

A NOVEL PROGRAM TO ENHANCE SAFETY FOR YOUNG DRIVERS IN ISRAEL

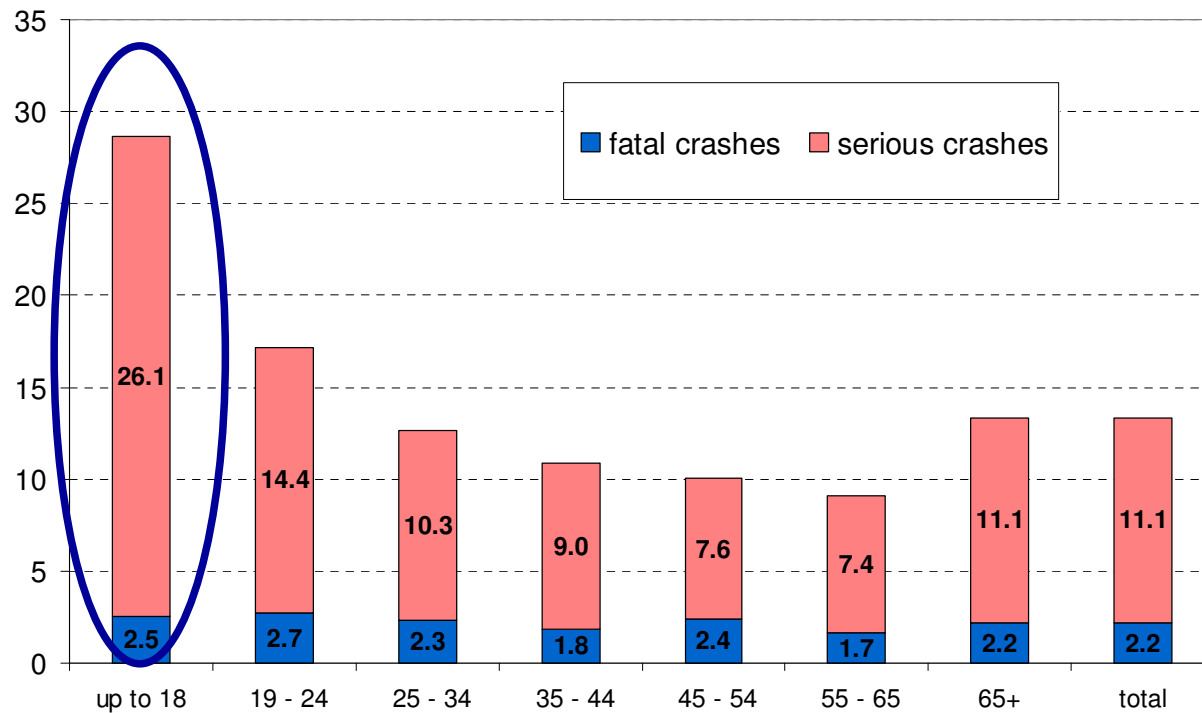
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Tomer Toledo, Technion, Israel**

**Road Safety on Four Continents
Bangkok, Thailand
15 November 2007**

Young Drivers in Israel

Basically they are like young drivers elsewhere

Driver's involvement rate in car crashes
drivers involved for 10,000 drivers



The Israeli National Safety Authority, 2005

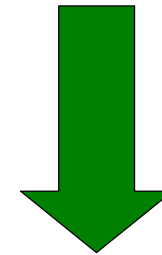


Current training procedure

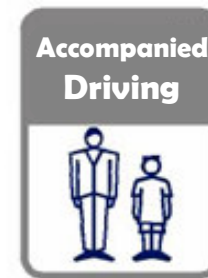
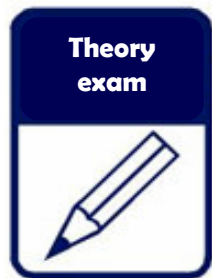
16.5

