



ICARUS Project  
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# ICARUS Project

Inter - Cultural Approaches for Road Users Safety

Research report

Results

**CYPRUS**

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## CAR DRIVERS (QUESTIONNAIRE SECTION 1)

### Sample description

A total of 103 people answered the Section 1 of the questionnaire. Males were 56 (54.4% of the total sample) and females were 47 (45.6% of the total sample). Their mean age was 22.82 years (standard error .35), ranging between 19 and 39 years. Only 17 respondents were older than 24 years old, though. Age was no significantly different between males and females. Not all the respondents answered all the items of the questionnaire, thus each analysis was run on the largest sample available for that analysis (missing values were not estimated).

### Driving habits

Tables 1 to 9 show the distribution as a function of gender of the answers to items concerning the driving habits and experiences. No one of the respondents owns a car. They however refer to use a car on a very regular basis (most of them drive everyday, without a prevalence of one gender), and for relatively short trips. Interestingly, male drivers refer to drive after midnight very often (about 80% of them drive after midnight more than 2 times a week), whereas female drivers are far less likely to drive after midnight (about 21% them do not drive after midnight at all). Male drivers also refer to have received a traffic fine more often than female drivers, mostly for having parked where it was forbidden, for speeding, and interestingly, for drunk driving (about 14% of male drivers have been fined for drunk driving).

Interestingly, about 58% the sample refers (60 respondents out of 103) state that they have driven at least once after having drunk alcohol (though it must be noticed that the item do not refer to being drunk, but only to driving after having drunk some alcohol), and about 22% of them quite often (mostly male drivers). However, only about half of them refer of having recognized some of the symptoms associated with driving under the effects of alcohol, especially dozing and difficulties on keeping focused on the road. This might suggest that a consistent number of young drivers are still unaware of the negative effects of driving under the effects of alcohol.

Summarizing, young drivers from Cyprus seem to be characterized by being frequent drivers, quite expert indeed, also experienced of driving during night hours (especially male drivers), and not very aware of the dangers associated with driving under the effects of alcohol.

**Table 1.** Frequency distribution of respondents for item H4 as a function of gender. \* refers to significant differences ( $p < .001$ ) between males and females.

H_4 Do you own a car?		
	Yes	No
Males	0	56 (100.%)
Females	0	47 (100.%)
Total	0	103 (100.%)

**Table 2.** Frequency distribution of respondents for item H5 as a function of gender. \* refers to significant differences ( $p < .001$ ) between males and females.

		H_5 How many times a week do you use the car?					
		Never	1-2 times	3-4 times	5-6 times	Everyday	Only in the weekend
Males		0	0	3	3	50	0
				(5.36%)	(5.36%)	(89.29%)	
Females		1	0	1	2	43	0
		(2.13%)		(2.13%)	(4.26%)	(91.49%)	
Total		1	0	4	5	93	0
		(.97%)		(3.88%)	(4.85%)	(90.29%)	

**Table 3.** Frequency distribution of respondents for item H6 as a function of gender. \* refers to significant differences ( $p < .001$ ) between males and females.

		H_6 How many kilometers do you drive in a week?				
		1-10 Km	11-30 Km	31-50 Km	51-100 Km	More than 100 Km
Males		1	3	9	14	29
		(1.79%)	(5.36%)	(16.07%)	(25.%)	(51.79%)
Females		1	6	7	17	16
		(2.13%)	(12.77%)	(14.89%)	(36.17%)	(34.04%)
Total		2	9	16	31	45
		(1.94%)	(8.74%)	(15.53%)	(30.1%)	(43.69%)

**Table 4.** Frequency distribution of respondents for item H7 as a function of gender. \* refers to significant differences ( $p < .001$ ) between males and females.

		H_7 In the last three months, how often have you driven for more that 2 hours uninterruptedly?			
		Never	1-2 times	2-4 times	More than 4 times
Males		4	25	13	14
		(7.14%)	(44.64%)	(23.21%)	(25.%)
Females		17	16	8	6
		(36.17%)*	(34.04%)	(17.02%)	(12.77%)
Total		21	41	21	20
		(20.39%)	(39.81%)	(20.39%)	(19.42%)

**Table 5.** Frequency distribution of respondents for item H8 as a function of gender. \* refers to significant differences ( $p < .001$ ) between males and females.

		H_8 In the last three months, how often have you happened to drive between midnight and 5:00 in the morning?			
		Never	1-2 times	2-4 times	More than 4 times
Males		2	9	14	31
		(3.57%)	(16.07%)	(25.%)	(55.36%)*
Females		10	11	14	12
		(21.28%)*	(23.4%)	(29.79%)	(25.53%)
Total		12	20	28	43
		(11.65%)	(19.42%)	(27.18%)	(41.75%)

**Table 6.** Frequency distribution of respondents for item H9 as a function of gender. \* refers to significant differences ( $p < .001$ ) between males and females.

H_9 Have you ever got a traffic fine?		
	No	Yes
Males	6 (10.71%)*	50 (89.29%)*
Females	28 (59.57%)*	19 (40.43%)
Total	34 (33.01%)	69 (66.99%)

**Table 7.** Frequency distribution of respondents for kinds of violations as a function of gender. \* refers to significant differences ( $p < .001$ ) between males and females.

	Males	Females	Total
No parking	21 (37.5%)*	8 (17.02%)	29 (28.16%)
Running a red light	1 (1.79%)	2 (4.26%)	3 (2.91%)
Running a stop sign	2 (3.57%)	0 (1.94%)	2 (1.94%)
Speeding	45 (80.36%)*	10 (21.28%)	55 (53.4%)
Drunk driving	8 (14.29%)*	1 (2.13%)	9 (8.74%)
Lack of seatbelts use	9 (16.07%)	2 (4.26%)	11 (10.68%)

**Table 8.** Frequency distribution of respondents for item H18 as a function of gender. \* refers to significant differences ( $p < .001$ ) between males and females.

H_18 Have you ever driven after drinking alcoholic drink?						
	Never			Often		
Males	13 (23.21%)	9 (16.07%)	7 (12.5%)	6 (10.71%)	10 (17.86%)*	11 (19.64%)*
Females	30 (63.83%)*	6 (12.77%)	7 (14.89%)	2 (4.26%)	1 (2.13%)	1 (2.13%)
Total	43 (41.75%)	15 (14.56%)	14 (13.59%)	8 (7.77%)	11 (10.68%)	12 (11.65%)

**Table 9.** Frequency distribution of respondents for alcohol effects as a function of gender. \* refers to significant differences ( $p < .001$ ) between males and females.

	Males	Females	Total
You could hardly follow the trajectory	5 (8.93%)	0	5 (4.85%)
You could hardly keep your head on straight	3 (5.36%)	0	3 (2.91%)
You had muscle cramps	2 (3.57%)	0	2 (1.94%)
You could hardly keep your eyes open	14 (25.0%)*	1 (2.13%)	15 (14.56%)
You got stomach cramps	2 (3.57%)	0	2 (1.94%)
You could not focus on the road	6 (10.71%)	0	6 (5.83%)
Someone who was with you made you notice it	3 (5.36%)	1 (2.13%)	4 (3.88%)

## Specific dimensions of the questionnaire scales

### Scale A, Attitude toward road safety issues.

Data from the Scale A of the questionnaire were submitted to exploratory factor analysis (Principal Axis method, Oblimin rotation). The Kaiser-Meyer-Olkin measure of sampling adequacy, 0.734, and factorability of the correlation matrix, Bartlett's test of sphericity  $\chi^2(153)=740.04$ ,  $p<.000$ , were both adequate. The criteria used to identify acceptable factors were (a) Scree test, (b) eigenvalues greater than 1, and (c) the percentage of the total variance accounted for by the factor solution. This yielded a three-factor solution that accounted for the 59.24% of the total variance. Table A.1 shows the eigenvalues and the variance accounted for by each factor. Table A.2 shows the item loadings after Oblimin rotation.

The first factor (labelled "Tolerance toward violations", accounting for by the 15.63% of the common variance) refers to a negative attitude toward traffic rules. Items such as "*Speed limit cannot be observed because it is too restrictive*" load on this factor.

The second factor (labelled "Negative attitude towards drugs and alcohol", accounting for by the 16.43% of the common variance) refers to a negative attitude toward driving under the effects of substances. Items such as "*I would never drive under the influence of narcotic drugs*" load on this factor.

The third factor (Labelled "Usefulness of violations", reversed, accounting for by the 13.83% of the common variance) refers to a positive attitude toward violations of the traffic code when they are useful for keeping the traffic going smoothly. Items such as "*It is reasonable to exceed speed limits to overtake slow or inexperienced drivers*" (reversed) load on this factor. This factor is moderately correlated to the factor "Tolerance toward violations" (Table A.3).

The fourth factor (labelled "Negative attitude toward speeding", accounting for by the 12.69% of the common variance) refers to a negative attitude toward going by car with a fast driver. Items such as "*It is ok to go by car with a fast driver if it is the only way to go back home at night*" (reversed) load on this factor. This factor is moderately correlated (negatively) to the factor "Tolerance toward violations" (Table A.3).

**Table A.1.** Eigenvalues and variance accounted for by each factor  
(Scale A)

Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total
1	4.383	24.352	24.352	2.814
2	3.312	18.401	42.753	2.958
3	1.818	10.101	52.854	2.490
4	1.150	6.390	59.244	2.285
5	1.111	6.175	65.419	
6	.913	5.073	70.492	

7	.800	4.443	74.935
8	.793	4.408	79.343
9	.616	3.422	82.766
10	.510	2.834	85.599
11	.502	2.789	88.389
12	.459	2.551	90.940
13	.376	2.091	93.031
14	.367	2.038	95.069
15	.302	1.680	96.749
16	.228	1.264	98.013
17	.207	1.152	99.165
18	.150	.835	100.000

**Table A.2.** Factor loadings (Scale A).

	Factors			
	Tolerance to violations	Negative attitude toward drugs and alcohol	Usefulness of violations (reversed)	Negative attitude toward speeding
A_1			-0.418	
A_2			-0.795	
A_3				
A_4	0.445		-0.372	
A_5			-0.475	
A_6	0.464			
A_7	0.550			-0.269
A_8	0.608			
A_9	0.319			-0.544
A_10	0.521		-0.268	
A_11			0.630	
A_12				-0.619
A_13				-0.806
A_14		0.562		
A_15		0.694		
A_16		0.843		
A_17		0.786		
A_18	-0.262	0.838		

**Table A.3.** Factor Correlation Matrix (Scale A)

Factor s	1	2	3	4
1	1.000	.004	-.351	-.361
2	.004	1.000	.056	.043
3	-.351	.056	1.000	.137
4	-.361	.043	.137	1.000

**Scale B, Locus of Control.**

Data from the Scale B of the questionnaire were submitted to exploratory factor analysis (Principal Axis method, Oblimin rotation). The Kaiser-Meyer-Olkin measure of sampling adequacy, 0.72, and factorability of the correlation matrix, Bartlett’s test of sphericity  $\chi^2(435)=1351.58, p<.000$ , were both adequate. The criteria used to identify acceptable factors were (a) Scree test, (b) eigenvalues greater than 1, and (c) the percentage of the total variance accounted for by the factor solution. This yielded a three-factor solution that accounted for the 40.16% of the total variance. Table B.1 shows the eigenvalues and the variance accounted for by each factor. Table B.2 shows the item loadings after Oblimin rotation.

The first factor (labelled “External Locus of Control”, accounting for by the 13.48% of the common variance) refers to an external Locus of Control, as respondents attribute responsibility of road accidents mostly to external causes, independent of drivers behaviour. Items such as “*Accidents occur mainly due to unpredictable causes*” load on this factor.

The second factor (labelled “Internal Locus of Control”, accounting for by the 9.90% of the common variance) refers to an internal Locus of Control, as respondents attribute responsibility of road accidents mostly to drivers’ failure to be careful or to pay attention to driving. Items such as “*Driving without accidents depends on driver’s ability to pay attention to what happens on the road and pavement*” load on this factor.

