

Table S1. Characteristics of the study population and of the four clusters solution

Characteristics		Total		Safe Drivers		Average Drivers		Careless Drivers		Reckless & Impaired Drivers	
		<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Sex	<i>Male</i>	1,473	68.1	685	69.5	326	69.2	293	63.1	169	69.8
	<i>Female</i>	689	31.9	300	30.5	145	30.8	171	36.9	73	30.2
Age	<i>14</i>	185	8.6	145	14.7	23	4.9	16	3.4	1	0.4
	<i>15</i>	291	13.5	206	20.9	35	7.4	30	6.5	20	8.3
	<i>16</i>	389	18.0	236	24.0	76	16.1	56	12.1	21	8.7
	<i>17</i>	383	17.7	216	21.9	75	15.9	63	13.6	29	12.0
	<i>18</i>	914	42.3	182	18.5	262	55.6	299	64.4	171	70.7
Educational level of the mother	<i>Pre-school education</i>	27	1.3	15	1.7	4	0.9	6	1.4	2	0.9
	<i>Primary education</i>	29	1.4	8	0.9	5	1.1	9	2.0	7	3.0
	<i>Lower secondary education</i>	472	23.1	186	20.5	111	24.4	115	26.0	60	25.5
	<i>Upper secondary education</i>	1,012	49.6	475	52.3	227	50.0	197	44.5	113	48.1
	<i>Bachelor's degree</i>	99	4.9	40	4.4	18	4.0	28	6.3	13	5.5
	<i>Master's degree or higher</i>	401	19.7	184	20.3	89	19.6	88	19.9	40	17.0
Educational level of the father	<i>Pre-school education</i>	39	1.9	22	2.4	5	1.1	5	1.1	7	3.1
	<i>Primary education</i>	48	2.4	11	1.2	12	2.7	13	3.0	12	5.2
	<i>Lower secondary education</i>	728	36.1	299	33.1	176	38.9	154	35.4	99	43.2
	<i>Upper secondary education</i>	869	43.1	401	44.5	194	42.9	192	44.1	82	35.8
	<i>Bachelor's degree</i>	62	3.1	33	3.7	9	2.0	12	2.8	8	3.5
	<i>Master's degree or higher</i>	272	13.5	136	15.1	56	12.4	59	13.6	21	9.2
Occupational status of the mother	<i>Unemployed</i>	474	23.1	234	25.2	92	20.1	99	22.4	49	21.8
	<i>Salaried/pensioner</i>	1,579	76.9	696	74.8	365	79.9	342	77.6	176	78.2
Occupational status of the father	<i>Unemployed</i>	68	3.4	31	3.4	11	2.5	15	3.5	11	5.2
	<i>Salaried/pensioner</i>	1,916	96.6	872	96.6	436	97.5	409	96.5	199	94.8
Parental family status	<i>Married/living together</i>	1,757	82.3	827	84.7	378	81.5	368	80.3	184	78.0
	<i>Divorced/separated/widowed</i>	377	17.7	149	15.3	86	18.5	90	19.7	52	22.0
Family relationship	<i>Very poor</i>	32	1.5	10	1.0	8	1.7	5	1.1	9	3.8
	<i>Poor</i>	44	2.0	18	1.8	6	1.3	14	3.1	6	2.5
	<i>Fair</i>	177	8.2	70	7.1	46	9.8	33	7.2	28	11.7
	<i>Good</i>	800	37.3	367	37.4	166	35.5	181	39.4	86	36.0
	<i>Very good</i>	1,094	51.0	516	52.6	242	51.7	226	49.2	110	46.0
Peer relationship	<i>Very poor</i>	14	0.7	8	0.8	3	0.6	1	0.2	2	0.8