17

17+
3 months



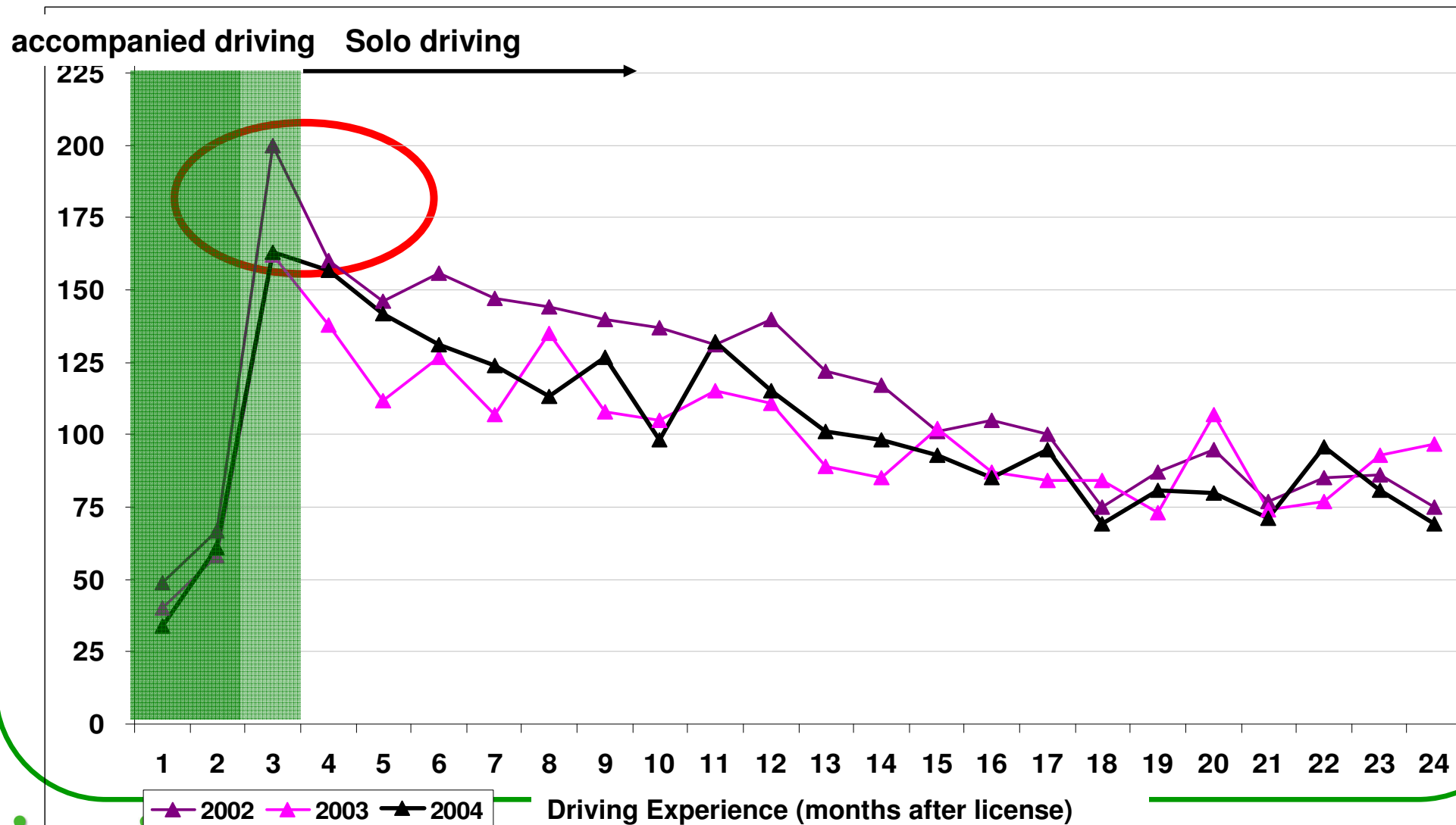
3 months



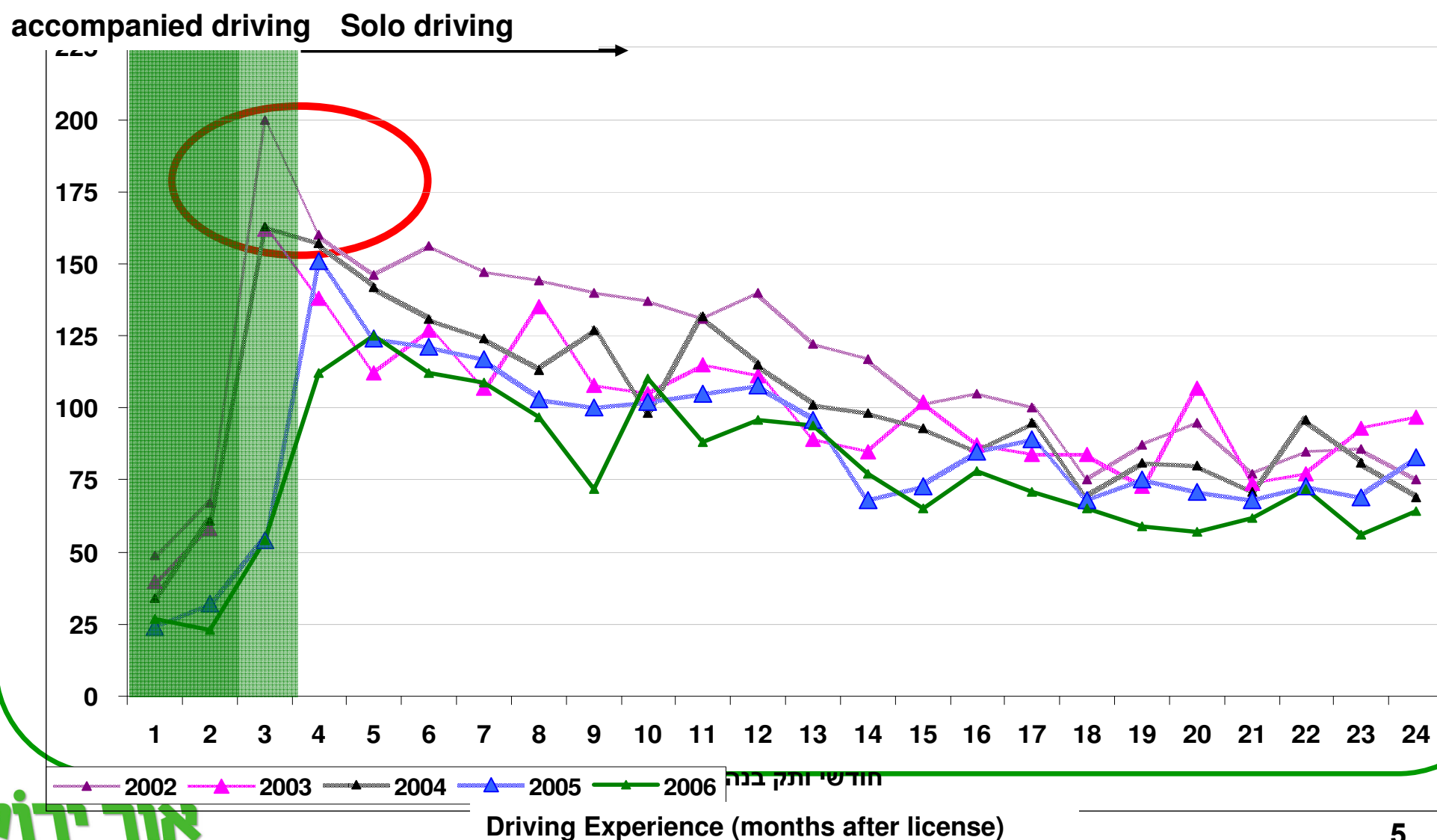
limitation
Up to 2 passengers



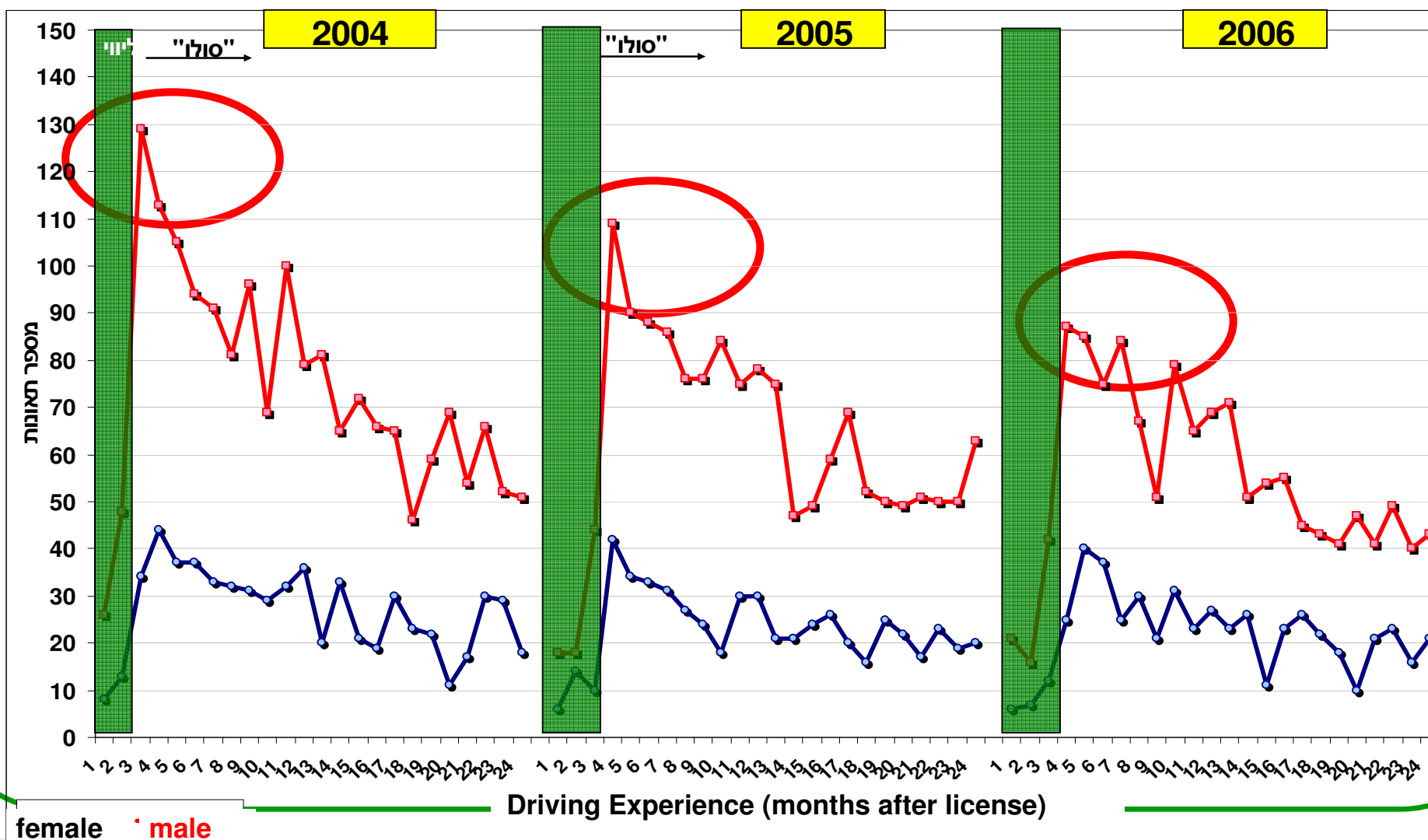
Young drivers (17-24) involved in road crashes by driving experience, the Jewish sector 2002-2004



Young drivers (17-24) involved in road crashes by driving experience, the Jewish sector 2002-2006



Young drivers (17-24) involved in road crashes by gender & driving experience, the Jewish sector 2002-2006



female · male

Driving Experience (months after license)

Green Light for Life

- Improve accompanied driving phase efficacy by:
 - Awareness
 - Motivation
 - Guidance



parents



young
drivers

Personal meeting



Contents of the Accompanied Driving Guidance Session

1. **Defining the goals** of the accompanied driving process: Benefiting as much as possible from the experience of the accompanying driver, while gaining driving experience.
2. **Bridging the gap** between the parents and young driver by creating a common language, and coordinating expectations.
3. **Motivating** both sides to make the most of the accompanied driving period, while gaining as much driving experience as possible.