The third factor (labelled “Attention related LOC”, reversed, accounting for by the 14.03% of the common variance) refers to an attention-related Locus of Control, wherein the road accidents are considered to be the result of the attention given by a driver. Items such as “*A careful driver can prevent any accident*” (reversed) load on this factor.

The three factors are not correlated (Table B.3).

**Table B.1.** Eigenvalues and variance accounted for by each factor (Scale B)

Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total
1	4.163	13.875	13.875	2.886
2	2.979	9.931	23.806	2.345
3	2.218	7.393	31.199	2.230
4	1.714	5.713	36.912	
5	1.450	4.833	41.745	
6	1.272	4.241	45.986	
7	1.188	3.961	49.947	
8	1.065	3.550	53.497	
9	1.027	3.422	56.920	
10	.948	3.161	60.080	
11	.912	3.040	63.121	

12	.850	2.835	65.955
13	.834	2.781	68.736
14	.783	2.609	71.345
15	.757	2.523	73.868
16	.703	2.345	76.213
17	.693	2.310	78.523
18	.663	2.212	80.734
19	.629	2.098	82.833
20	.623	2.078	84.911
21	.598	1.995	86.906
22	.579	1.931	88.836
23	.548	1.828	90.664
24	.537	1.788	92.452
25	.473	1.577	94.029
26	.464	1.545	95.574
27	.408	1.361	96.936
28	.357	1.192	98.127
29	.295	.982	99.109
30	.267	.891	100.000

**Table B.2.** Factor loadings (Scale B).

	Factor		
	External LOC	Internal LOC	Attention-related LOC (reversed)
B_1	0.555		
B_2	0.611		0.267
B_3	0.292		
B_4	0.535		
B_5	0.366		
B_6		0.273	-0.363
B_7			-0.699
B_8			-0.664
B_9	0.258		-0.373
B_10			-0.514
B_11	0.628		
B_12	0.455		
B_13	0.637		

B_14	0.386		
B_15	0.365		-0.327
B_16	0.276	0.296	
B_17		0.316	-0.579
B_18		0.585	
B_19		0.689	
B_20	0.332		-0.409
B_21	0.321	0.282	
B_22		0.624	
B_23		0.599	
B_24	0.253		-0.401
B_25	0.434	0.288	
B_26		0.592	
B_27		0.545	
B_28			-0.652
B_29	-0.273	0.266	
B_30			-0.714

**Table B.3.** Factor correlation matrix

Factor	1	2	3
1	1.000	.063	-.274
2	.063	1.000	-.126
3	-.274	-.126	1.000

**Scale D, Rage during driving.**

Data from the Scale D of the questionnaire were submitted to exploratory factor analysis (Principal Axis method, Oblimin rotation). The Kaiser-Meyer-Olkin measure of sampling adequacy, 0.8, and factorability of the correlation matrix, Bartlett’s test of sphericity  $\chi^2(91)=475.007$ ,  $p<.000$ , were both adequate. The criteria used to identify acceptable factors were (a) Scree test, (b) eigenvalues greater than 1, and (c) the percentage of the total variance accounted for by the factor solution. This yielded a three-factor solution that accounted for the 46.09% of the total variance. Table D.1 shows the eigenvalues and the variance accounted for by each factor. Table D.2 shows the item loadings after Oblimin rotation.

The first factor (labelled “Violation-related rage”, accounting for by the 17.36% of the common variance) refers to the rage reactions due to other drivers violating the traffic code. Items such as “*Somebody does not stop at a red traffic light or a stop sign*” load on this factor. The second factor (labelled “Obstacle-related rage”, accounting for by the 28.69% of the common variance) refers to the rage reactions due to obstacles preventing drivers to drive the way they want. Items such as “*Somebody is slow in parking and blocks the traffic.*” load on this factor.

The two factors are positively correlated (Table D.3).

**Table D.1.** Eigenvalues and variance accounted for by each factor (Scale D)

Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total
1	4.833	34.523	34.523	3.440
2	1.620	11.571	46.094	3.369
3	1.170	8.358	54.452	
4	1.115	7.963	62.415	
5	.930	6.644	69.059	
6	.793	5.664	74.723	
7	.716	5.116	79.839	
8	.559	3.991	83.830	
9	.531	3.793	87.623	
10	.445	3.179	90.802	
11	.385	2.750	93.552	
12	.345	2.466	96.018	
13	.307	2.193	98.211	
14	.250	1.789	100.000	

**Table D.2.** Factor loadings (Scale D).

	Factor	
	Violation-related raga	Obstacle-related raga
D_1	.344	
D_2	.293	
D_3	.614	
D_4	.864	-.261
D_5		.712
D_6	.513	
D_7		.453
D_8		.573
D_9	.625	
D_10	.532	
D_11	.280	.419
D_12		.737
D_13		.444
D_14		.515

**Table D3.** Factor Correlation Matrix

Factor	1	2
1	1.000	.477
2	.477	1.000

### Scale F, Personality.

Data from the Scale F of the questionnaire were submitted to exploratory factor analysis (Principal Axis method, Oblimin rotation). The Kaiser-Meyer-Olkin measure of sampling adequacy, 0.65, and factorability of the correlation matrix, Bartlett's test of sphericity  $\chi^2(666)=1395.64$ ,  $p<.000$ , were both adequate. The criteria used to identify acceptable factors were (a) Scree test, (b) eigenvalues greater than 1, and (c) the percentage of the total variance accounted for by the factor solution. This yielded a five-factor solution that accounted for the 44.68% of the total variance. Table F.1 shows the eigenvalues and the variance accounted for by each factor. Table F.2 shows the item loadings after Oblimin rotation.

The first factor (labelled "Anxiety", accounting for by the 10.17% of the common variance) refers to the tendency to be anxious, nervous. Items such as "*I easily panic*" load on this factor.

The second factor (labelled "Conscientiousness", accounting for by the 9.09% of the common variance) refers to show self-discipline and planned behaviour. Items such as "*I tend to persevere until the task is finished*" load on this factor.

The third factor (labelled "Sensation seeking", accounting for by the 7.28% of the common variance) refers to the Sensation-seeking personality trait. Items such as "*I often wish exciting things*" load on this factor.

The fourth factor (labelled "Stability", accounting for by the 4.90% of the common variance) refers to being calm and reflexive. Items such as "*I am tranquil and not irritable*" load on this factor

The fifth factor (labelled "Altruism", accounting for by the 8.13% of the common variance) refers to egoism, indifference, cool-headed. Items such as "*Some people think I am egoist and egocentric*" negatively load on this factor.

Table F.3. shows that the factors are not correlated.

**Table F.1.** Eigenvalues and variance accounted for by each factor (Scale F)

Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total
1	5.095	13.771	13.771	3.763
2	4.425	11.961	25.731	3.362
3	2.747	7.423	33.155	2.696
4	2.308	6.238	39.393	1.814
5	1.956	5.286	44.678	3.007
6	1.698	4.59	49.268	
7	1.464	3.958	53.226	
8	1.338	3.615	56.841	

9	1.278	3.455	60.296
10	1.084	2.929	63.225
11	1.033	2.793	66.017
12	1.012	2.736	68.754
13	0.954	2.58	71.333
14	0.817	2.209	73.543
15	0.77	2.08	75.623
16	0.753	2.036	77.659
17	0.728	1.969	79.627
18	0.701	1.894	81.522
19	0.686	1.854	83.376
20	0.609	1.646	85.022
21	0.585	1.58	86.602
22	0.557	1.507	88.109
23	0.521	1.408	89.517
24	0.462	1.248	90.765
25	0.421	1.138	91.903
26	0.412	1.113	93.017
27	0.388	1.049	94.066
28	0.35	0.947	95.012
29	0.301	0.814	95.826
30	0.27	0.731	96.557
31	0.238	0.642	97.199
32	0.227	0.615	97.814
33	0.203	0.549	98.363
34	0.199	0.539	98.901
35	0.153	0.414	99.315
36	0.136	0.369	99.684
37	0.117	0.316	100

**Table F.2.** Factor loadings (Scale F).

	Factor				
	Anxiety	Conscientiousness	Sensation Seeking	Stability	Altruism
F_1			0.514		
F_2	0.506				
F_3	0.352				-0.357
F_4			0.349	-0.44	
F_5	0.445				-0.35
F_6				0.507	
F_7					0.344
F_8					-0.288
F_9		0.287		0.381	-0.255
F_10	0.279		0.27		
F_11					-0.408
F_12			0.56		
F_13	0.522			-0.375	
F_14	0.27		0.28	0.313	
F_15	0.312	0.287			
F_16	0.353		-0.47	0.272	
F_17					-0.587
F_18					-0.305
F_19		-0.272			-0.411
F_20		0.49			0.387
F_21	0.614				
F_22				0.587	
F_23					0.518
F_24			0.392		
F_25			0.408		
F_26	0.467				
F_27		0.351	0.415		0.346
F_28	0.381	0.341			
F_29	0.649				
F_30	0.702				
F_31		0.279	0.42		0.418
F_32			0.251		
F_33		0.597			
F_34	0.325	-0.435	0.484		
F_35		0.724			
F_36		0.812			
F_37	0.317	-0.318	0.334		

**Table F.3.** Factor Correlation Matrix

Factor	1	2	3	4	5
1	1.000	.051	.139	-.077	-.102
2	.051	1.000	.015	.114	.235
3	.139	.015	1.000	.027	-.039
4	-.077	.114	.027	1.000	.026
5	-.102	.235	-.039	.026	1.000

### Scale I, Driving Behaviour Questionnaire.

Data from the Scale I of the questionnaire were submitted to exploratory factor analysis (Principal Axis method, Oblimin rotation). The Kaiser-Meyer-Olkin measure of sampling adequacy, 0.87, and factorability of the correlation matrix, Bartlett's test of sphericity  $\chi^2(561)=2353.97$ ,  $p<.000$ , were both adequate. The criteria used to identify acceptable factors were (a) Scree test, (b) eigenvalues greater than 1, and (c) the percentage of the total variance accounted for by the factor solution. This yielded a three-factor solution that accounted for the 53.38% of the total variance. Table I.1 shows the eigenvalues and the variance accounted for by each factor. Table I.2 shows the item loadings after Oblimin rotation.

The first factor (labelled "Slips/Lapses, accounting for by the 30.43% of the common variance) refers to errors of the slips and lapses kind. Items such as "*Realised you were driving with your headlights switched off while they should have been switched on*" load on this factor. The second factor (labelled "Violations", accounting for by the 20.29% of the common variance) refers to violations of the traffic code. Items such as "*Exceeded speed limits on the motorway*" load on this factor.

The third factor (labelled "Mistakes" accounting for by the 22.46% of the common variance) refers to erroneous driving behavior. Items such as "*Realised that you were taking off from a traffic light in third gear*" load on this factor.

The three factors are however notably correlated (Table I.3).

