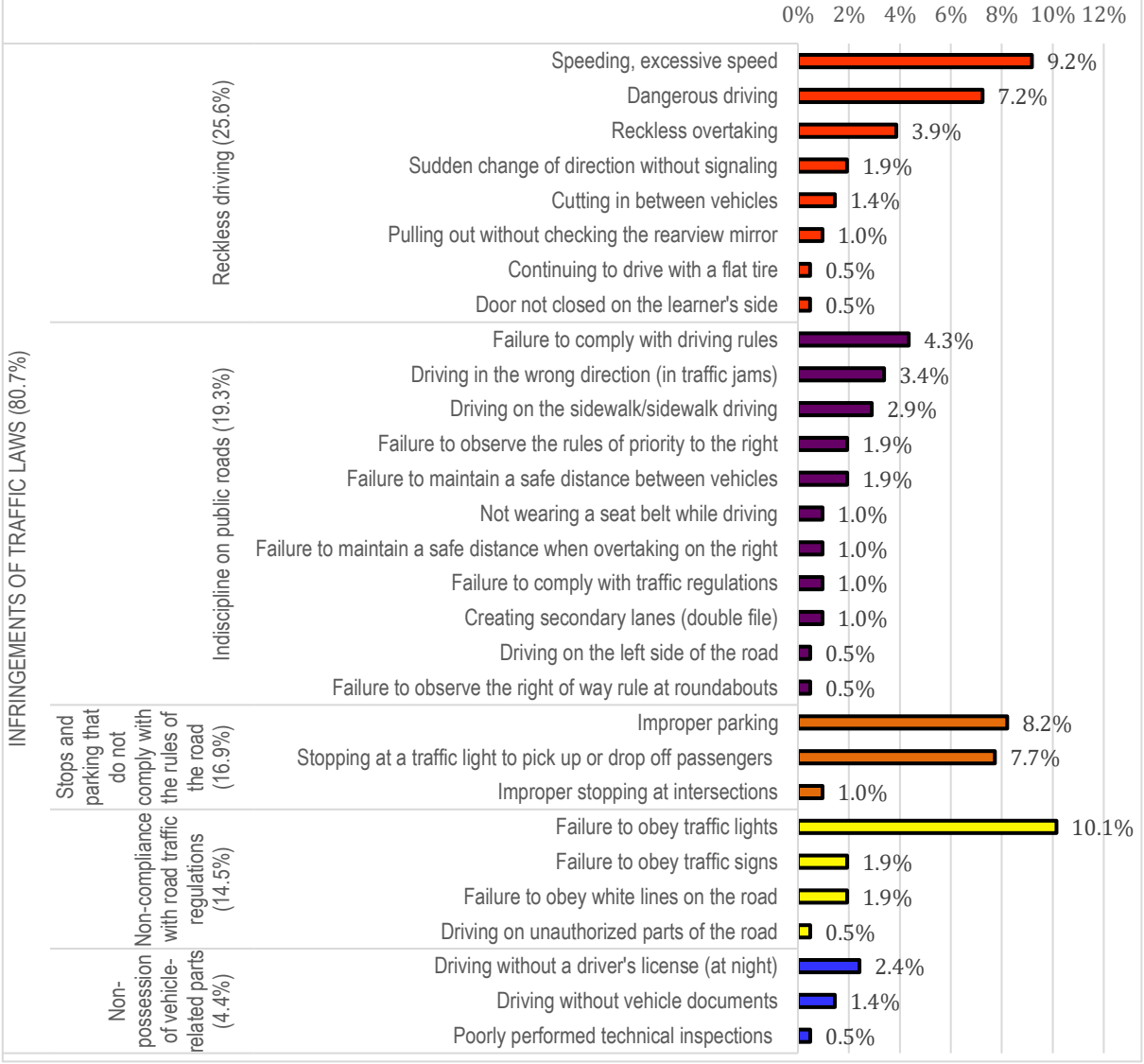
Coding, which involved assigning codes to each risky behaviour identified in the corpus.

Quantification, whereby behaviours were systematically counted in accordance with the previous steps

III. RESULTS

The findings are structured into two subsections. The first presents the different violations of the Highway Code generally committed by professional drivers of meter taxis, *gbaka* minibuses, and *woro-woro* shared taxis in Abidjan. These infringements are summarised in **Figure 1**. The second subsection concerns other risky driving behaviours carried out by the aforementioned drivers, which are presented in **Figure 2**.