	<i>Poor</i>	17	0.8	9	0.9	4	0.9	2	0.4	2	0.8
	<i>Fair</i>	154	7.2	72	7.3	28	6.0	30	6.5	24	10.0
	<i>Good</i>	992	46.1	453	46.2	231	49.4	211	45.7	97	40.4
	<i>Very good</i>	974	45.3	439	44.8	202	43.2	218	47.2	115	47.9
School performance	<i>Very poor</i>	42	2.0	17	1.7	8	1.7	10	2.2	7	2.9
	<i>Poor</i>	108	5.0	39	4.0	18	3.8	22	4.8	29	12.1
	<i>Fair</i>	584	27.1	251	25.6	121	25.9	131	28.4	81	33.8
	<i>Good</i>	1,167	54.2	553	56.3	258	55.1	248	53.7	108	45.0
	<i>Very good</i>	251	11.7	122	12.4	63	13.5	51	11.0	15	6.3
School year failure	<i>No</i>	1,667	77.4	840	85.5	365	77.8	334	72.6	128	53.1
	<i>Yes</i>	486	22.6	143	14.5	104	22.2	126	27.4	113	46.9
Nervousness in the last month	<i>Never</i>	98	4.5	56	5.7	18	3.8	11	2.4	13	5.4
	<i>Rarely</i>	432	20.0	236	24.0	90	19.2	71	15.3	35	14.5
	<i>Sometimes</i>	822	38.1	380	38.7	179	38.2	178	38.4	85	35.3
	<i>Often</i>	673	31.2	267	27.2	156	33.3	168	36.3	82	34.0
	<i>Very often</i>	130	6.0	43	4.4	26	5.5	35	7.6	26	10.8
Hopelessness in the last month	<i>Never</i>	1,048	48.8	510	52.1	232	49.5	204	44.3	102	42.3
	<i>Rarely</i>	489	22.8	226	23.1	106	22.6	100	21.7	57	23.7
	<i>Sometimes</i>	355	16.5	140	14.3	77	16.4	100	21.7	38	15.8
	<i>Often</i>	187	8.7	69	7.0	41	8.7	45	9.8	32	13.3
	<i>Very often</i>	70	3.3	34	3.5	13	2.8	11	2.4	12	5.0
Restlessness in the last month	<i>Never</i>	306	14.2	177	18.1	59	12.6	39	8.4	31	12.8
	<i>Rarely</i>	601	28.0	291	29.7	119	25.5	130	28.1	61	25.2
	<i>Sometimes</i>	712	33.1	313	32.0	169	36.2	149	32.3	81	33.5
	<i>Often</i>	440	20.5	159	16.2	111	23.8	118	25.5	52	21.5
	<i>Very often</i>	91	4.2	39	4.0	9	1.9	26	5.6	17	7.0
Sadness in the last month	<i>Never</i>	1,417	65.9	674	68.7	310	66.2	292	63.5	141	58.5
	<i>Rarely</i>	375	17.4	146	14.9	90	19.2	88	19.1	51	21.2
	<i>Sometimes</i>	224	10.4	100	10.2	40	8.5	54	11.7	30	12.4
	<i>Often</i>	105	4.9	48	4.9	24	5.1	22	4.8	11	4.6
	<i>Very often</i>	29	1.3	13	1.3	4	0.9	4	0.9	8	3.3
Exhaustion in the last month	<i>Never</i>	729	34.1	364	37.2	164	35.2	131	29.0	70	28.9
	<i>Rarely</i>	648	30.3	302	30.8	135	29.0	142	31.4	69	28.5
	<i>Sometimes</i>	440	20.6	178	18.2	110	23.6	102	22.6	50	20.7
	<i>Often</i>	239	11.2	102	10.4	43	9.2	59	13.1	35	14.5
	<i>Very often</i>	83	3.9	33	3.4	14	3.0	18	4.0	18	7.4

Worthlessness in the last month	<i>Never</i>	1,389	65.1	640	65.8	308	66.2	291	63.8	150	62.5
	<i>Rarely</i>	333	15.6	158	16.3	66	14.2	72	15.8	37	15.4
	<i>Sometimes</i>	229	10.7	91	9.4	49	10.5	63	13.8	26	10.8
	<i>Often</i>	117	5.5	57	5.9	29	6.2	23	5.0	8	3.3
	<i>Very often</i>	65	3.0	26	2.7	13	2.8	7	1.5	19	7.9
Sleep quality	<i>Deep/restful</i>	939	44.5	454	47.3	202	43.6	180	39.6	103	43.8
	<i>Light</i>	826	39.1	379	39.5	186	40.2	190	41.8	71	30.2
	<i>Interrupted</i>	347	16.4	126	13.1	75	16.2	85	18.7	61	26.0
Pathological gambling	<i>No</i>	1,903	89.3	892	92.0	429	92.3	402	87.8	180	75.6
	<i>Yes</i>	228	10.7	78	8.0	36	7.7	56	12.2	58	24.4
Smoking habit	<i>Regular smoker</i>	530	24.6	147	15.0	100	21.4	148	31.9	135	56.7
	<i>Occasional/social smoker</i>	315	14.6	122	12.4	72	15.4	84	18.1	37	15.5
	<i>Non-smoker</i>	1,306	60.7	712	72.6	296	63.2	232	50.0	66	27.7
Being drunk in the last year	<i>No</i>	852	41.2	509	54.6	171	38.1	137	30.4	35	15.0
	<i>Yes</i>	1,214	58.8	423	45.4	278	61.9	314	69.6	199	85.0
Binge drinking in the last month	<i>No</i>	1,204	58.0	648	68.7	264	58.7	228	50.4	64	27.7
	<i>Yes</i>	872	42.0	295	31.3	186	41.3	224	49.6	167	72.3
Drug use in the last month	<i>No</i>	1,621	75.6	820	83.8	354	75.2	327	71.1	120	50.8
	<i>Yes</i>	524	24.4	158	16.2	117	24.8	133	28.9	116	49.2
Bullying behavior in the last year	<i>No</i>	1,869	87.5	866	89.4	425	90.6	396	86.3	182	76.2
	<i>Yes</i>	267	12.5	103	10.6	44	9.4	63	13.7	57	23.8
Physical activity	<i>Less than 1 time a week</i>	189	9.0	77	8.0	46	10.0	37	8.2	29	12.6
	<i>1 or more times a week</i>	1,908	91.0	882	92.0	412	90.0	413	91.8	201	87.4
Age of the first sexual intercourse	<i>No sexual initiation</i>	1,021	48.3	627	65.3	198	43.2	162	35.4	34	14.2
	<i>After age 13</i>	827	39.1	246	25.6	212	46.3	236	51.6	133	55.6
	<i>Before age 13</i>	266	12.6	87	9.1	48	10.5	59	12.9	72	30.1
Use of alcohol or drug before the last sexual intercourse	<i>No</i>	889	81.3	289	85.8	229	87.1	244	83.0	127	63.5
	<i>Yes</i>	205	18.7	48	14.2	34	12.9	50	17.0	73	36.5
Use of condom during the last sexual intercourse	<i>No</i>	434	38.9	105	30.2	85	32.1	133	44.6	111	54.1
	<i>Yes</i>	682	61.1	243	69.8	180	67.9	165	55.4	94	45.9
Average frequency of driving	<i>6 day a week/every day</i>	1,386	64.1	499	50.7	325	69.0	346	74.6	216	89.3
	<i>2-5 days a week</i>	587	27.2	349	35.4	120	25.5	94	20.3	24	9.9
	<i>1 day a week</i>	189	8.7	137	13.9	26	5.5	24	5.2	2	0.8
Passenger of a	<i>Never</i>	1,680	79.4	840	86.8	366	79.9	340	74.9	134	57.0