**Table I.1.** Eigenvalues and variance accounted for by each factor (Scale I)

Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total
1	12.878	37.878	37.878	10.347
2	3.249	9.556	47.434	6.898
3	2.021	5.945	53.379	7.636
4	1.408	4.142	57.521	
5	1.371	4.031	61.552	
6	1.288	3.788	65.340	
7	1.142	3.360	68.700	
8	.989	2.910	71.610	
9	.912	2.682	74.292	
10	.866	2.547	76.839	
11	.815	2.397	79.236	
12	.697	2.049	81.285	
13	.606	1.782	83.067	
14	.592	1.740	84.807	
15	.528	1.552	86.359	

16	.501	1.475	87.834
17	.452	1.331	89.165
18	.425	1.250	90.414
19	.375	1.104	91.518
20	.339	.996	92.514
21	.292	.858	93.372
22	.278	.818	94.190
23	.268	.789	94.979
24	.248	.730	95.709
25	.213	.628	96.336
26	.208	.613	96.949
27	.187	.550	97.499
28	.172	.505	98.005
29	.154	.452	98.456
30	.145	.428	98.884
31	.128	.376	99.259
32	.102	.299	99.559
33	.079	.231	99.790
34	.071	.210	100.000

**Table I.2.** Factor loadings (Scale I).

	Factor		
	Slips/Lapses	Violations	Mistakes
I_1		0.47	
I_2		0.483	
I_3		0.634	
I_4		0.683	
I_5		0.737	
I_6			0.666
I_7		0.716	
I_8		0.52	
I_9	0.272	0.275	
I_10		0.531	
I_11		0.43	0.474
I_12		0.658	
I_13		0.268	0.279
I_14			0.509
I_15		0.456	
I_16			0.546

I_17			0.515
I_18	0.283		0.307
I_19	0.675		
I_20	0.458		
I_21	0.304		0.503
I_22	0.586		
I_23	0.305		0.594
I_24	0.434	-0.294	0.469
I_25	0.445		0.357
I_26	0.305		0.519
I_27	0.484		0.331
I_28	0.85		
I_29	0.847		
I_30	0.699	0.314	
I_31	0.832		
I_32	0.878		
I_33	0.736		
I_34	0.655		

**Table I.3.** Factor Correlation Matrix (Scale I)

Factor	1	2	3
1	1.000	.360	.518
2	.360	1.000	.335
3	.518	.335	1.000

**Scale J, Imagined driving behaviour.**

Data from the Scale J of the questionnaire were submitted to exploratory factor analysis (Principal Axis method, Oblimin rotation). The Kaiser-Meyer-Olkin measure of sampling adequacy, 0.78, and factorability of the correlation matrix, Bartlett’s test of sphericity  $\chi^2(231)=1411.51, p<.000$ , were both adequate. The criteria used to identify acceptable factors were (a) Scree test, (b) eigenvalues greater than 1, and (c) the percentage of the total variance accounted for by the factor solution. This yielded a five-factor solution that accounted for the 63.82% of the total variance. Table J.1 shows the eigenvalues and the variance accounted for by each factor. Table J.2 shows the item loadings after Oblimin rotation.

The first factor (labelled “Speeding”, accounting for by the 13.63% of the common variance) refers to speeding. Items such as “*You drive fast in order to be on time at the appointment*” load on this factor.

The second factor (labelled “Slowing”, accounting for by the 11.23% of the common variance) refers to the slowing the speed when required by the traffic conditions. Items such as “*You slow down and drive below speed limit when the road is slippery*” load on this factor.

The third factor (labelled “Alcohol/Drugs”, accounting for by the 8.59% of the common variance) refers to alcohol and drugs related behaviours. Items such as “*You drive after having had a glass of beer/wine*” load on this factor.

The fourth factor (labelled “Correct behaviour”, accounting for by the 11.89% of the common variance) refers to omitting of slowing down in proximity of children playing areas. Items such as “*You drive without keeping a safe distance*” negatively load on this factor.

The “Correct behaviour” factor has a negative correlation with factors “Speed” and “Alcohol/Drugs” (Table J.3).

**Table J.1.** Eigenvalues and variance accounted for by each factor (Scale J)

Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total
1	6.506	29.573	29.573	4.635
2	4.086	18.573	48.146	3.819
3	2.114	9.607	57.753	2.922
4	1.336	6.072	63.825	4.043
5	1.053	4.784	68.609	
6	.980	4.453	73.062	
7	.803	3.652	76.713	
8	.744	3.383	80.097	
9	.665	3.021	83.118	
10	.614	2.793	85.910	
11	.472	2.147	88.057	
12	.419	1.905	89.962	
13	.395	1.794	91.755	

14	.363	1.651	93.406
15	.325	1.477	94.883
16	.269	1.223	96.106
17	.219	.994	97.099
18	.193	.876	97.975
19	.157	.713	98.689
20	.125	.568	99.256
21	.097	.443	99.699
22	.066	.301	100.000

**Table J.2.** Factor loadings (Scale J).

	Factor			
	Speeding	Slowing	Alcohol/ Drugs	Correct Behaviour
J_1	0.645			
J_2	0.773			
J_3	0.773			
J_4	0.823			
J_5	0.662			
J_6	0.426		0.254	-0.397
J_7	0.266		0.350	-0.289
J_8			0.328	-0.494
J_9	0.304			-0.563
J_10	0.386			
J_11				-0.809
J_12				-0.751
J_13		0.504		-0.314
J_14		0.847		
J_15		0.806		
J_16		0.740		
J_17		0.284	0.498	
J_18			0.763	
J_19		0.803		
J_20		0.722		
J_21	-0.344	0.363		
J_22			0.701	

**Table J.3.** Factor Correlation Matrix

Factor	1	2	3	4
1	1.000	.064	.186	-.381
2	.064	1.000	.099	-.046
3	.186	.099	1.000	-.388
4	-.381	-.046	-.388	1.000

### Scale K, Driving under the effect of alcohol.

Data from the Scale K of the questionnaire were submitted to exploratory factor analysis (Principal Axis method. Oblimin rotation). The Kaiser-Meyer-Olkin measure of sampling adequacy, 0.75, and factorability of the correlation matrix. Bartlett's test of sphericity  $\chi^2(36)=653.25$ ,  $p<.000$ , were both adequate. The criteria used to identify acceptable factors were (a) Scree test, (b) eigenvalues greater than 1, and (c) the percentage of the total variance accounted for by the factor solution. This yielded a two-factor solution that accounted for the 57.68% of the total variance. Table K.1 shows the eigenvalues and the variance accounted for by each factor. Table K.2 shows the item loadings after Oblimin rotation.

The first factor (labelled "Permissive Attitude Toward Alcohol", accounting for by the 23.28% of the common variance) refers to driving under the effect of alcohol. Items such as "*You drove less than two hours after having drunk alcohol*" load on this factor.

The second factor (labelled "Preventing Behaviours", accounting for by the 21.13% of the common variance) refers to the behaviours aimed at preventing someone from driving under the effects of alcohol. Items such as "*You were the designated driver*" load on this factor.

The third factor (labelled "Police Control", accounting for by the 22.91% of the common variance) refers to control of Police for an alcohol test. Items such as "*You were driving a car and you were stopped by the police for an alcohol test*" load on this factor.

The three factors are moderately correlated (Table K.3.)

**Table K.1.** Eigenvalues and variance accounted for by each factor (Scale K)

Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total
1	3.273	36.367	36.367	2.096
2	1.357	15.080	51.446	1.902
3	1.169	12.988	64.434	2.062
4	.962	10.686	75.120	
5	.787	8.741	83.861	
6	.482	5.351	89.212	
7	.375	4.168	93.380	
8	.318	3.535	96.915	
9	.278	3.085	100.000	

**Table K.2.** Factor loadings (Scale K).

	Factor		
	Permissive Attitude	Preventing Behaviours	Police Control
K_1	0.764		
K_2	0.834		
K_3		0.262	
K_4			0.511
K_5	0.359		
K_6		0.955	
K_7		0.685	
K_8			0.490
K_9			0.910

**Table K.3.** Factor Correlation Matrix (Scale K).

Factor	1	2	3
1	1.000	.304	.409
2	.304	1.000	.385
3	.409	.385	1.000

### **Scale L, Effects of alcohol.**

Data from the Scale L of the questionnaire were submitted to exploratory factor analysis (Principal Axis method, Oblimin rotation). The Kaiser-Meyer-Olkin measure of sampling adequacy, 0.76, and factorability of the correlation matrix, Bartlett's test of sphericity  $\chi^2(190)=951.29$ ,  $p<.000$ , were both adequate. The criteria used to identify acceptable factors were (a) Scree test, (b) eigenvalues greater than 1, and (c) the percentage of the total variance accounted for by the factor solution. This yielded a three-factor solution that accounted for the 52.19% of the total variance. Table L.1 shows the eigenvalues and the variance accounted for by each factor. Table L.2 shows the item loadings after Oblimin rotation.

The first factor (labelled "Positive effects", accounting for by the 17.85% of the common variance) refers to the supposed positive effects of alcohol assumption. Items such as "*Alcohol makes your driving more sportive and brilliant*" load on this factor.

The second factor (labelled "Negative effects", accounting for by the 14.71% of the common variance) refers to the supposed negative effects of alcohol assumption. Items such as "*Alcohol makes you less capable of assessing the risks*" load on this factor.

The third factor (labelled "Underestimation of negative effects", reversed, accounting for by the 15.45% of the common variance) refers to the estimation of the negative effects of alcohol assumption. Items such as "*Alcohol has little effects on you*" (reversed) load on this factor.

Table L.3. shows the correlations among the factors.

**Table L.1.** Eigenvalues and variance accounted for by each factor (Scale L)

Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total
1	5.187	25.934	25.934	3.795
2	3.618	18.089	44.022	3.699
3	1.634	8.169	52.191	2.483
4	1.352	6.760	58.951	
5	1.260	6.301	65.253	
6	.897	4.484	69.737	
7	.826	4.129	73.866	
8	.792	3.961	77.828	
9	.684	3.422	81.250	
10	.621	3.107	84.357	
11	.581	2.905	87.261	
12	.471	2.353	89.614	
13	.446	2.232	91.846	
14	.348	1.741	93.587	
15	.322	1.611	95.199	
16	.285	1.423	96.622	
17	.247	1.234	97.856	
19	.211	1.055	98.910	
20	.127	.636	99.546	

**Table L.2.** Factor loadings (Scale L).

	Factor		
	Positive effects	Negative effects	Underestimation of negative effects (reversed)
L_1			-0.329
L_2		0.732	
L_3		0.736	
L_4	0.612		
L_5	0.789		
L_6	0.511		
L_7		0.672	

L_8	0.689		
L_9	0.573	0.288	
L_10	0.429	-0.399	-0.459
L_11		0.730	
L_12	0.348	-0.440	-0.537
L_13	0.457	0.258	
L_14		0.482	-0.413
L_15		0.547	-0.366
L_16		0.258	-0.469
L_17	0.373		-0.251
L_18	0.381		-0.315
L_19			-0.506
L_20			-0.513

**Table L.3.** Factor Correlation Matrix (Scale L)

Factor	1	2	3
1	1.000	-.181	-.292
2	-.181	1.000	-.089
3	-.292	-.089	1.000

## Cluster analysis

Factor scores on the identified subscales for scales A, B, D, F, I, K, and L were computed through regression analysis, and then submitted to cluster analysis in order to identify groups of respondents. Also the scores on the scale H (Moral disengagement) were included into the analysis. A hierarchical method of cluster analysis was used to identify the number of clusters, then a k-means method was used to identify the groups of respondents.

Results showed three separate groups of respondents. A multivariate analysis of variance yielded a significant difference among the three groups (Wilks' Lambda=0.08,  $F_{48,140}=7.57$ ,  $p<.0001$ ). A further factorial analysis of variance on the subscales scores yielded a significant difference among the three groups ( $F_{2,93}=33.50$ ,  $p<.001$ ) and a significant interaction between group and subscale ( $F_{46,2139}= 10.49$ ,  $p<.001$ ), meaning that each group of respondents shows a specific profile.