Figure 1
Description of traffic violations among informal public transport drivers in Abidjan



Source: Field survey, 2025.

Regarding reckless or dangerous behaviours, the most frequent risky practices were: excessive speed (9.2%), reckless/dangerous driving (7.2%), and risky overtaking/unsignalled overtaking (3.9%).
With respect to indiscipline on the public road, the most frequently reported risky behaviours were: failure to comply with driving rules (4.3%), driving in the wrong direction (in cases of traffic congestion) (3.4%), and driving on pavements (2.9%).
Concerning illegal stops and parking, two behaviours were particularly associated with drivers of these three modes of collective transport: poor parking (8.2%) and stopping at traffic lights or on the roadway to pick up passengers (7.7%).
In terms of failure to comply with traffic signals, the most commonly reported behaviour was running red lights (10.1%).
As for the absence of required vehicle documents, the main risky behaviour observed was driving without a licence (at night) (2.4%).

Interpretation of Violations

These different categories of Highway Code violations by drivers can be interpreted through Siegrist's (1996) Effort–Reward Imbalance Model. Indeed, informal drivers, facing socioeconomic precarity and financial pressure, are more exposed to effort–reward imbalances, which increases their likelihood of engaging in dangerous driving.
Drivers evaluate their actions in terms of **costs–efforts** (concentration, fatigue, stress) and **rewards** (financial gain, time savings, social recognition, sense of control). For example, one *gbaka* driver explained:

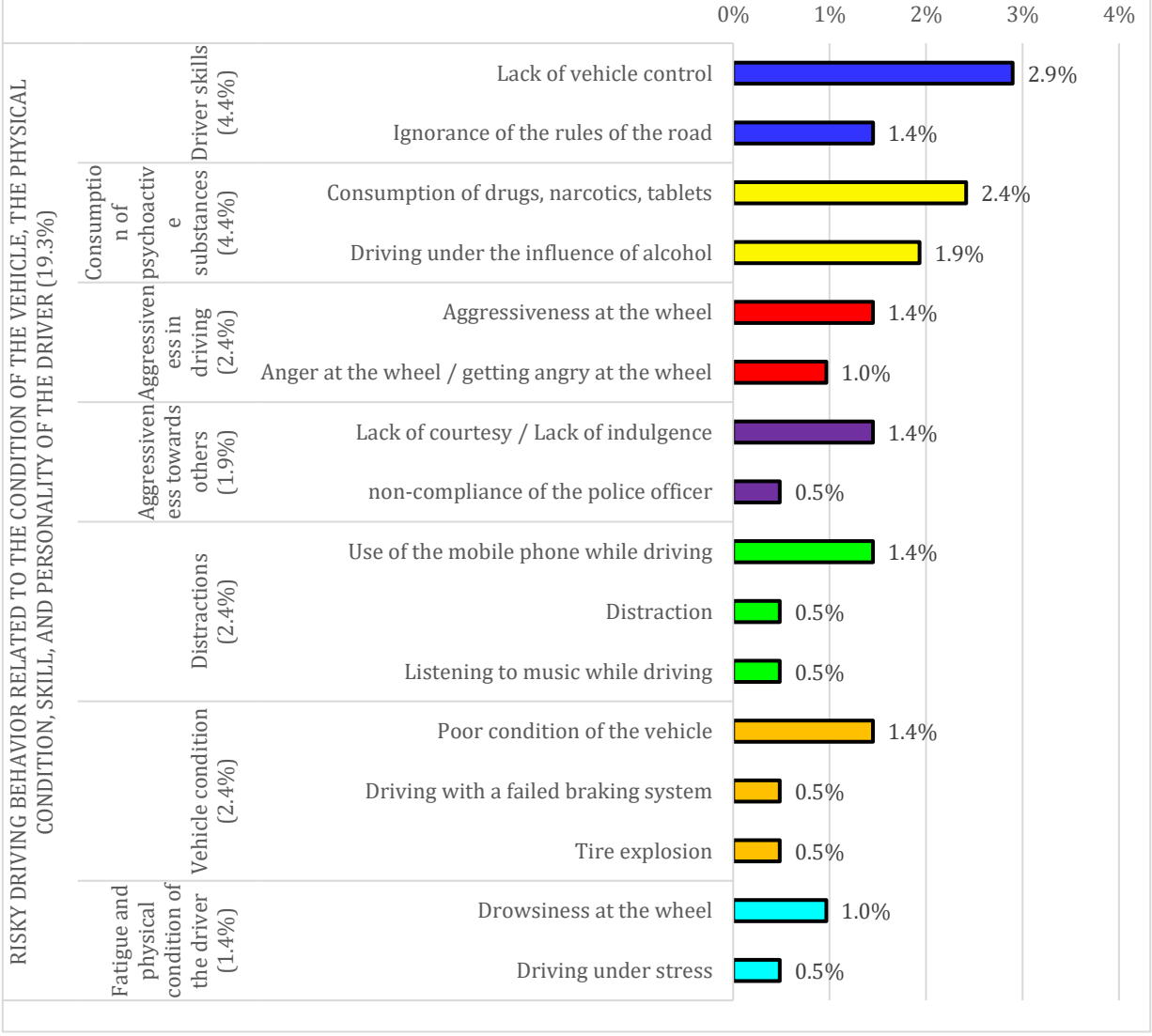
> "Our work is hard; it's because we cannot find other jobs that we manage like this. We must meet the daily target, pay the unions, deal with the police who never leave us alone, and in all this, we must try to earn something to bring home."

