ATTITUDES, *DRIVING* ***SELF-EFFICACY***, *AND* ***FEAR*** *OF DRIVING IN DRIVING LEARNERS AND NOVICE DRIVERS*

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Problem of novice drivers

- About 1/3 of traffic crashes in Lithuania are due to novice drivers‘ fault.
- The main causes: lack of experience/skills and age related developmental issues.
- After gaining some of experience in controlling a vehicle, novice drivers tend to overestimate their driving skills. Therefore, they take more risks on the road.
- Driving for young people serves not only commuting for place to place, but various other psychological functions.

Role of driving training

- It supposes to prepare young person to be safe driver.
- Attention is given to teaching of manoeuvring skills.
- Safety features or readiness to handle driving in a safe way remain peripheral in standard driving training.
- Standard driving training should be tuned more towards safety teaching and understanding of psychological nature of driving.

Standard driving training

Driving school:

- Theory – 40 hours
- Practice – 30 hours
- Duration – 3-6 weeks

Individually:

- Theory – individually
- Practice – 30 hours (driving school)

Driving with close relative is permitted after theory exam

Purpose of Driving Training

The standard driving training:

- transferring of theoretical knowledge of traffic rules,
- training of practical vehicle control skills,
- getting acquainted with technical organization of vehicle,
- getting acquainted with first aid,
- instruction of safety features and attitudes.

What does actually happen during driving training?

- There are very little of evidence-based knowledge what learner-drivers learn during the training besides traffic rules and vehicle manoeuvring skills.
- We focus on rather easily changeable characteristics and their variations during driving training period. Shall we treat those changes as a success of training?
  - Attitudes towards driving safety
  - Driving self-efficacy
  - Fear to drive

Current Study

The aims:

- to evaluate the changes of driving self-efficacy, fear of driving, and road safety attitudes that occur during the standard driving training in Lithuania;
- to evaluate the one-year effect of the changes;
- to evaluate how driving self-efficacy, fear of driving, and road safety attitudes contribute to later self-reported risky driving.

Hypotheses (1)