1. **RISKY DRIVERS.** One group can be identified as composed of risky drivers. They have a permissive attitude toward driving under the effect of alcohol and recreational drugs, and are not that much aware of the negative effects of alcohol upon driving. They also refer not to have a correct behaviour during driving. They are also quite tolerant toward violations of the traffic code and speeding and, more interestingly, they see reasons why the traffic code should be violated, as such violations are useful to keep traffic flowing smoothly. Furthermore, risky drivers have high scores on driving related rage, especially due to obstacles, and high scores on moral disengagement.
2. **ANGRY DRIVERS.** People in this group are characterized by having rather high scores on the rage-related subscales, both violations and obstacles-related. They are also high on the anxiety subscale, though not as high as the risky drivers. However, they are tolerant toward violations of the traffic rules. Interestingly enough, similarly to risky drivers, people in this group do consider violations of the traffic code as useful for keeping traffic flowing. Similarly to the safe drivers, however, they show low scores on moral disengagement.
3. **SAFE DRIVERS.** Safe drivers are instead characterized by being not tolerant toward driving under the effects of alcohol and drugs, toward violations of traffic rules and speeding. Safe drivers have a rather high score on external Locus of Control, and show intermediate levels of anxiety. They are also aware of the alcohol negative effects upon driving, and do not feel rage during driving. People in the safe drivers group show low scores on moral disengagement.

Interestingly, the three groups do not differ in terms of age or gender, though a (not significant) prevalence of males can be observed among the risky and angry drivers.

The average score per subscale (and standard error) for each group is shown in Table 1. Tables 2, 3, and 4 report the results of the post-hoc comparisons among the three groups. Table 5 shows the respondents' mean age as a function of gender and group. Figure 1 shows the profiles of the three groups of drivers on selected subscales. The three groups do not differ in terms of their perception of risk of being involved in an accident (Figure 2), or in terms of perception of parents' and friends' support and encouragement for their reckless driving behaviour (Figures 3 and 4).

**Table 1.** Average scores and standard error for each group on the subscales of the questionnaire

	RISKY DRIVERS			ANGRY DRIVERS			SAFE DRIVERS		
	Mean	Std.Err.	N	Mean	Std.Err.	N	Mean	Std.Err.	N
Tolerance toward violations	0.43	0.16	25	0.20	0.14	34	-0.41	0.13	37
Negative attitude toward alcohol/drugs	-0.47	0.17	25	0.35	0.14	34	0.11	0.14	37
Usefulness of violations (rev)	-0.39	0.16	25	-0.41	0.13	34	0.51	0.13	37
Negative attitude toward speeding	-0.40	0.18	25	0.01	0.15	34	0.25	0.14	37
External Locus of Control	0.33	0.18	25	0.03	0.16	34	-0.27	0.15	37
Internal Locus of Control	-0.07	0.18	25	0.30	0.16	34	-0.13	0.15	37
Attention-related Locus of Control (rev)	-0.44	0.18	25	0.30	0.16	34	0.04	0.15	37
Violation-related rage	0.13	0.15	25	0.56	0.13	34	-0.60	0.12	37
Obstacle-related rage	0.52	0.15	25	0.29	0.13	34	-0.58	0.13	37
Anxiety	0.89	0.13	25	0.25	0.11	34	-0.69	0.11	37
Conscientiousness	-0.16	0.18	25	0.30	0.16	34	-0.12	0.15	37
Sensation Seeking	0.47	0.17	25	-0.06	0.15	34	-0.25	0.14	37
Stability	0.08	0.17	25	-0.27	0.14	34	0.22	0.14	37
Altruism	-0.76	0.14	25	0.62	0.12	34	0.04	0.12	37
Slips/Lapses	0.94	0.17	25	-0.30	0.14	34	-0.36	0.14	37
Violations	0.71	0.15	25	0.29	0.13	34	-0.76	0.12	37
Mistakes	0.95	0.16	25	-0.35	0.13	34	-0.31	0.13	37
Permissive attitude toward alcohol	0.59	0.17	25	-0.19	0.15	34	-0.23	0.14	37
Prevention behavior	-0.02	0.19	25	0.16	0.16	34	-0.16	0.16	37
Police control	0.23	0.18	25	0.25	0.15	34	-0.41	0.14	37
Alcohol positive effects	0.92	0.15	25	-0.39	0.13	34	-0.20	0.13	37
Alcohol negative effects	-0.26	0.18	25	0.42	0.15	34	-0.28	0.15	37
Underestimation of alcohol negative effects (rev)	-0.65	0.16	25	0.11	0.14	34	0.35	0.14	37
Moral disengagement	0.78	0.17	25	-0.11	0.14	34	-0.42	0.14	37

**Table 2.** Comparison between Risky and Angry drivers on each subscale.

	RISKY DRIVERS	ANGRY DRIVERS	SIGNIFICANCE
	N=25	N=34	
Tolerance toward violations	0.43	0.20	ns
Negative attitude toward alcohol/drugs	-0.47	0.35	ns
Usefulness of violations (rev)	-0.39	-0.41	ns
Negative attitude toward speeding	-0.40	0.01	ns
External Locus of Control	0.33	0.03	ns

Internal Locus of Control	-0.07	0.30	ns
Attention-related Locus of Control (rev)	-0.44	0.30	ns
Violation-related rage	0.13	0.56	ns
Obstacle-related rage	0.52	0.29	ns
Anxiety	0.89	0.25	p<.001
Conscientiousness	-0.16	0.30	ns
Sensation Seeking	0.47	-0.06	ns
Stability	0.08	-0.27	ns
Altruism	-0.76	0.62	p<.001
Slips/Lapses	0.94	-0.30	p<.001
Violations	0.71	0.29	ns
Mistakes	0.95	-0.35	p<.001
Permissive attitude toward alcohol	0.59	-0.19	ns
Prevention behavior	-0.02	0.16	ns
Police control	0.23	0.25	ns
Alcohol positive effects	0.92	-0.39	p<.001
Alcohol negative effects	-0.26	0.42	p<.001
Underestimation of alcohol negative effects (rev)	-0.65	0.11	ns
Moral disengagement	0.78	-0.11	ns

**Table 3.** Comparison between Risky and Safe drivers on each subscale.

	RISKY DRIVERS	SAFE DRIVERS	SIGNIFICANCE
	N=25	N=37	
Tolerance toward violations	0.43	-0.41	p<.001
Negative attitude toward alcohol/drugs	-0.47	0.11	ns
Usefulness of violations (rev)	-0.39	0.51	p<.001
Negative attitude toward speeding	-0.40	0.25	ns
External Locus of Control	0.33	-0.27	ns
Internal Locus of Control	-0.07	-0.13	ns
Attention-related Locus of Control (rev)	-0.44	0.04	ns
Violation-related rage	0.13	-0.60	ns
Obstacle-related rage	0.52	-0.58	p<.001
Anxiety	0.89	-0.69	p<.001
Conscientiousness	-0.16	-0.12	ns
Sensation Seeking	0.47	-0.25	ns
Stability	0.08	0.22	ns
Altruism	-0.76	0.04	p<.001
Slips/Lapses	0.94	-0.36	p<.001
Violations	0.71	-0.76	p<.001
Mistakes	0.95	-0.31	p<.001
Permissive attitude toward alcohol	0.59	-0.23	p<.001
Prevention behavior	-0.02	-0.16	ns
Police control	0.23	-0.41	ns
Alcohol positive effects	0.92	-0.20	p<.001

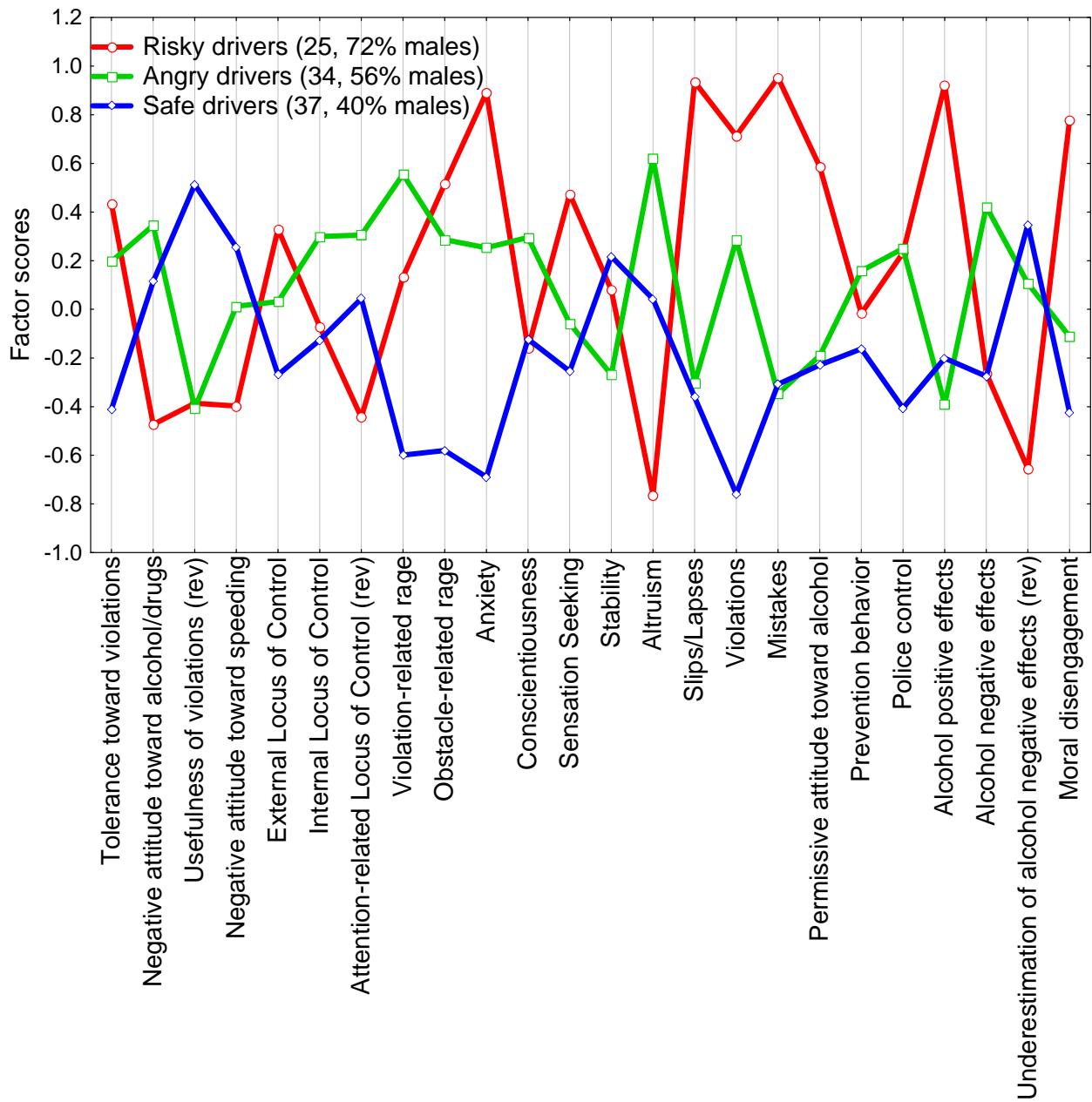
Alcohol negative effects	-0.26	-0.28	ns
Underestimation of alcohol negative effects (rev)	-0.65	0.35	ns
Moral disengagement	0.78	-0.42	ns

**Table 4.** Comparison between Angry and Safe drivers on each subscale.

	ANGRY DRIVERS	SAFE DRIVERS	SIGNIFICANCE
	N=34	N=37	
Tolerance toward violations	0.20	-0.41	ns
Negative attitude toward alcohol/drugs	0.35	0.11	ns
Usefulness of violations (rev)	-0.41	0.51	p<.001
Negative attitude toward speeding	0.01	0.25	ns
External Locus of Control	0.03	-0.27	ns
Internal Locus of Control	0.30	-0.13	ns
Attention-related Locus of Control (rev)	0.30	0.04	ns
Violation-related rage	0.56	-0.60	p<.001
Obstacle-related rage	0.29	-0.58	p<.001
Anxiety	0.25	-0.69	p<.001
Conscientiousness	0.30	-0.12	ns
Sensation Seeking	-0.06	-0.25	ns
Stability	-0.27	0.22	ns
Altruism	0.62	0.04	ns
Slips/Lapses	-0.30	-0.36	ns
Violations	0.29	-0.76	p<.001
Mistakes	-0.35	-0.31	ns
Permissive attitude toward alcohol	-0.19	-0.23	ns
Prevention behavior	0.16	-0.16	ns
Police control	0.25	-0.41	ns
Alcohol positive effects	-0.39	-0.20	ns
Alcohol negative effects	0.42	-0.28	ns
Underestimation of alcohol negative effects (rev)	0.11	0.35	ns
Moral disengagement	-0.11	-0.42	ns

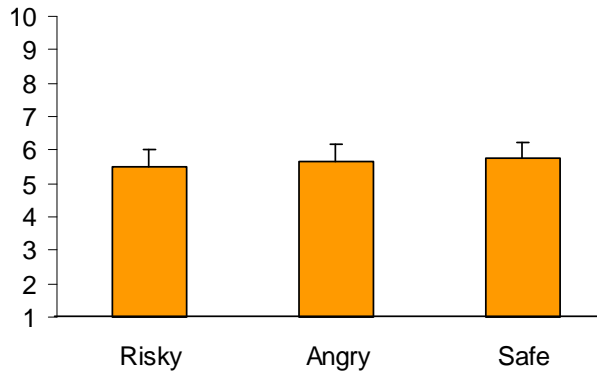
**Table 5.** Mean age (years) and standard errors as a function of gender and group.