Thus, a persistent imbalance—high efforts compared to low or uncertain financial rewards—generates chronic stress that manifests in dysfunctional behaviours, such as reckless driving, public indiscipline, and violations of traffic signals, all involving risk-taking. As an OSER accidentology officer put it:

> "Road accidents involving informal collective transport drivers are caused by excessive speed, reckless driving, and risky overtaking."

Figure 2

Description of other risky car driving among informal public transport drivers in Abidjan



Source: Field survey, 2025.

Figure 2 presents risky behaviours related to vehicle condition, drivers' physical state, skills, and personality traits. These had relatively lower frequencies than those associated with Highway Code violations reported in Figure 1. The proportions were as follows:

drivers' skills (4.4%),
use of psychoactive substances (4.4%),
aggressiveness while driving (2.4%),
distractions (2.4%),
vehicle condition (2.4%),
aggressiveness towards others (1.9%), and

driver fatigue/physical condition (1.4%).

A more detailed breakdown shows that:

Driver skills: lack of vehicle control (2.9%) and lack of knowledge of the Highway Code (1.4%).
Substance use: drug and pill consumption (2.4%) and alcohol consumption while driving (1.9%).
Aggressiveness while driving: driving aggression (1.4%) and anger at the wheel (1.0%).
Distractions: mobile phone use while driving (1.4%) and listening to music while driving (0.5%).
Vehicle condition: poor mechanical state (1.4%), defective braking system (0.5%), and tyre bursts (0.5%).
Aggressiveness towards others: lack of courtesy/indulgence (1.4%) and disrespect towards police officers (0.5%).
Fatigue/physical condition: drowsiness while driving (1.0%) and driving under stress (0.5%).

Interpretation of Other Risky Behaviours

These risky driving behaviours can be explained by Lazuras et al.'s (2022) theory of self-regulation. This framework proposes an innovative approach to understanding risky driving by focusing on the **cognitive, emotional, and motivational processes** underpinning drivers' capacity to regulate their actions behind the wheel.

According to this perspective, appropriate driving depends on the ability to plan, monitor, and adjust behaviours in line with safety objectives, despite internal challenges (low skills, substance use, anger, fatigue, stress) and external challenges (distractions, poor vehicle condition, financial stress).

As one police officer explained:

> "They are very nervous; they lack proper training, they are often unschooled, the pressure of the daily financial target disturbs them, the consumption of drugs, lack of sleep makes them reckless and inattentive on the road."

Similarly, a *woro-woro* driver testified:

> "Some among us drive as if they were in competition, simply to show off. Often, it's alcohol; when they drink too much, they take the wheel without focusing. If they are near a traffic light, they accelerate so as not to stop when it turns red."