drunk driver	<i>Once a month</i>	373	17.6	120	12.4	80	17.5	101	22.2	72	30.6
	<i>A few times a month</i>	50	2.4	8	0.8	11	2.4	11	2.4	20	8.5
	<i>A few times a week</i>	4	0.2	0	0.0	1	0.2	1	0.2	2	0.9
	<i>Several times a week</i>	8	0.4	0	0.0	0	0.0	1	0.2	7	3.0
Passenger of a drugged driver	<i>Never</i>	1,802	84.6	899	92.5	393	85.2	363	79.3	147	61.8
	<i>Once a month</i>	235	11.0	58	6.0	50	10.8	73	15.9	54	22.7
	<i>A few times a month</i>	57	2.7	9	0.9	17	3.7	12	2.6	19	8.0
	<i>A few times a week</i>	22	1.0	6	0.6	1	0.2	7	1.5	8	3.4
	<i>Several times a week</i>	13	0.6	0	0.0	0	0.0	3	0.7	10	4.2

Table S2. Logistic regression models for the risk of road traffic accidents (RTA) and severe RTA

	Model 1 <i>Outcome: ≥ 1 RTA(s)</i>	Model 2 <i>Outcome: ≥ 1 severe RTA(s)</i>
	<i>Odds ratio (95%CI)</i>	<i>Odds ratio (95%CI)</i>
Clusters		
<i>Safe drivers (ref.)</i>	1	1
Average drivers	1.22 (0.93-1.60)	0.94 (0.46-1.92)
Careless drivers	1.78** (1.35-2.35)	1.26 (0.64-2.45)
Reckless drivers	3.24** (2.29-4.58)	2.15** (1.06-4.40)
Sex		
<i>Male</i>	1	1
Female	0.58** (0.47- 0.73)	0.96 (0.54 – 1.69)
Age		
≤ 14	1	1
15	2.9 ** (1.69 – 4.98)	0.71 (0.13-3.9)
16	4.13 **	1.39

	(2.45 – 6.94)	(0.29 -6.71)
17	5.75** (3.42 – 9.68)	1.18 (0.24 – 5.66)
≥ 18	6.4 ** (3.73 – 10.98)	1.01 (0.2 – 5.05)
Average driving frequency		
<i>6 day a week/every day</i>	1	1
<i>Several times a week</i>	0.62 ** (0.49- 0.78)	0.80 (0.41-1.53)
Once a week	0.39 ** (0.25 – 0.60)	1.27 (0.41 – 0.39)
Type of motor vehicle driven		
<i>Passenger car</i>	1	1
Moped ≤ 50 cc	3.68 ** (2.65 – 5.12)	0.74 (0.34-1.59)
Motorbike 50 cc - 125 cc	3.63** (2.45 – 5.36)	1.31 (0.55 – 3.10)
Motorbike ≥ 125 cc	3.13 ** (2.02-4.86)	1.13 (0.43-3.00)
Moped car ≤ 50 cc	2.09 * (1.15- 3.81)	1.74 (0.5352 -5.67)

* $p < 0,05$ ** $p < 0,001$