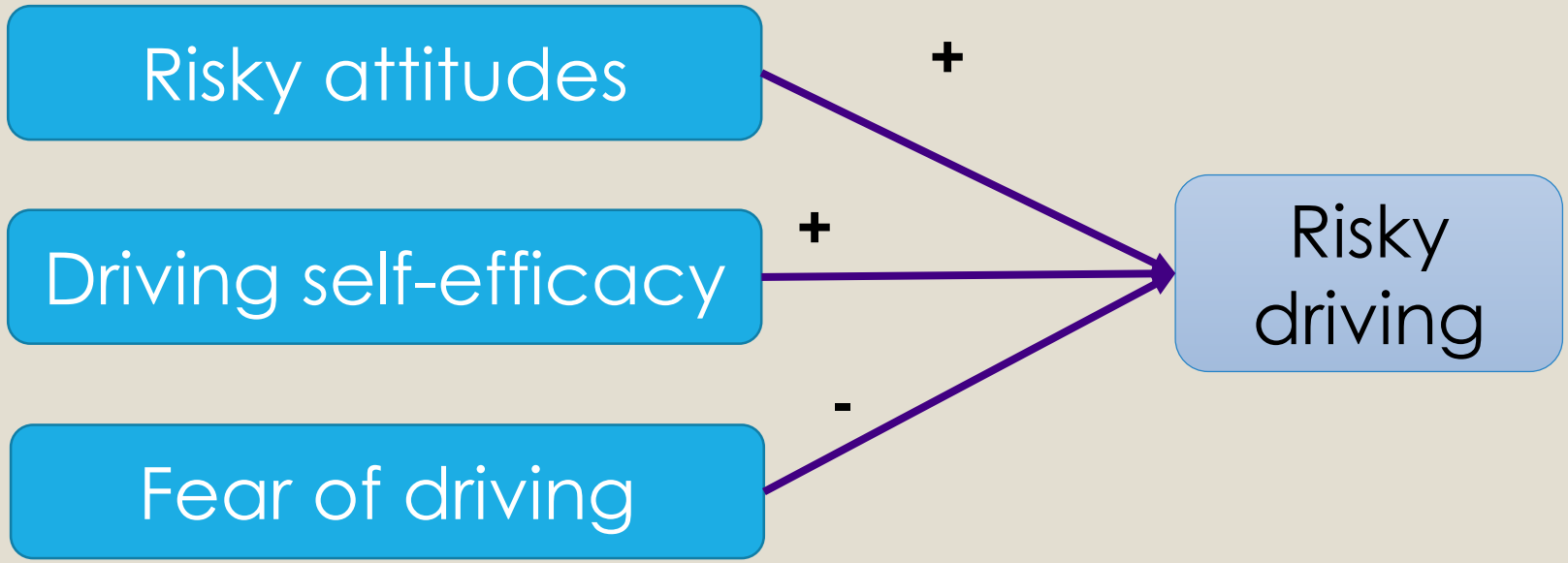
Attitudes

Or no change

Driving self-efficacy

Fear of driving

Hypotheses (2)



Participants

Licensed novice drivers – 175 (longitudinal sample).

Age 18 – 30+ years.
Mean age – 20
55 % - 18-19 years at the end of training.
6 % - above 30 years.

38 %

62 %

Several driving schools across Lithuania, but were mainly recruited from the large cities.

Study design – longitudinal / 3 waves

1 stage

Start of the training

- **Questionnaire**
  - personality traits
  - driving fear
  - driving self-efficacy
  - and attitudes towards traffic safety

2 stage

End of the training

- **Questionnaire**
  - driving fear
  - driving self-efficacy
  - and attitudes towards traffic safety

3 stage

12 month follow up

- **Telephoned** to evaluate their self-reported driving style and a number of outcomes of their driving (e.g., crashes and fines), again driving self-efficacy and attitudes towards traffic safety