Indeed, self-regulation depends on **finite psychological resources** (attention, willpower), which are often depleted by factors such as stress, fatigue, or excessive cognitive demands. In this context, cognitive overload such as driving in difficult environments where financial pressure is the performance standard reduces the mental bandwidth available for safe driving.

IV. DISCUSSION

The present research aimed to describe and analyse risky driving behaviours adopted by drivers of public transport vehicles in Abidjan. It relied on a qualitative approach based on semi-structured interviews conducted with 14 drivers of meter taxis, minibuses (*gbaka*), and shared taxis (*woro-woro*), as well as 17 key informants responsible for road safety. The participants' ages ranged from 21 to 59 years.

The findings yield two main insights. The first relates to four major categories of traffic violations frequently observed among the targeted drivers: reckless driving (25.6%), indiscipline on public roads (19.3%), illegal stops and parking (16.9%), and failure to comply with traffic signals (14.5%).

These violations are consistent with those reported in previous studies conducted in Europe, the Americas, Asia, and Africa (Damodariya & Patel, 2021; Horoszkiewicz et al., 2023; Sánchez-López et al., 2024; Tarlochan et al., 2022; Teye-Kwadjo, 2019; Töre et al., 2023; Useche et al., 2019).

For example, Damodariya and Patel (2021) observed that in India, 18.1% of drivers engaged in risky behaviours, including violations of traffic rules. Such risky practices were reported for 32.7% of trucks and 54.3% of multi-axle vehicles travelling in the median lane, thereby disrupting traffic flow. Their study sample comprised drivers of various vehicle types (cars, trucks, buses, two-wheelers, etc.), aged 18 to 60, with educational levels ranging from secondary school to doctoral degrees. The study combined qualitative interviews with a quantitative videographic audit. The authors concluded that risky driving behaviours, particularly inappropriate use of median lanes by heavy vehicles, were a major cause of accidents on Indian highways. They recommended regular driver audits and stronger enforcement measures to improve road safety.

Our results also partially corroborate those of Useche et al. (2019), who studied Colombian professional drivers aged 18 to 73 (mean age 41.14 years), of whom 98.4% were male. These authors found that job stress was positively correlated with risky driving styles, while professional driving accidents were positively correlated with risky driving and negatively correlated with patient and cautious driving styles.

The significant associations between risky driving styles and workplace variables (anger at the wheel, job stress, accidents) support the usefulness of instruments such as the Multidimensional Driving Style Inventory in identifying at-risk drivers and designing interventions to improve road safety. Similarly to our study, the working environment of meter taxi, *gbaka*, and *woro-woro* drivers

in Abidjan (daily revenue pressures, police harassment, intense workload, and time constraints) fostered anger and stress, which in turn encouraged risky behaviours.

In this perspective, our results are consistent with those of Töre et al. (2023), whose quantitative study demonstrated that drivers from different cultures exhibit varying motivations underpinning risky driving styles. American drivers were more likely to adopt anxious driving styles and less likely to adopt patient and cautious ones than Turkish and Israeli drivers. Turkish drivers were more likely to display hostile and angry driving, and less likely to engage in reckless or thrill-seeking behaviours, compared to Americans and Israelis. Unlike our study, their research focused on non-professional drivers in Israel, Turkey, and the United States, most of whom had university degrees and full- or part-time employment. Their study highlights the importance of understanding cultural differences in driving styles and associated emotional processes. It also suggests that interventions targeting emotional regulation could foster safer driving behaviours tailored to cultural contexts.

In addition, our findings resonate with those of Teye-Kwadjo (2019), who studied 519 commercial and private vehicle drivers in Ghana. Aged 18 to 73 (mean age 27.98 years), the sample comprised 75.5% men and 24.5% women. Participants completed scales measuring fatalism, risk perception, attitudes toward risky driving, and self-reported risky driving behaviours. Results indicated that fatalism was positively associated with risky driving attitudes, while risk perception was negatively associated. Attitudes towards risky driving were, in turn, positively correlated with self-reported risky driving behaviours. These findings suggest that fatalistic beliefs and risk perception play important roles in shaping risky driving behaviours, with attitudes acting as a key mediating mechanism.

Consequently, Teye-Kwadjo (2019) concluded that road safety campaigns in Ghana should target fatalistic beliefs while promoting positive attitudes towards safety. Periodic training programmes and persuasive messaging through traditional and social media were recommended to help modify drivers' risky behaviours.

