



Road Safety Culture Among Car Drivers and Motorcycle Riders in Greece: Examining Influencing Factors

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Abstract

Previous research has found important differences between motorcyclists and car drivers on speeding and driving under the influence of alcohol (DUI). A questionnaire survey in Athens and Rhodes focusing on aggressive driving, speeding and DUI showed that drivers' and riders' behaviours were shared within the geographical communities and significantly different across communities. This can be partially attributed to different community RSCs which is primarily influenced by the perceived level of police enforcement.

Objectives

- Compare road safety behaviours among **car drivers** and **motorcyclists** in Athens and Rhodes.
- Examine the factors influencing road safety behaviours, focusing on **community road safety culture** (RSC).
- Examine the **factors influencing RSC** among the two modes of transport in the two geographical areas.



Background

- RSC is defined as **shared patterns** of **behaviour**, shared **norms** prescribing certain road safety behaviours and thus, shared **expectations** regarding the behaviours of others.
- **Assumptions**
 - a) RSC on an island (Rhodes) could be different from that in the capital, as an island is a geographical enclosed area.
 - b) A common motorcycle RSC exists across geographical communities, based on the unique experiences of motorcycle riders, compared to e.g. car drivers.
 - c) A unique RSC in Rhodes is expected, shared among both car drivers and motorcyclists.

Survey

• Sample characteristics

Group	Number	Proportion	Males	<26	26-35	36-45	46-55	56+
MC Rhodes	74	15%	91%	20%	41%	28%	10%	1%
Car Rhodes	87	25%	62%	9%	21%	46%	21%	3%
MC Athens	119	18%	82%	10%	24%	25%	25%	15%
Car Athens	199	42%	65%	3%	24%	23%	32%	19%

• Survey themes

- Background variables (e.g. age, gender, kms driven in the last 2 years)
- Road safety behaviours
- Community road safety culture
- Perceived enforcement
- Influence of tourists

Statistical analysis

- Hierarchical, linear regression analysis, in successive steps to examine the variables predicting respondents' **road safety behaviours**.
- Hierarchical, linear regression analysis, examining the variables predicting **community RSC**.

Results

Aggressive violations	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7
Gender (M:1, F:2)	-.110**	-.131***	-.101**	-.098**	-.086*	-.086**	-.086*
Age group		-.217***	-.256***	-.253***	-.155***	-.137***	-.138***
Education			-.158***	-.157***	-.109**	-.137***	-.141***
MC/Car				-.014	-.011	-.029	-.038
Rhodes/Athens					-.311***	-.223***	-.217***
Community RS Culture						.206***	.189***
Perceived Enforcement							-.056
Adjusted R ²	.010	.055	.075	.074	.160	.192	.192
Speeding							
Gender (M:1, F:2)	-.111**	-.125**	-.118**	-.136***	-.108**	-.123***	-.123***
Age group		-.142***	-.151***	-.168***	-.060	-.040	-.040
Education			-.037	-.040	.005	-.014	-.016
MC/Car				.076	.074	.061	.057
Rhodes/Athens					-.336***	-.262***	-.259***
Community RS Culture						.210***	.202***
Perceived Enforcement							-.023
Adjusted R ²	.010	.028	.028	.031	.141	.174	.172
DUI							
Gender (M:1, F:2)	-.142***	-.157***	-.152***	-.161***	-.155***	-.155***	-.155***
Age group		-.150***	-.156***	-.164***	-.108**	-.094*	-.093*
Education			-.024	-.026	.002	-.019	-.017
MC/Car				.038	.040	.026	.031
Rhodes/Athens					-.180***	-.113**	-.117**
Community RS Culture						.159***	.170***
Perceived Enforcement							.036
Adjusted R ²	.018	.038	.037	.036	.064	.082	.081
Community RSC							
Gender (M:1, F:2)	.039	.018	.004	-.017	.000	.001	.001
Age group		-.220***	-.202***	-.221***	-.088*	-.085*	-.085*
Education			.071	.068	.133***	.101**	.101**
MC/Car				.087*	.091**	.040	.040
Rhodes/Athens					-.426***	-.360***	-.360***
Community RS Culture						-.270***	-.270***
Perceived Enforcement	-.001	.045	.048	.053	.216	.281	.281
Adjusted R ²	.039	.018	.004	-.017	.000	.001	.001

* p < 0.1, **p < 0.05, *** p < 0.01

Discussion

- **MC riders in Rhodes** showed the highest level of aggressive violations.
- Patterns of **speeding** were similar among drivers/riders within communities and different across communities.
- Driving under the **influence** of **alcohol** varies according to geographical region.
- **Geographical region** is a more important variable when it comes to explaining road safety behaviours, than the car drivers versus motorcycle rider dimension.
- **Female** rider/drivers are less aggressive in traffic, they over speed less and they drive less under the influence.
- **Increasing** age is related to less aggressive violations and less driving under the influence.
- Drivers' (and riders') increasing levels of **education** were found to be related to decreasing aggressive violations.
- Perceived level of enforcement was the most important predictor of **community RSC**.
- **Geographical region** and **community RSC** are related, indicating lower perceived levels of violations among other drivers in the community in Athens than in Rhodes.
- **Foreign tourists** cannot explain the higher level of violations in Rhodes. In contrast, it seems that they make a third of the riders drive slower in the summer. However, this could potentially lead to irritation and aggression on which riders/drivers from Rhodes score higher.

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