Measures (1)

Time 1 and 2 and 3:

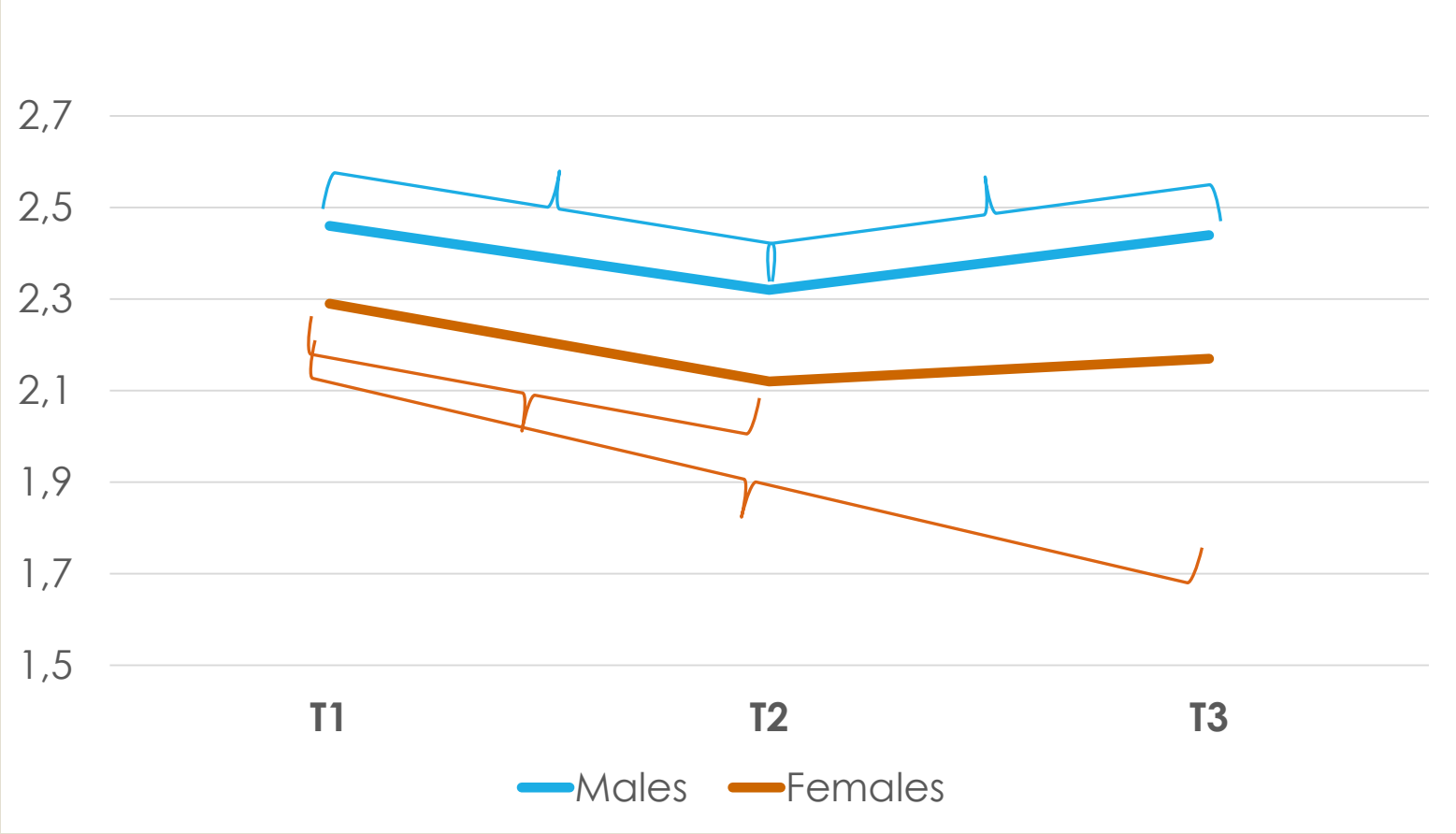
- Scale of **Attitudes towards risky driving** (Iversen, Rundmo, 2004). It refers to person's perception and evaluation of rule obeying, over-speeding, drink-driving, behaviour of others (Cronbach alpha = .76-.82).
- **Adelaide Driving Self-efficacy scale** – ADSES (George, Clark, & Crotty, 2005), which measure the confidence of the driver in being able to drive well in various situations (Cronbach alpha = .91).
- The **Driving Cognitions Questionnaire** – DCQ (Ehlers et al, 2007) measures specific fear related thoughts. It assesses thoughts related to the possibility to get hurt or hurt someone in car crash, experience sudden burdens on the road, critics of other drivers (Cronbach alpha = .88-.92).