The second insight from our findings relates to eight less prevalent risky driving behaviours: absence of required vehicle documents (4.4%), limited driver competence (4.4%), use of psychoactive substances (4.4%), aggressiveness while driving (2.4%), distractions (2.4%), poor vehicle condition (2.4%), aggressiveness towards others (1.9%), and fatigue/poor physical condition (1.4%). These results broadly align with previous findings from studies conducted in China (Hu et al., 2021), North America, Asia, Europe, and Australia (Rashmi & Marisamynathan, 2023), as well as China again (Zhai & Xi, 2023).

Specifically, Rashmi and Marisamynathan (2023) sought to identify the most common aberrant driving behaviours among long-haul freight truck drivers in North America, Asia, Europe, and Australia. The most frequently observed aberrant behaviours included speeding, illegal overtaking, driver fatigue, drug and alcohol use, risky lane changes, and distracted driving (mobile phone use). The authors interpreted these results as reflecting a complex interplay of human, environmental, and organisational factors, emphasising the need for targeted policies and interventions to enhance road safety.

Our findings also align with those of Zhai and Xi (2023), who reported that among 332 Chinese drivers (173 men and 159 women, average age 34.6 years), excessive working hours increased the likelihood of anger while driving. Their lifestyle and working conditions heightened their propensity to adopt aggressive and risky driving behaviours.

Similarly, Hu et al. (2021) identified seven secondary factors accounting for over 70% of the variance in dangerous driving behaviours. These included basic sensory information, fatigue, overtaking, visual attention, driving experience, and individual characteristics. Their quantitative study, based on a questionnaire administered to 356 Chinese drivers aged 18 to 60 involved in traffic accidents, highlighted the multifactorial nature of risky driving. By contrast, our study used a qualitative approach, relying on semi-structured interviews with 14 informal transport drivers and 17 road safety officers in Abidjan.

Nevertheless, our study is subject to certain limitations inherent in qualitative research in psychology. These include researcher cognitive and cultural biases, the limited scope of interviews restricting representativeness, the subjectivity of analysis, and the social desirability bias exhibited by some participants

CONCLUSION

Reckless driving, indiscipline on public roads, illegal stops and parking, and failure to comply with traffic signals constitute the four fundamental categories of traffic offences generally observed among professional drivers of meter taxis, gbaka minibuses, and woro-woro shared taxis in Abidjan.

The working environment, drivers' state of mind, their level of education, and professional qualifications appear to be the key factors underlying such violations of the Highway Code. The findings obtained, as well as the psychological motives underpinning them, are corroborated by empirical evidence from previous studies conducted in the Americas, Europe, Asia, and Oceania.

Therefore, it is recommended that drivers of these three modes of public transport in Abidjan should receive more extensive training and awareness-raising regarding the harmful consequences of their behaviours, while also being afforded improved financial conditions. Psychologists with expertise in road safety could make valuable contributions in this regard.