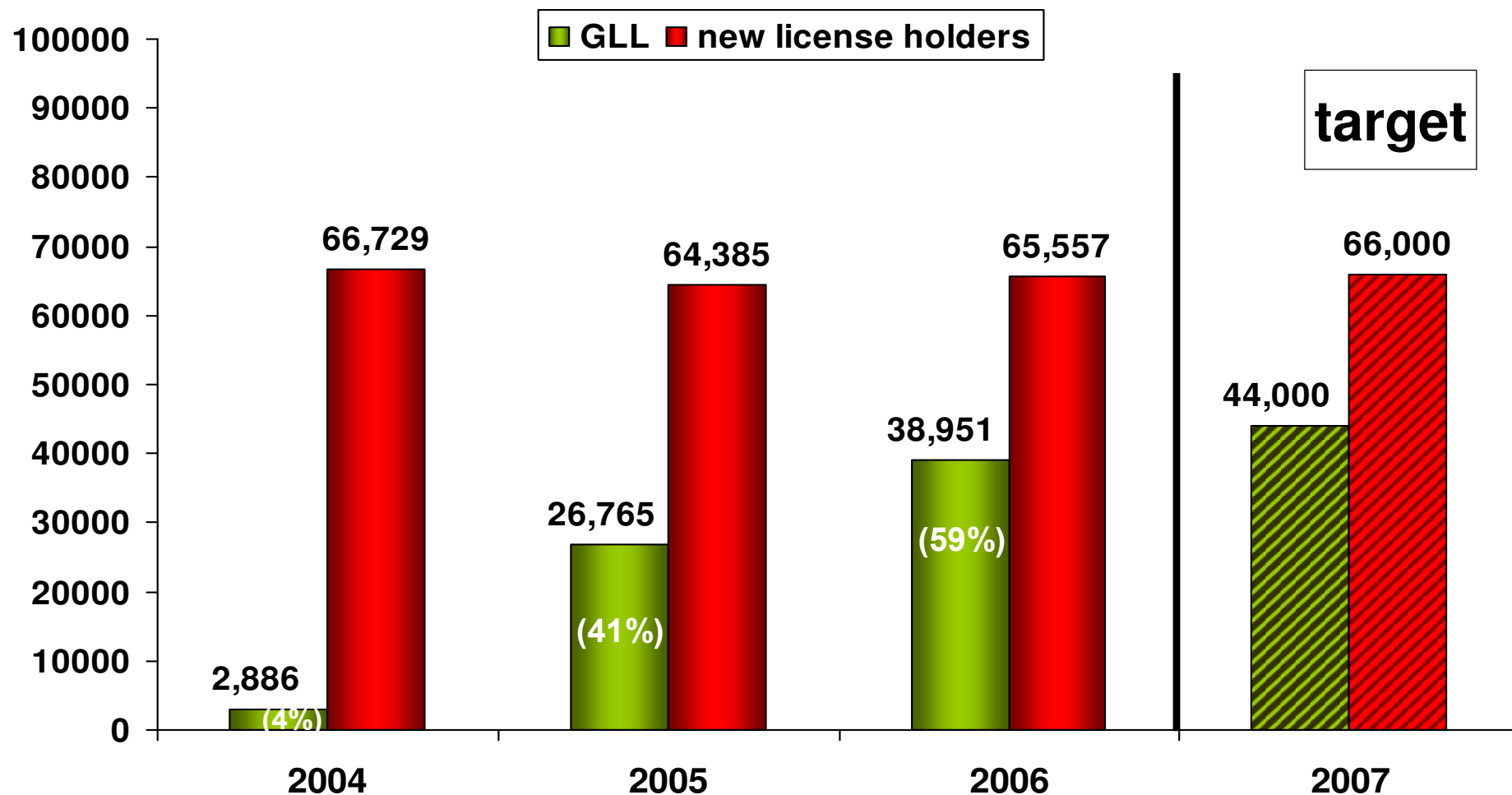
Contents of the Accompanied Driving Guidance Session – cont.

4. Developing a **mindset for anticipation and avoiding surprises** – recognizing indicating signs on the road, and reacting appropriately.
5. Familiarization with the **patterns of young drivers** and their specific difficulties, and instilling safer and more responsible driving habits.
6. Providing **driving tips** and tools for an effective accompanied driving period.

participants

- **voluntary**
- **recruitment**
 - **Licensing offices**
 - **Schools**
 - **Media**
 - **Internet**
 - **A friend-brings-a-friend**