		Mean age	Standard error	N
Males	Risky drivers	22.94	0.86	18
	Angry drivers	22.37	0.83	19
	Safe drivers	24.53	0.94	15
Females	Risky drivers	24.14	1.38	7
	Angry drivers	22.33	0.94	15
	Safe drivers	22.32	0.78	22

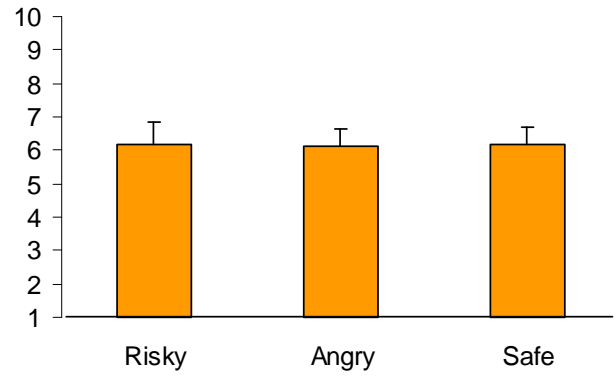


**Figure 1.** Average scores for each group on the subscales of the questionnaire.

C.1 How would you assess your risk of having a road accident as against the people of your age (10=very high)?

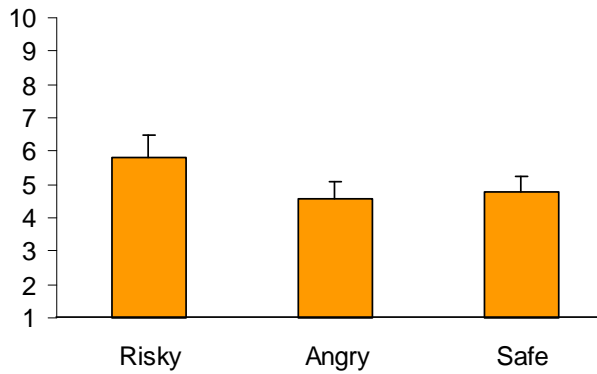


C.2 How much are you worried about this possibility (10=very worried)?

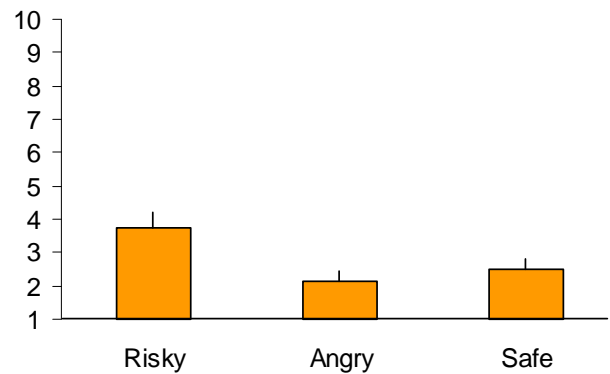


**Figure 2.** Average scores for each group on items concerning risk perception.

C.3 How much your friends would approve your reckless driving (10=totally approve)?

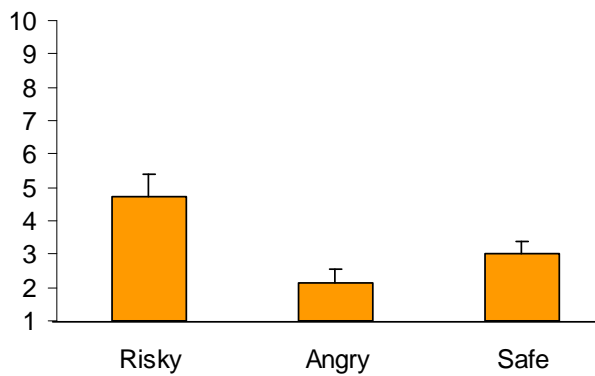


C.4 How much your friends would encourage your reckless driving (10=totally approve)?

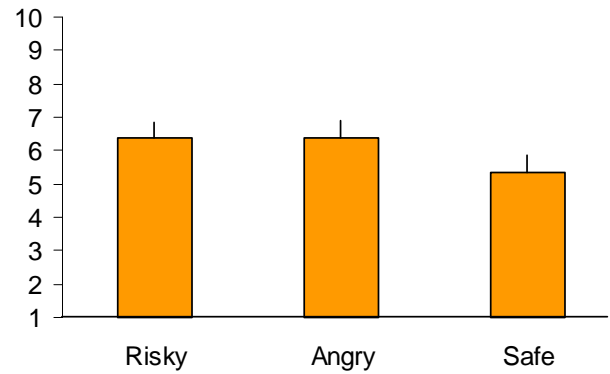


**Figure 3.** Average scores for each group on items concerning friends' attitude.

C.5 How angry would your parents get for your reckless driving (10=not at all)?



C.6 Would your parents punish you for your reckless driving (10=not at all)?



**Figure 4.** Average scores for each group on items concerning parents' attitude.

## NON DRIVERS (QUESTIONNAIRE SECTION 3)

### Sample description

A total of 90 people answered the Section 3 of the questionnaire. Males were 42 (46,7% of the total sample) and females were 48 (53.3% of the total sample). Their mean age was 18.0 years (standard deviation 0.41), ranging between 17 and 20 years. Age was no significantly different between males and females. Not all the respondents answered all the items of the questionnaire, thus each analysis was run on the largest sample available for that analysis (missing values were not estimated).

### Specific dimensions of the questionnaire scales

#### Scale M, Attitude toward road safety issues.

Data from the Scale M of the questionnaire were submitted to exploratory factor analysis (Principal Axis method, Oblimin rotation). The Kaiser-Meyer-Olkin measure of sampling adequacy, 0.78, and factorability of the correlation matrix, Bartlett's test of sphericity  $\chi^2(153) = 642.470$ ,  $p < .000$ , were both adequate. The criteria used to identify acceptable factors were (a) Scree test, (b) eigenvalues greater than 1, and (c) the percentage of the total variance accounted for by the factor solution. This yielded a four-factor solution that accounted for the 60.07% of the total variance. Table M.1 shows the eigenvalues and the variance accounted for by each factor. Table M.2 shows the item loadings after Oblimin rotation.

The first factor (labelled "Tolerance toward violations", accounting for by the 21.86% of the common variance) refers to a negative attitude toward traffic rules. Items such as "*The road traffic code is often too complicated to be observed*" load on this factor.

The second factor (labelled "Negative attitude toward drugs and alcohol", accounting for by the 18,23% of the common variance) refers to a negative attitude toward driving under the effects of substances. Items such as "*I would never drive under the influence of narcotic drugs*" load on this factor.

The third factor (labelled "Positive attitude toward speeding", accounting for by the 8.64% of the common variance) refers to a positive attitude toward going by car with a fast driver. Items such as "It is ok to go by car with a fast driver if it is the only way to go back home at night" load on this factor.

The fourth factor (labelled "Negative attitude toward risky driving", accounting for by the 11.6% of the common variance) refers to the negative attitude to take risks driving. Items such as "*Running risks and breaking a few rules does not necessarily mean that you are a bad driver*" (reversed) load on this factor. This factor correlates negatively with the first factor (table M.3).

Table M.1. Eigenvalues and variance accounted for by each factor  
(Scale M)

Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings <sup>a</sup>
	Total	% of Variance	Cumulative %	Total
1	4.907	27.263	27.263	3.934
2	3.566	19.810	47.073	3.281
3	1.241	6.892	53.965	1.556
4	1.099	6.104	60.070	2.088
5	.999	5.550	65.620	
6	.849	4.718	70.338	
7	.812	4.513	74.851	
8	.692	3.846	78.697	
9	.626	3.479	82.177	
10	.591	3.281	85.458	
11	.501	2.785	88.244	
12	.460	2.554	90.798	
13	.401	2.227	93.025	
14	.341	1.895	94.920	
15	.317	1.759	96.678	
16	.257	1.429	98.107	
17	.207	1.151	99.258	
18	.134	.742	100.000	

Table M.2. Factor loadings (Scale M).

	Factors			
	Tolerance to violations to traffic rules	Negative attitude toward drugs and alcohol	Positive Attitude Toward Speeding	Negative attitude toward risky driving
M_1	0.531			
M_2	0.436			-0.305
M_3		0.264		
M_4	0.330			-0.312
M_5				-0.620
M_6				-0.349

M_7	0.619			
M_8	0.703			
M_9	0.601		-0.291	
M_10		0.265	-0.540	
M_11		0.367	0.520	
M_12	0.554			-0.283
M_13	0.688		0.279	
M_14		0.624		
M_15		0.649		
M_16		0.796		
M_17		0.838		
M_18		0.815		

Table M.3. Factor Correlation Matrix (Scale M)

Factor	1	2	3	4
1	1,000	-,111	-,309	-,414
2	-,111	1,000	-,008	-,076
3	-,309	-,008	1,000	,121
4	-,414	-,076	,121	1,000

## Scale N, Locus of Control.

Data from the Scale N of the questionnaire were submitted to exploratory factor analysis (Principal Axis method, Oblimin rotation). The Kaiser-Meyer-Olkin measure of sampling adequacy, 0.58, and factorability of the correlation matrix, Bartlett's test of sphericity  $\chi^2(435)=961.06$ ,  $p<.000$ , were both adequate. The criteria used to identify acceptable factors were (a) Scree test, (b) eigenvalues greater than 1, and (c) the percentage of the total variance accounted for by the factor solution. This yielded a three-factor solution that accounted for the 35.7% of the total variance. Table N.1 shows the eigenvalues and the variance accounted for by each factor. Table N.2 shows the item loadings after Oblimin rotation.

The first factor (labelled "Internal Locus of Control", accounting for by the 12.24% of the common variance) refers to an internal Locus of Control, as respondents attribute responsibility of road accidents mostly to drivers. Items such as "*In case of accident it is almost always the driver's fault*" load on this factor.

The second factor (labelled "External Locus of Control, reversed", accounting for by the 10.61% of the common variance) refers to an external Locus of Control, as respondents attribute responsibility of road accidents mostly to external causes, independent of drivers behaviour. Items such as "*Frequent drivers who have no accidents are only lucky persons and are not more careful than others*" load on this factor.

The third factor (labelled "Attention related Internal LOC", reversed, accounting for by the 7.5% of the common variance) refers to an external, attention-related Locus of Control, as respondents attribute not much responsibility of road accidents mostly to drivers' failure to be careful or to pay attention to driving. Items such as "*A careful driver can prevent any accident*" (reversed) load on this factor.

The three factors are not correlated (Table N.3).