REFERENCES

1) Adès, J., & Lejoyeux, M. (2004). *Alcool et conduites à risque*. Paris: PUF. [in French]
2) Aktouf, O. (1987). *Méthodologie des sciences sociales et approche qualitative des organisations*. Québec: Presses de l'Université du Québec. [in French]
3) Bamba, K. (2023). *La vidéo-verbalisation et la régulation routière en Côte d'Ivoire*. Abidjan: Ministère des Transports. [in French]
4) Causse, M. (2003). *L'optimisme comparatif et la conduite automobile*. Paris: L'Harmattan. [in French]
5) Damodariya, M., & Patel, N. (2021). Risk-taking behaviour as a symbol of masculinity: Evidence from India. *International Journal of Traffic and Transportation Engineering, 11*(2), 45–59.
6) Freydier, P. (2014). *Psychologie et comportements routiers*. Paris: Dunod. [in French]
7) Horoszkiewicz, I., Töre, T., & Useche, S. (2023). Risky driving behaviours in multicultural contexts: Comparative perspectives. *Journal of Safety Research, 85*(3), 122–135.
8) Hu, X., Zhang, Y., & Xi, J. (2021). Cognitive and emotional factors in risky driving behaviours in China. *Accident Analysis & Prevention, 151*, 105–115.
9) INS. (2023). *Rapport annuel sur la sécurité routière en Côte d'Ivoire*. Abidjan : Institut National de la Statistique. [in French]
10) Kouadio, A. (2015). *Transports urbains et informalité en Côte d'Ivoire*. Abidjan: Éditions CEDA. [in French]
11) Lazuras, L., Özkan, T., & De Winter, J. (2022). Self-regulation and risky driving: A cognitive-emotional framework. *Transportation Research Part F: Traffic Psychology and Behaviour, 86*, 312–325.
12) Okou, S., & Zamblé, K. (2024). Corruption and road safety policies in Côte d'Ivoire: Limits of enforcement. *African Journal of Transport Studies, 7*(1), 55–70.
13) Özkan, T., & Lajunen, T. (2005). A new addition to DBQ: Positive driver behaviours scale. *Transportation Research Part F: Traffic Psychology and Behaviour, 8*(4–5), 355–368.
14) Padilla, J. L., Johnson, T., & Smith, R. (2020). Road safety awareness campaigns and their effectiveness among youth in the United States. *Journal of Applied Social Psychology, 50*(9), 553–570.
15) Perez-Diaz, J. (2000). Normes sociales et prise de risque: Une analyse sociologique. *Revue Française de Sociologie, 41*(3), 441–470. [in French]
16) Pirès, A. (1997). *Échantillonnage et recherche qualitative*. Montréal: Université de Montréal. [in French]
17) Rashmi, R., & Marisamynathan, S. (2023). Aberrant driving behaviours among long-haul truck drivers across continents. *Safety Science, 158*, 105–182.
18) Sánchez-López, M., Tarlochan, F., & Xi, J. (2024). Socio-demographic predictors of risky driving: Evidence from cross-cultural research. *Transportation Research Part F: Traffic Psychology and Behaviour, 90*, 77–92.
19) Schultz, T. W. (1961). Investment in human capital. *The American Economic Review, 51*(1), 1–17.
20) Sey, M. (2021). Road safety awareness and its challenges in Côte d'Ivoire. *African Journal of Social Sciences, 12*(2), 88–104.
21) Shandhana, R., & Marisamynathan, S. (2023). Corruption, weak enforcement and road accidents: A comparative analysis. *International Journal of Traffic Safety, 10*(4), 201–220.
22) Siegrist, J. (1996). Adverse health effects of high-effort/low-reward conditions. *Journal of Occupational Health Psychology, 1*(1), 27–41.
23) Taubman-Ben-Ari, O., Skvirsky, V., & Lotan, T. (2020). Driving styles and external factors: Their joint role in risky behaviours. *Accident Analysis & Prevention, 139*, 105–274.
24) Tarlochan, F., Singh, H., & Kumar, S. (2022). Young drivers and risky driving behaviours: Evidence from Asia. *Journal of Transportation Safety & Security, 14*(2), 221–239.
25) Teye-Kwadjo, E. (2019). Fatalism, risk perception and risky driving among commercial drivers in Ghana. *Journal of Psychology in Africa, 29*(5), 463–471.
26) Töre, T., Useche, S., & Horoszkiewicz, I. (2023). Cultural differences in driving styles: Evidence from Israel, Turkey, and the USA. *Transportation Research Part F: Traffic Psychology and Behaviour, 89*, 115–127.
27) Useche, S. A., Alonso, F., & Cendales, B. (2019). Stress-related driving behaviours among professional drivers: Evidence from Colombia. *Journal of Safety Research, 70*, 185–195.
28) Villieux, A. (2007). *Sécurité routière et politiques publiques en France*. Paris: La Documentation Française. [in French]
29) WHO. (2018). *Global status report on road safety 2018*. Geneva: World Health Organization.
30) WHO. (2022). *Global health observatory data on road traffic deaths*. Geneva: World Health Organization.
31) WHO. (2023). *Global status report on road safety 2023*. Geneva: World Health Organization.

32) Zhai, J., & Xi, J. (2023). Overwork and anger at the wheel: Evidence from Chinese drivers. *Accident Analysis & Prevention, 172*, 106–278.
33) Ziebel, A. (2011). *Les infrastructures routières et la sécurité en Afrique subsaharienne*. Paris: Karthala. [in French]