Green Light for Life - numbers



Summary so far

Nation wide operation since 2005

Up today – more than **100,000** families have participated in the project



1,098 municipalities & local authorities

Project evaluation

No Dive	Date	Место Place	Глубина Depth	Время Dive Time	Подробности Dive Details	Подпись партнеров Signature of partners
366	5.11.03	Maldives Kuda Guro Wreck	30.2	55	Супер! Сначала wreck с frog финишем, потом тунель с хедлайтом и отвлечением, потом jack-финиш.	MALEESHA DIVING CRUISE
367	5.11.03	Maldives Kandooma Thila	28.5	47	Сначала утроба огромного тигря. Но красиво! Вода чистая, лососи, мурены, много бабочек и рыбы...	MALEESHA DIVING CRUISE
368	5.11.03	Maldives Felidu Atoll Fushi Kanduv	28.2	48	Великий утробный лагуна, скала, лососи, мурены, много бабочек и рыбы...	MALEESHA DIVING CRUISE
369	6.11.03	Maldives Fotteyo Out	30.2	52	Великий хамстер, into the blue. Ветер в 5.30 хороший, а не хамстер!	MALEESHA DIVING CRUISE
370	6.11.03	Maldives Fotteyo	42.1	52	Сначала jack-fish ball на глубине 42м, потом бабочки и мурены. Красиво!	MALEESHA DIVING CRUISE



Section 1
About your Organisation

Please tick a single category only

1 In years, which of the following time spans most closely illustrates how long the organisation has been running?

0-5 years ☐ 6-10 years ☐ 11-15 years ☐ 16-25 years ☐ 25 plus years ☐

2 Which of the following structures most closely represent the organisation?

single unit ☐ two unit ☐ three unit ☐ multiple unit ☐

3 Which of the following categories most accurately illustrate the number of employees that work for the organisation?

0-5 employees ☐ 6-10 employees ☐ 11-15 employees ☐ 16-25 employees ☐ 25 plus employees ☐

Section 2
Your Views on Recruitment

Please tick the box that most closely represent your feelings about each of the following statements from 1 (strongly agree) to 5 (strongly disagree)

1 strongly agree agree disagree 1 strongly disagree

4 We have experienced problems in recruiting staff ☐ ☐ ☐ ☐

5 We prefer to employ staff that are already qualified ☐ ☐ ☐ ☐

6 We rely on finding our own staff for the purpose of recruitment ☐ ☐ ☐ ☐

7 We would consider purchasing staff from other organisations if necessary for our own recruitment needs ☐ ☐ ☐ ☐

8 The offer of higher wages by competitors has caused some of our staff to leave ☐ ☐ ☐ ☐

Please tick a single category only

9 We expect to keep staff for:

under 1 year ☐ 1-3 years ☐ 4-6 years ☐ 7 plus years ☐

Number of questionnaires: 289

Avg.	Good	Average	Bad	No ans.
8.82	210	48	7	24
8.83	210	48	7	24
7.23	156	100	29	4
7.23	156	100	29	4
9.24	256	19	9	6
9.35	249	16	8	16
9.41	202	33	9	45
8.95	192	78	16	3
8.09	117	44	16	112
7.85	117	58	19	97
7.55	226	49	13	1
8.70	147	26	14	102
8.56	175	53	13	48
8.21	127	41	15	106
8.36	258	23	6	2
8.06	190	23	10	66
9.39	142	60	28	59
9.04	136	64	25	75
7.38	106	45	20	118
7.49	55	15	20	199
7.57	93	118	50	28
7.61	99	71	31	88
6.94	15	27		
6.26	1240			
5.82				
6.69				



Project evaluation based on crash involvement

Data sources

- Data base of participants (OR YAROK)
- New license holders (CBS)
- Drivers involved in crashes with injuries (CBS)