Table N.1. Eigenvalues and variance accounted for by each factor  
(Scale N)

Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total
1	4.713	15.711	15.711	3.672
2	3.709	12.362	28.073	3.183
3	2.288	7.627	35.700	2.252
4	2.247	7.491	43.191	
5	1.727	5.757	48.948	
6	1.457	4.858	53.806	
7	1.384	4.615	58.421	
8	1.241	4.135	62.556	
9	1.199	3.996	66.552	

10	1.051	3.505	70.056
11	.946	3.153	73.210
12	.876	2.919	76.129
13	.810	2.699	78.828
14	.752	2.508	81.335
15	.649	2.163	83.499
16	.598	1.993	85.492
17	.547	1.823	87.315
18	.493	1.644	88.959
19	.462	1.540	90.499
20	.429	1.429	91.928
21	.410	1.365	93.293
22	.365	1.217	94.510
23	.276	.920	95.430
24	.272	.906	96.336
25	.254	.846	97.182
26	.236	.788	97.970
27	.202	.674	98.644
28	.173	.577	99.221
29	.120	.399	99.621
30	.114	.379	100.000

Table N.2. Factor loadings (Scale N).

	Factor		
	Internal LOC	External LOC	Attention-related Internal LOC (reversed)
N_1		0.372	
N_2		0.436	
N_3	0.341		
N_4		0.455	
N_5	-0.351	0.608	
N_6	0.298		-0.639
N_7		0.479	-0.265
N_8		0.293	-0.267
N_9	0.330		-0.412
N_10	0.578		
N_11	0.472		
N_12	0.357		
N_13	0.280	0.267	
N_14		0.520	

Table N.2. Factor loadings (Scale N).

	Factor		
	Internal LOC	External LOC	Attention-related Internal LOC (reversed)
N_1		0.372	
N_2		0.436	
N_15		0.518	
N_16	0.626		
N_17			-0.515
N_18	0.456	0.325	
N_19	0.308		
N_20	-0.396	0.590	
N_21			
N_22	0.618		
N_23			
N_24	-0.271	0.525	
N_25	0.356	0.361	
N_26	0.625		
N_27	0.557		
N_28		0.277	-0.666
N_29			
N_30			-0.566

Table N.3. Factor correlation matrix

Factor	1	2	3
1	1.000	.099	-.077
2	.099	1.000	-.119
3	-.077	-.119	1.000

**Scale P, rage.**

Data from the Scale P of the questionnaire were submitted to exploratory factor analysis (Principal Axis method, Oblimin rotation). The Kaiser-Meyer-Olkin measure of sampling adequacy, 0.77, and factorability of the correlation matrix, Bartlett’s test of sphericity  $\chi^2(91)=491.17, p<.000$ , were both adequate. The criteria used to identify acceptable factors were (a) Scree test, (b) eigenvalues greater than 1, and (c) the percentage of the total variance accounted for by the factor solution. This yielded a three-factor solution that accounted for the 66.29% of the total variance. Table P.1 shows the eigenvalues and the variance accounted for by each factor. Table P.2 shows the item loadings after Oblimin rotation.

The first factor (labelled “Insult-related rage”, accounting for by the 23.75% of the common variance) refers to the rage reactions due insults from other drivers. Items such as “*Somebody makes an obscene gesture for your way of driving*” load on this factor.

The second factor (labelled “Obstacle lorry related rage”, accounting for by the 15.34% of the common variance) refers to the rage reactions due to obstacles preventing drivers to drive the way they want, particularly for the presence of lorry. Items such as “*You are driving behind a huge lorry blocking your view*” load on this factor.

The third factor (labelled “Obstacle related rage”, accounting for by the 19.03% of the common variance) refers to the rage reactions due to obstacles preventing drivers to drive the way they want. Items such as “*You are trapped in traffic jam*” load on this factor. This factor is moderately correlated with the first factor “Insult-related rage” (Table P.3).

The fourth factor (labelled “Violation-related rage”, accounting for by the 16.73% of the common variance) refers to the rage reactions due to other drivers violating the traffic code. Items such as “*Somebody does not stop at a red traffic light or a stop sign*” load on this factor. Also this factor is moderately correlated with the first factor “Insult-related rage” (Table P.3).

Table P.1. Eigenvalues and variance accounted for by each factor (Scale D)

Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total
1	4.967	35.481	35.481	3.326
2	1.662	11.873	47.354	2.148
3	1.374	9.814	57.168	2.664
4	1.277	9.119	66.287	2.342
5	.847	6.051	72.337	
6	.793	5.666	78.004	
7	.585	4.177	82.181	
8	.578	4.127	86.307	
9	.495	3.532	89.839	
10	.428	3.055	92.895	
11	.305	2.181	95.076	
12	.272	1.941	97.017	
13	.251	1.792	98.810	

14	.167	1.190	100.000
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Table P.2. Factor loadings (Scale P).

	Factor			
	Insult related rage	Obstacle Lorry related rage	Obstacle related rage	Violation related rage
P_1				.824
P_2	.259	-.282	.469	
P_3	.262			.549
P_4				.508
P_5			.766	
P_6	.410			
P_7	.316		.454	
P_8		.321	.381	
P_9	.823			
P_10	.919			
P_11	.336			
P_12			.643	
P_13		.751		
P_14		.783		

Table P.3. Factor Correlation Matrix (Scale P)

Factor	1	2	3	4
1	1.000	.219	.385	.325
2	.219	1.000	.166	.285
3	.385	.166	1.000	.249
4	.325	.285	.249	1.000

**Scale R. Personality.**

Data from the Scale R of the questionnaire were submitted to exploratory factor analysis (Principal Axis method. Oblimin rotation). The Kaiser-Meyer-Olkin measure of sampling adequacy. 0.61, and factorability of the correlation matrix. Bartlett’s test of sphericity  $\chi^2(666)=1280.96$ .  $p<.000$ , were both adequate. The criteria used to identify acceptable factors were (a) Scree test, (b) eigenvalues greater than 1, and (c) the percentage of the total variance accounted for by the factor solution. This yielded a five-factor solution that accounted for the 40.45% of the total variance. Table R.1 shows the eigenvalues and the variance accounted for by each factor. Table R.2 shows the item loadings after Oblimin rotation.

The first factor (labelled “Anger/Egoism”, accounting for by the 4.42% of the common variance) refers anger and egoism. Items such as “I think I’m generous with who is in trouble” (reversed) load on this factor.

The second factor (labelled “Conscientiousness”), accounting for by the 5.74% of the common variance) refers to responsibility, commitment, attention. Items such as “*I am a reliable worker*” load on this factor.

The third factor (labelled “Calmness”, accounting for by the 6.04% of the common variance) refers to being calm and reflexive. Items such as “*I am tranquil and not irritable*” load on this factor.

The fourth factor (labelled “No anxiety”, accounting for by the 7.08% of the common variance) refers to the tendency to be secure, not nervous. Items such as “I often feel tense and nervous”(reversed) load on this factor.

The four factors are not slightly correlated (Table R.3).

Table R.1. Eigenvalues and variance accounted for by each factor  
(Scale R)

Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total
1	5.241	14.165	14.165	3.990
2	4.574	12.362	26.527	4.008
3	2.671	7.219	33.746	2.791
4	2.478	6.699	40.445	2.343
5	1.898	5.129	45.573	
6	1.701	4.597	50.170	
7	1.651	4.461	54.632	
8	1.492	4.033	58.664	
9	1.323	3.576	62.240	
10	1.226	3.312	65.552	
11	1.060	2.864	68.417	

12	1.032	2.788	71.205
13	.950	2.566	73.771
14	.892	2.412	76.183
15	.784	2.120	78.303
16	.716	1.935	80.238
17	.685	1.853	82.090
18	.657	1.776	83.866
19	.633	1.711	85.578
20	.596	1.611	87.188
21	.558	1.509	88.697
22	.516	1.395	90.093
23	.473	1.277	91.370
24	.441	1.192	92.562
25	.380	1.026	93.588
26	.329	.889	94.477
27	.303	.818	95.295
28	.263	.711	96.006
29	.233	.629	96.635
30	.219	.591	97.226
31	.190	.514	97.740
32	.187	.504	98.244
33	.176	.476	98.720
34	.143	.386	99.105
35	.128	.347	99.452
36	.117	.317	99.769
37	.085	.231	100.000

Table R.2. Factor loadings (Scale R).

	Factor			
	Anger/Egoism	Conscientiousness	Calmness	No Anxiety
R_1				0.320
R_2	0.377			
R_3	0.434		-0.418	0.268
R_4	0.477		-0.416	
R_5	0.680			
R_6		0.273		0.352
R_7		0.807		

R_8			0.393	0.339
R_9				0.483
R_10	0.447		-0.452	
R_11				0.453
R_12	0.285		-0.425	
R_13	0.518		-0.285	
R_14				0.301
R_15		0.667	0.267	
R_16		0.250	0.620	
R_17				0.532
R_18	0.459	-0.338	0.341	0.486
R_19	0.293			0.363
R_20		0.465	-0.370	
R_21	0.341	0.378		
R_22				
R_23		0.643		
R_24			-0.464	
R_25			-0.292	
R_26	0.658			
R_27		0.588		
R_28			-0.303	
R_29	0.541			
R_30	0.594			
R_31		0.557		
R_32				
R_33		0.599		
R_34				
R_35		0.441	-0.321	
R_36		0.455		0.317
R_37	0.524			

Table R.3. Factor Correlation Matrix

Factor	1	2	3	4
1	1.000	-.090	-.117	.118
2	-.090	1.000	-.077	.033
3	-.117	-.077	1.000	-.091
4	.118	.033	-.091	1.000



### Scale S, Imagined driving behaviour.

Data from the Scale S of the questionnaire were submitted to exploratory factor analysis (Principal Axis method. Oblimin rotation). The Kaiser-Meyer-Olkin measure of sampling adequacy. 0.79, and factorability of the correlation matrix. Bartlett's test of sphericity  $\chi^2(231)=984.64$ .  $p<.000$ , were both adequate. The criteria used to identify acceptable factors were (a) Scree test, (b) eigenvalues greater than 1, and (c) the percentage of the total variance accounted for by the factor solution. This yielded a five-factor solution that accounted for the 55.20 % of the total variance. Table S.1 shows the eigenvalues and the variance accounted for by each factor. Table S.2 shows the item loadings after Oblimin rotation.

The first factor (labelled "Speed/Alcohol and Drug", accounting for by the 15.62% of the common variance) refers to risky driving behaviour. Items such as "You drive without keeping a safe distance" load on this factor.

The second factor (labelled "Slowing". accounting for by the 8,63% of the common variance) refers to the slowing the speed when required by the traffic conditions. Items such as "You slow down when approaching a danger sign" load on this factor.

The third factor (labelled "Complying with the traffic code", accounting for by the 11,94% of the common variance) refers to correct behaviour. Items such as "You violate traffic rules in order to move more smoothly" (reversed) load on this factor. This factor correlates negatively with the first factor (table S.3).

Table S.1. Eigenvalues and variance accounted for by each factor (Scale S)

Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total
1	7.218	32.807	32.807	5.779
2	3.218	14.628	47.435	3.194
3	1.710	7.773	55.208	4.420
4	1.312	5.964	61.172	
5	1.213	5.514	66.686	
6	1.031	4.684	71.370	
7	.883	4.015	75.385	
8	.728	3.310	78.695	
9	.718	3.262	81.957	
10	.568	2.580	84.537	
11	.531	2.415	86.952	
12	.424	1.928	88.880	
13	.416	1.889	90.769	
14	.379	1.721	92.490	

15	.328	1.490	93.980
16	.274	1.245	95.225
17	.223	1.013	96.238
18	.215	.978	97.217
19	.178	.811	98.028
20	.171	.776	98.804
21	.151	.687	99.491
22	.112	.509	100.000

Table S.2. Factor loadings (Scale S).