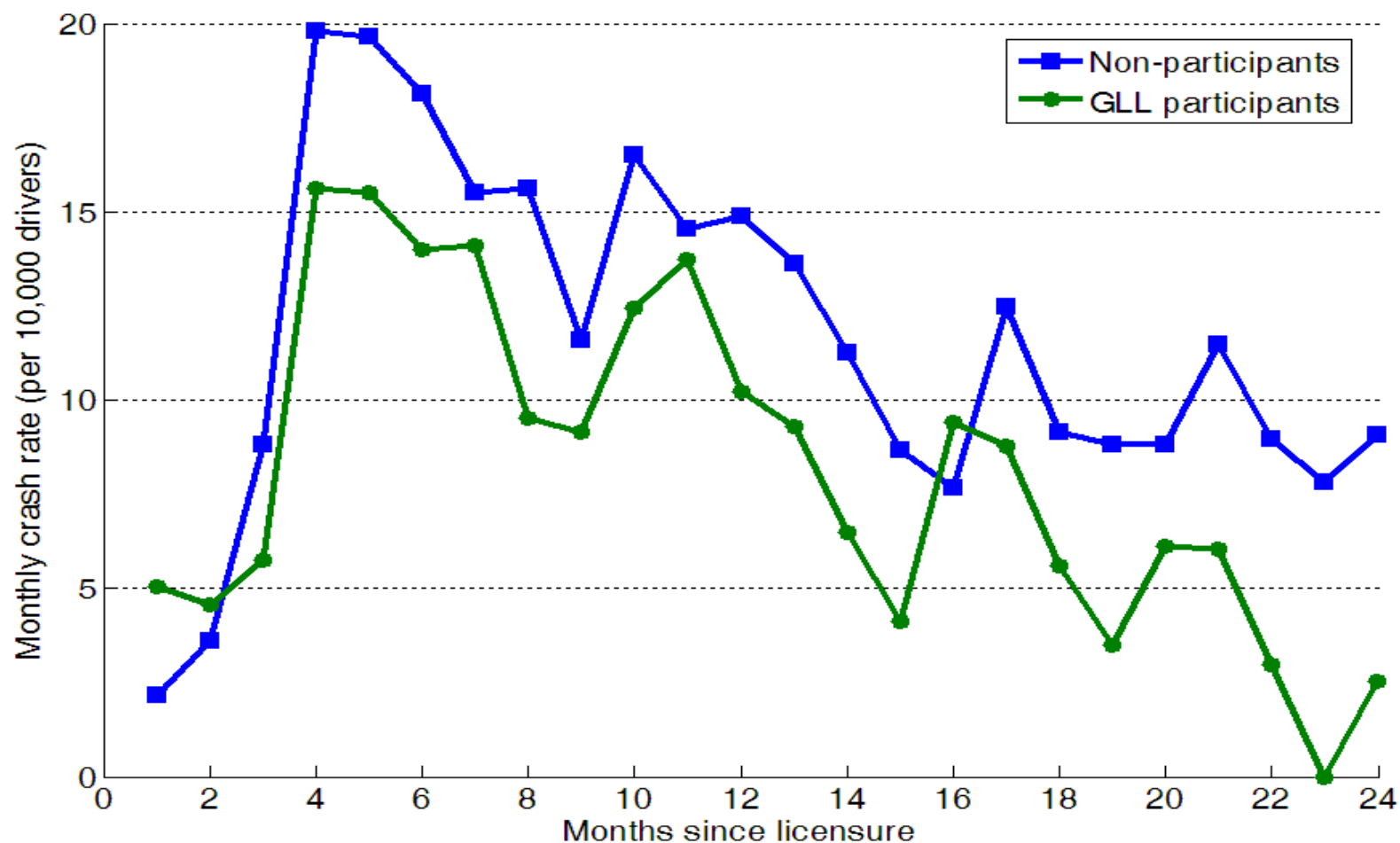
Data Analysis

- Involvement in crashes of participants and non participants
- Aggregate data:
 - By month of licensure and month of crash
 - Number of crashes and drivers in each subgroup

Crash statistics for GLL participants and for non-participants

Statistic	GLL participants	Non-participants
Drivers	41,651	82,838
Injury car crashes	552	1643
Crash rate (per 10,000 drivers)	132.5	198.3

Crash involvement of GLL participants and non-participants by driving experience



The Model

- Data (732 observations)
 - Number of crashes of participants and non-participants by month of licensure and experience
- Dependent variable: monthly number of crashes in each group
- Explanatory variables:
 - Experience
 - Accompanied driving –vs- solo driving
 - Participation in GLL
 - Normalized for 10,000 drivers by number of drivers and days of the month

Poisson regression

$$\ln(AC_{itn}) = -\ln(10000) + \ln(N_{in}) + \ln(D_t) + X_{itn}\beta + \varepsilon_{it}$$

Where:

AC_{itn} is the number of accidents

i is the month of licensure

t is the month of crash

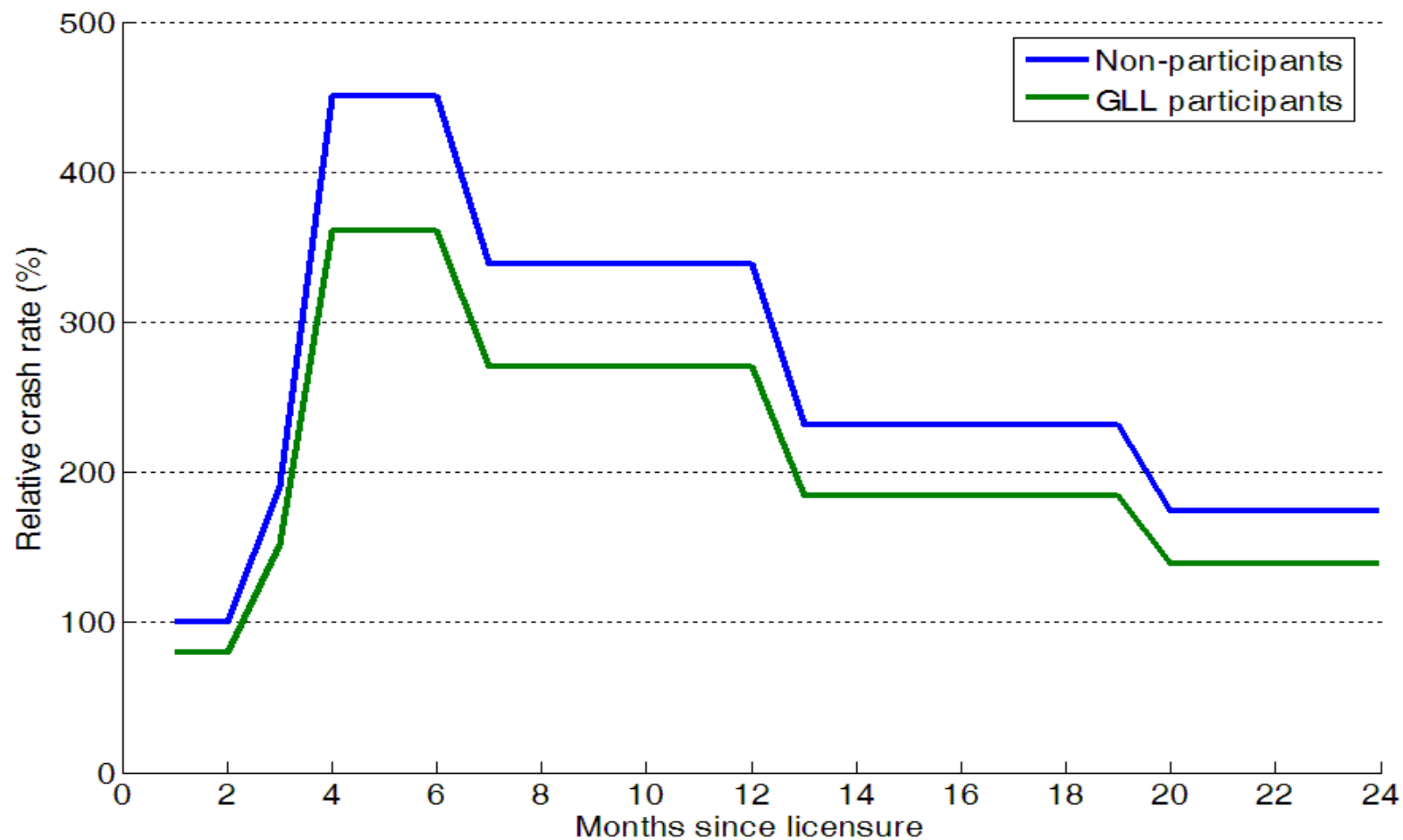
n is the sub-group

Estimation results for the crash involvement model

Variable	Parameter Value	t-statistic	P-value
Constant	-1.0819	-6.15	<0.001
GLL participation dummy	-0.2240	-4.16	<0.001
ADP dummy	-0.8604	-7.32	<0.001
3-6 Months experience dummy	0.6458	3.94	<0.001
7-12 Months experience dummy	0.3590	2.04	0.041
13-19 Months experience dummy	-0.0227	-0.13	0.900
20-24 Months experience dummy	-0.3052	-1.47	0.141

participation in the GLL program reduces the risk of crash involvement in the first 24 months after licensure by 20.1%.

Estimation results for the crash involvement model



Selection bias

- It was decided not to restrict participation
- Adjustment for gender and age was made
- Nation wide dissemination – large numbers
- Current research:
 - Self reports of attitudes towards safety in participants and non-participants groups
 - Education level of parents (CBS data)