	Factor		
	Speed/Alcohol and Drug	Slowing	Complying with the traffic code
S_1			-0.818
S_2	0.350		-0.559
S_3	0.261		-0.616
S_4	0.277		-0.597
S_5			-0.806
S_6	0.609		-0.256
S_7	0.728		
S_8	0.854		
S_9	0.757		
S_10	0.278		-0.390
S_11	0.553		
S_12	0.349		-0.264
S_13		0.388	
S_14		0.667	
S_15	-0.268	0.696	
S_16	-0.281	0.565	
S_17	0.286		-0.287
S_18	0.571		
S_19		0.652	
S_20		0.623	
S_21		0.575	
S_22	0.726		

Table S.3. Factor Correlation Matrix (Scale S)

Factor	1	2	3
1	1.000	-.246	-.426
2	-.246	1.000	.018
3	-.426	.018	1.000

**Scale T, effects of alcohol.**

Data from the Scale T of the questionnaire were submitted to exploratory factor analysis (Principal Axis method. Oblimin rotation). The Kaiser-Meyer-Olkin measure of sampling adequacy, 0.76, and factorability of the correlation matrix. Bartlett’s test of sphericity  $\chi^2(190)=7492,92$ ,  $p<.000$ , were both adequate. The criteria used to identify acceptable factors were (a) Scree test, (b) eigenvalues greater than 1, and (c) the percentage of the total variance accounted for by the factor solution. This yielded a three-factor solution that accounted for the 50.29% of the total variance. Table T.1 shows the eigenvalues and the variance accounted for by each factor. Table T.2 shows the item loadings after Oblimin rotation.

The first factor (labelled “Positive effects”, accounting for by the 21.89% of the common variance) refers to the supposed positive effects of alcohol assumption. Items such as “Alcohol increases concentration capacity” load on this factor.

The second factor (labelled “Negative effects on risk assessment”, accounting for by the 8.33% of the common variance) refers to the underestimation of risks after alcohol assumption. Items such as “*Alcohol makes you less capable of assessing the risks*” load on this factor.

The third (labelled “Negative effects”, accounting for by the 20.4% of the common variance) refers to the supposed negative effects of alcohol assumption. Items such as “Alcohol decreases the level of attention” load on this factor. This factor has correlates negatively with the “Positive effects” factor (Table T.3).

Table T.1. Eigenvalues and variance accounted for by each factor (Scale T)

Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative	Total
			%	
1	6.214	31.071	31.071	4.378
2	2.214	11.071	42.143	1.665
3	1.630	8.148	50.291	4.080
4	1.349	6.746	57.037	
5	1.291	6.453	63.489	
6	1.128	5.642	69.131	
7	.975	4.874	74.005	
8	.820	4.102	78.107	
9	.636	3.181	81.288	
10	.616	3.079	84.367	
11	.559	2.795	87.162	
12	.437	2.187	89.349	
13	.398	1.990	91.340	
14	.368	1.840	93.180	

15	.350	1.750	94.930
16	.305	1.523	96.453
17	.231	1.156	97.609
18	.207	1.033	98.642
19	.175	.877	99.519
20	.096	.481	100.000

Table T.2. Factor loadings (Scale T).

	Factor		
	Positive effects	Negative effects on risk assessment	Negative effects
T_1	0.495		
T_2			0.929
T_3			0.772
T_4	0.290		
T_5	0.550		-0.314
T_6	0.527		
T_7	-0.361		
T_8	0.606		-0.283
T_9		0.358	
T_10	0.538		-0.377
T_11		0.263	0.761
T_12	0.352		-0.472
T_13		0.498	
T_14		0.735	
T_15	-0.326	0.293	0.285
T_16	0.360		
T_17	0.496	-0.335	
T_18	0.726		
T_19	0.589		
T_20	0.382		

Table T.3. Factor Correlation Matrix (Scale T)

Factor	1	2	3
1	1.000	-.060	-.315
2	-.060	1.000	.178
3	-.315	.178	1.000

## Cluster analysis

Factor scores on the identified subscales for scales A, B, D, F, I, K, and L were computed through regression analysis, and then submitted to cluster analysis in order to identify groups of respondents. Also the scores on the scale H (Moral disengagement) were included into the analysis. A hierarchical method of cluster analysis was used to identify the number of clusters, then a k-means method was used to identify the groups of respondents.

Results showed three separate groups of respondents. A multivariate analysis of variance yielded a significant difference among the three groups (Wilks' Lambda=0.05,  $F_{38,104}=9.00$ ,  $p<.0001$ ). A further factorial analysis of variance on the subscales scores yielded a significant difference among the three groups ( $F_{2,70}=4.50$ ,  $p<.01$ ) and a significant interaction between group and subscale ( $F_{38,1260}=12.82$ ,  $p<.001$ ), meaning that each group of respondents shows a specific profile.

4. **RISKY DRIVERS.** One group can be identified as composed of risky drivers. They have a permissive attitude toward driving under the effect of alcohol and recreational drugs, and are not that much aware of the negative effects of alcohol upon driving. They also refer not to have a correct behaviour during driving. They are also quite tolerant toward violations of the traffic code and speeding and, more interestingly, they see reasons why the traffic code should be violated, as such violations are useful to keep traffic flowing smoothly. Furthermore, risky drivers have high scores on driving related rage, especially due to obstacles, and high scores on moral disengagement.
5. **ANGRY DRIVERS.** People in this group are characterized by having rather high scores on the rage-related subscales, both violations and obstacles-related. They are also high on the anxiety subscale, though not as high as the risky drivers. However, they are tolerant toward violations of the traffic rules. Interestingly enough, similarly to risky drivers, people in this group do consider violations of the traffic code as useful for keeping traffic flowing. Similarly to the safe drivers, however, they show low scores on moral disengagement.
6. **SAFE DRIVERS.** Safe drivers are instead characterized by being not tolerant toward driving under the effects of alcohol and drugs, toward violations of traffic rules and speeding. Safe drivers have a rather high score on external Locus of Control, and show intermediate levels of anxiety. They are also aware of the alcohol negative effects upon driving, and do not feel rage during driving. People in the safe drivers group show low scores on moral disengagement.

Interestingly, the three groups do not differ in terms of age or gender, though a prevalence of males can be observed among the risky drivers.

The average score per subscale (and standard error) for each group is shown in Table 1. Tables 2, 3, and 4 report the results of the post-hoc comparisons among the three groups. Table 5 shows the respondents' mean age as a function of gender and group. Figure 1 shows the profiles of the three groups of drivers on selected subscales. The three groups do not differ in terms of their perception of risk of being involved in an accident and of how much they worry about this possibility (Figure 2). However, respondents in the risky group feel to be encouraged by their friends more than respondents in the other two groups (Figure 3). The same respondents consider their parents would not be angry at their driving behaviour more than the other respondents (Figure 4).

**Table 1.** Average scores and standard error for each group on the subscales of the questionnaire

	RISKY DRIVERS			SAFE DRIVERS			ANGRY DRIVERS		
	Mean	Std.Err.	N	Mean	Std.Err.	N	Mean	Std.Err.	N
Usefulness of violations	0.83	0.14	25	-0.78	0.14	25	-0.21	0.14	23
Negative attitude toward alcohol/drugs	-0.49	0.16	25	0.53	0.16	25	0.12	0.17	23
Positive attitude toward speeding	-0.34	0.14	25	0.57	0.14	25	-0.23	0.14	23
Negative attitude toward risky driving	-0.46	0.14	25	0.50	0.14	25	0.00	0.15	23
Internal Locus of Control	-0.50	0.17	25	0.40	0.17	25	0.14	0.17	23
External Locus of Control	0.54	0.17	25	-0.45	0.17	25	-0.11	0.17	23
Attention-related Locus of control (rev)	-0.45	0.16	25	0.25	0.16	25	0.23	0.17	23
Insult-related rage	-0.11	0.17	25	-0.27	0.17	25	0.50	0.18	23
Lorry-related rage	0.05	0.15	25	-0.58	0.15	25	0.69	0.15	23
Obstacle-related rage	0.37	0.14	25	-0.75	0.14	25	0.35	0.15	23
Violation-related rage	-0.13	0.16	25	-0.19	0.16	25	0.56	0.17	23
Egocentrism	0.43	0.15	25	-0.78	0.15	25	0.37	0.16	23
Conscientiousness	-0.79	0.16	25	0.43	0.16	25	0.17	0.17	23
Stability	0.06	0.17	25	0.30	0.17	25	-0.24	0.18	23
Anxiety (rev)	0.49	0.16	25	-0.24	0.16	25	-0.30	0.17	23
Alcohol positive effects	0.76	0.14	25	-0.53	0.14	25	-0.42	0.15	23
Alcohol negative effects on risk assessment	-0.36	0.16	25	0.13	0.16	25	0.42	0.17	23
Alcohol negative effects	-0.61	0.16	25	0.52	0.16	25	0.35	0.16	23
Moral disengagement	0.40	0.16	25	-0.59	0.16	25	0.07	0.16	23

**Table 2.** Comparison between Risky and Safe drivers on each subscale.

	RISKY DRIVERS	SAFE DRIVERS	SIGNIFICANCE
	25	25	
Usefulness of violations	0.83	-0.78	p<.001
Negative attitude toward alcohol/drugs	-0.49	0.53	p<.001
Positive attitude toward speeding	-0.34	0.57	p<.001
Negative attitude toward risky driving	-0.46	0.50	p<.001
Internal Locus of Control	-0.50	0.40	p<.001
External Locus of Control	0.54	-0.45	p<.001
Attention-related Locus of control (rev)	-0.45	0.25	ns
Insult-related rage	-0.11	-0.27	ns
Lorry-related rage	0.05	-0.58	ns
Obstacle-related rage	0.37	-0.75	p<.001
Violation-related rage	-0.13	-0.19	ns

Egocentrism	0.43	-0.78	p<.001
Conscientiousness	-0.79	0.43	p<.001
Stability	0.06	0.30	ns
Anxiety (rev)	0.49	-0.24	ns
Alcohol positive effects	0.76	-0.53	p<.001
Alcohol negative effects on risk assessment	-0.36	0.13	ns
Alcohol negative effects	-0.61	0.52	p<.001
Moral disengagement	0.40	-0.59	p<.001

**Table 3.** Comparison between Risky and Angry drivers on each subscale.

	RISKY DRIVERS	ANGRY DRIVERS	SIGNIFICANCE
	25	23	
Usefulness of violations	0.83	-0.21	p<.001
Negative attitude toward alcohol/drugs	-0.49	0.12	ns
Positive attitude toward speeding	-0.34	-0.23	ns
Negative attitude toward risky driving	-0.46	0.00	ns
Internal Locus of Control	-0.50	0.14	ns
External Locus of Control	0.54	-0.11	ns
Attention-related Locus of control (rev)	-0.45	0.23	ns
Insult-related rage	-0.11	0.50	ns
Lorry-related rage	0.05	0.69	ns
Obstacle-related rage	0.37	0.35	ns
Violation-related rage	-0.13	0.56	ns
Egocentrism	0.43	0.37	ns
Conscientiousness	-0.79	0.17	p<.001
Stability	0.06	-0.24	ns
Anxiety (rev)	0.49	-0.30	ns
Alcohol positive effects	0.76	-0.42	p<.001
Alcohol negative effects on risk assessment	-0.36	0.42	p<.001
Alcohol negative effects	-0.61	0.35	p<.001
Moral disengagement	0.40	0.07	ns

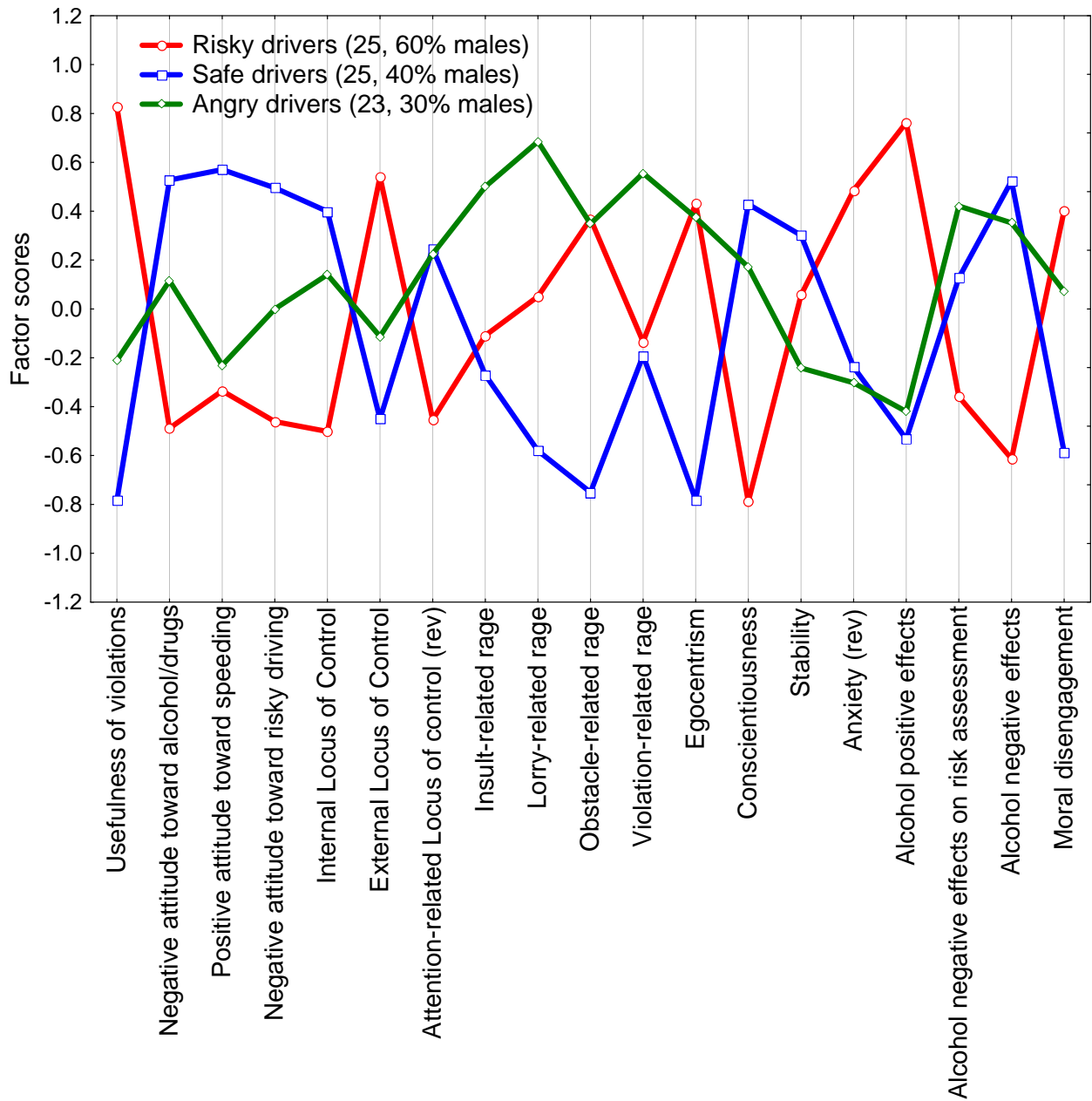
**Table 4.** Comparison between Angry and Safe drivers on each subscale.

	SAFE DRIVERS	ANGRY DRIVERS	SIGNIFICANCE
	25	23	
Usefulness of violations	-0.78	-0.21	ns
Negative attitude toward alcohol/drugs	0.53	0.12	ns
Positive attitude toward speeding	0.57	-0.23	p<.001
Negative attitude toward risky driving	0.50	0.00	ns
Internal Locus of Control	0.40	0.14	ns
External Locus of Control	-0.45	-0.11	ns

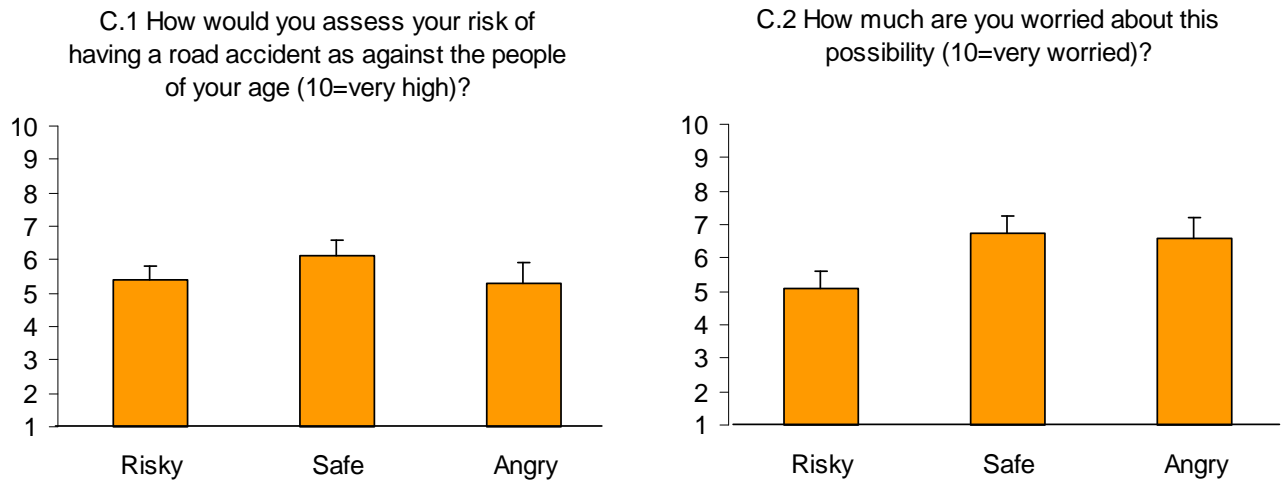
Attention-related Locus of control (rev)	0.25	0.23	ns
Insult-related rage	-0.27	0.50	ns
Lorry-related rage	-0.58	0.69	p<.001
Obstacle-related rage	-0.75	0.35	p<.001
Violation-related rage	-0.19	0.56	p<.001
Egocentrism	-0.78	0.37	p<.001
Conscientiousness	0.43	0.17	ns
Stability	0.30	-0.24	ns
Anxiety (rev)	-0.24	-0.30	ns
Alcohol positive effects	-0.53	-0.42	ns
Alcohol negative effects on risk assessment	0.13	0.42	ns
Alcohol negative effects	0.52	0.35	ns
Moral disengagement	-0.59	0.07	ns

**Table 5.** Mean age (years) and standard errors as a function of gender and group.

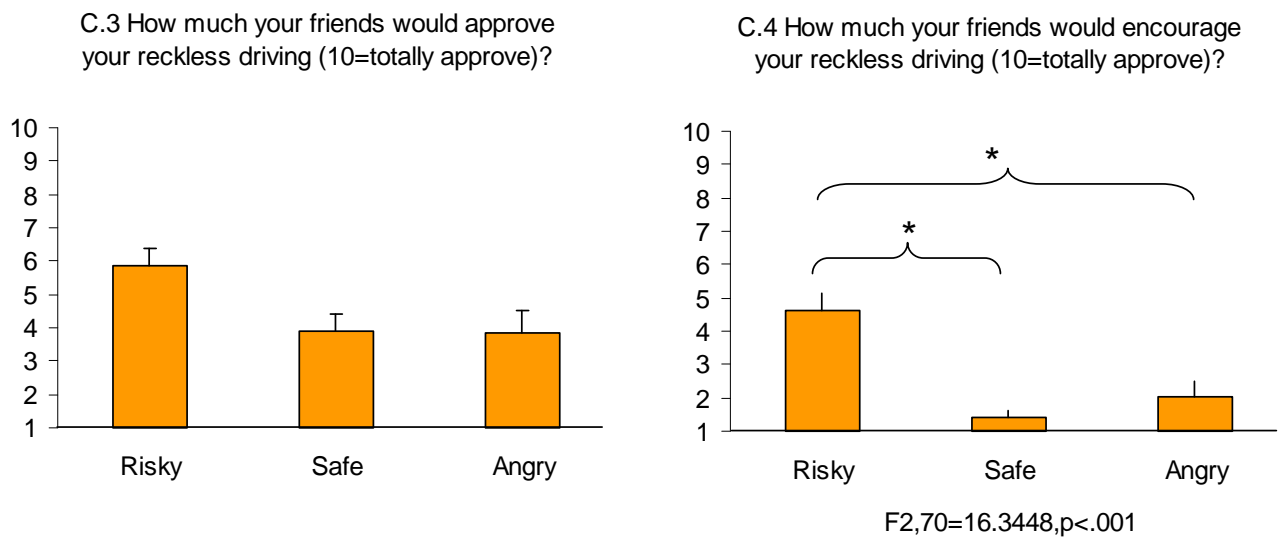
		Mean age	Standard error	N
Males	Risky drivers	19.39	0.19	15
	Safe drivers	18.75	0.33	10
	Angry drivers	18.94	0.24	7
Females	Risky drivers	18.52	0.17	10
	Safe drivers	18.20	0.46	15
	Angry drivers	18.09	0.22	16



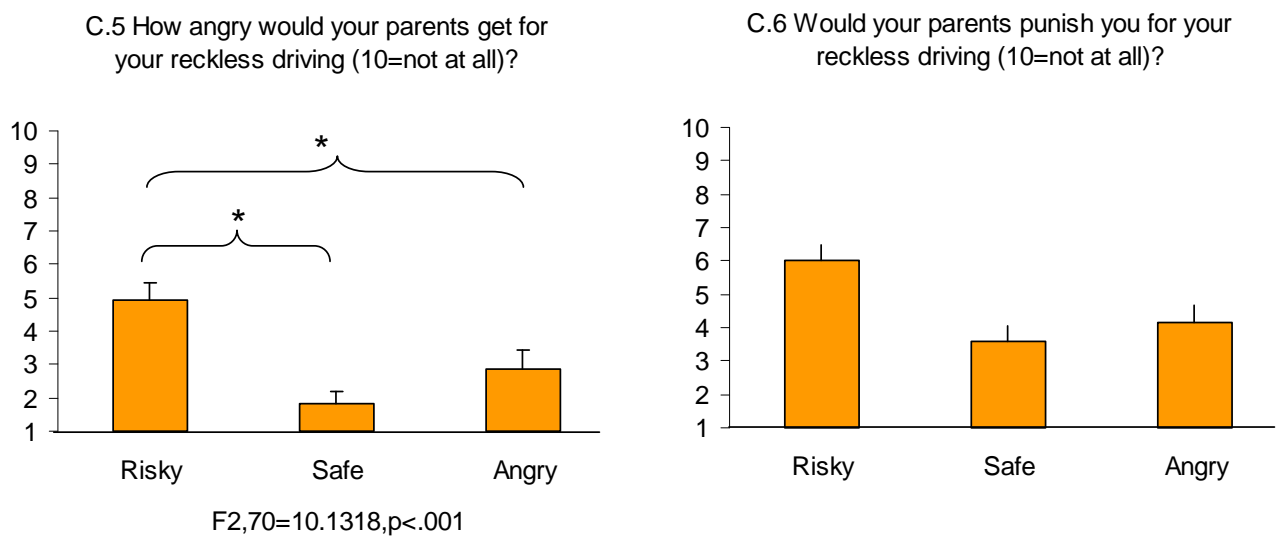
**Figure 1.** Average scores for each group on the subscales of the questionnaire.



**Figure 2.** Average scores for each group on items concerning risk perception.



**Figure 3.** Average scores for each group on items concerning friends' attitude.



**Figure 4.** Average scores for each group on items concerning parents' attitude.