Measures (2)

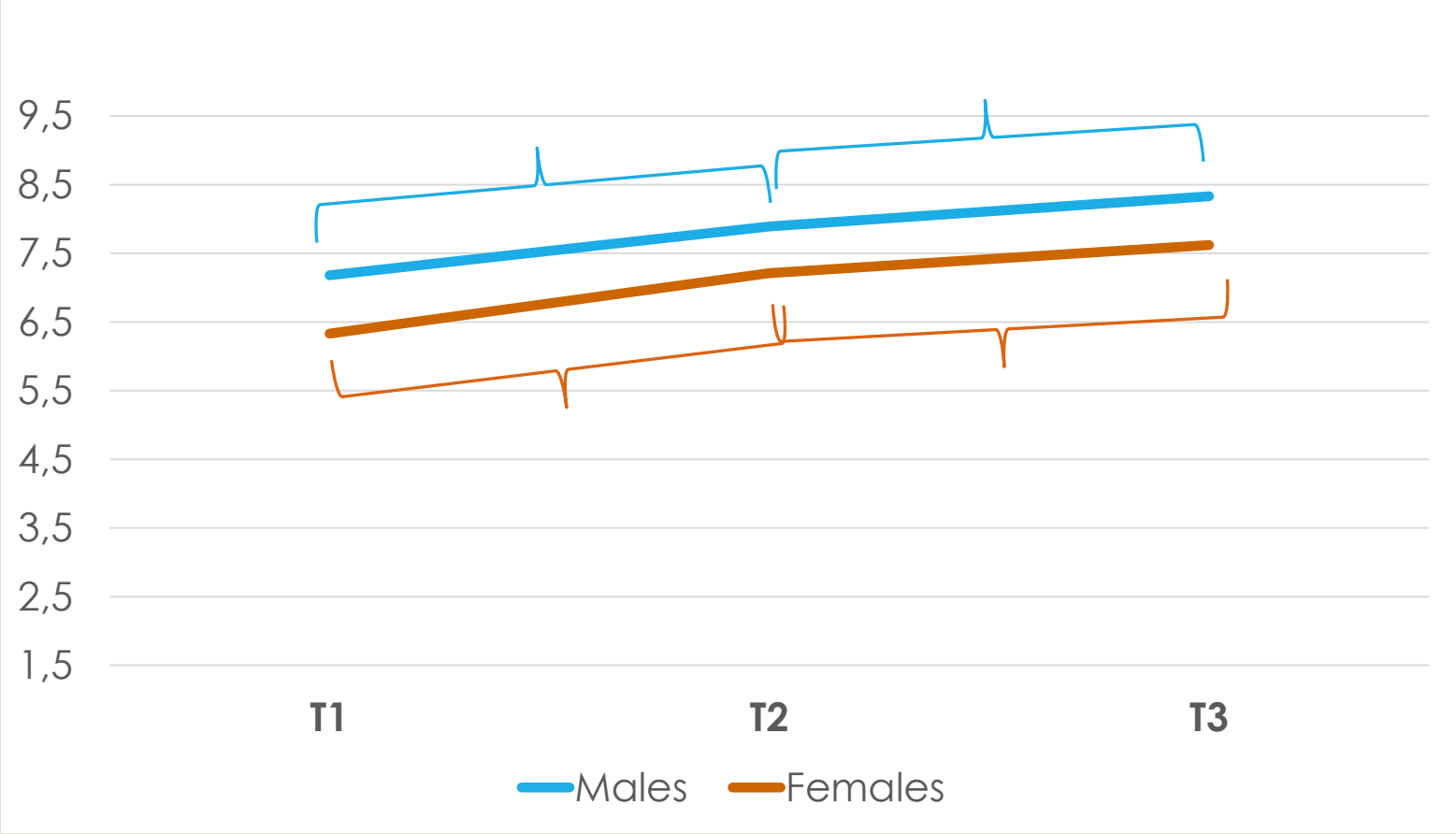
Time 3:

- self-reported risky driving behaviour using the **Driver Behaviour Questionnaire** (DBQ; Reason et al., 1990): errors (Cronbach's alpha = .85) and violations (Cronbach's alpha = .75).

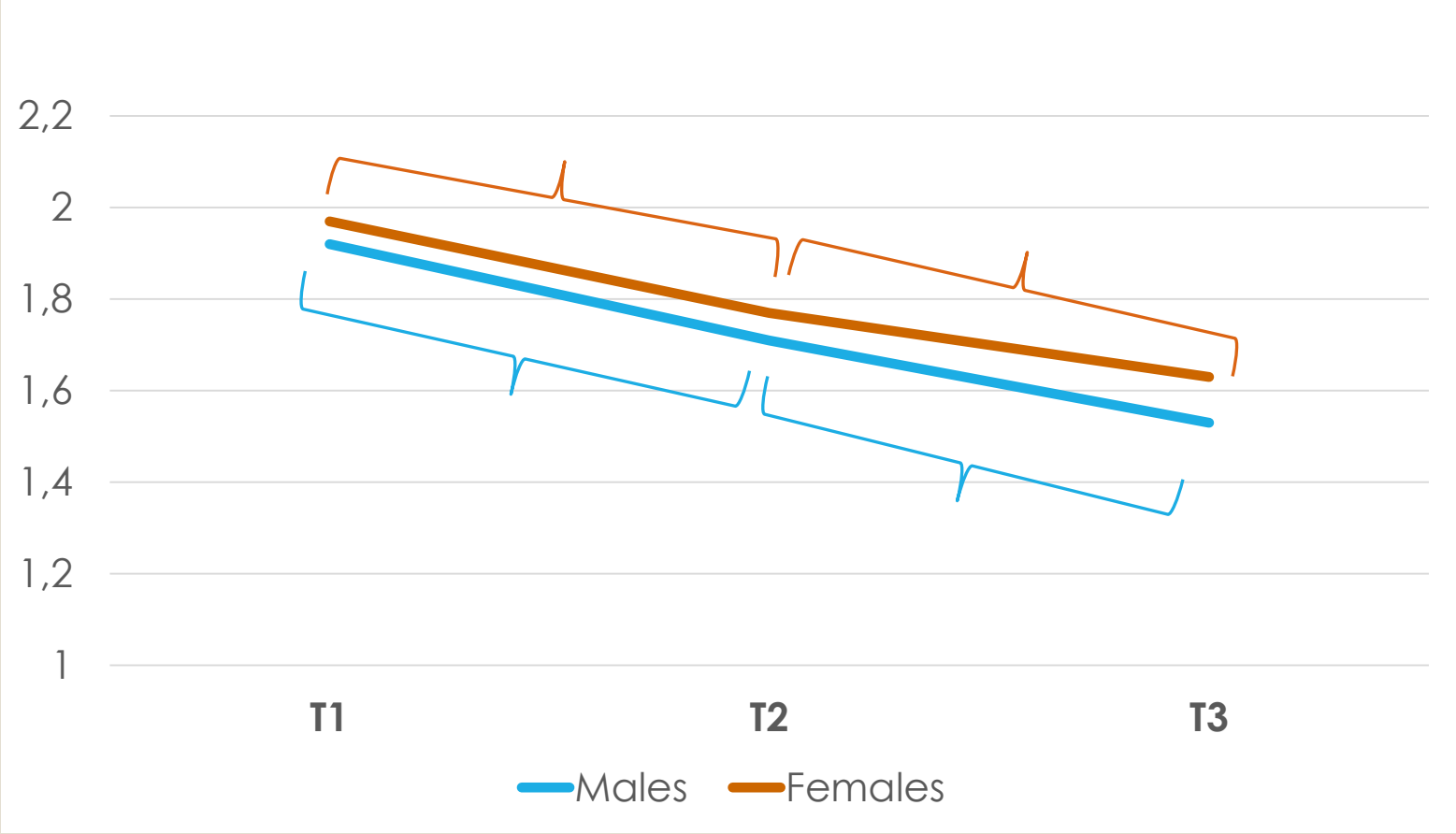
Attitudinal changes



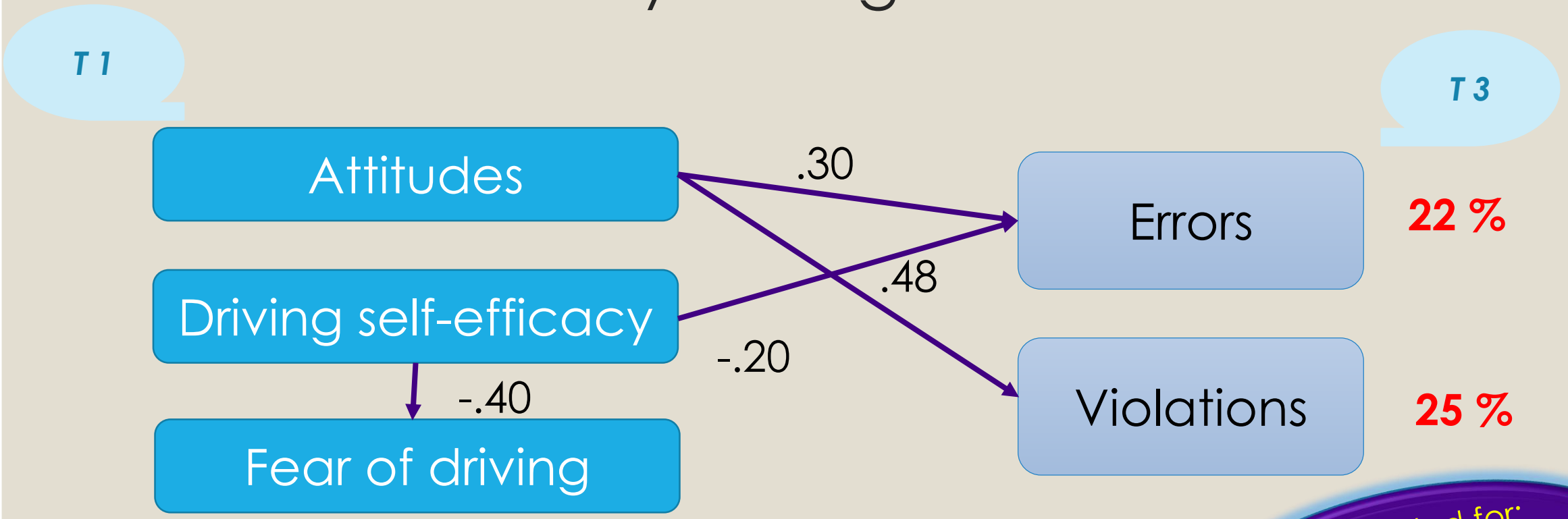
Driving self-efficacy changes



Fear of driving changes

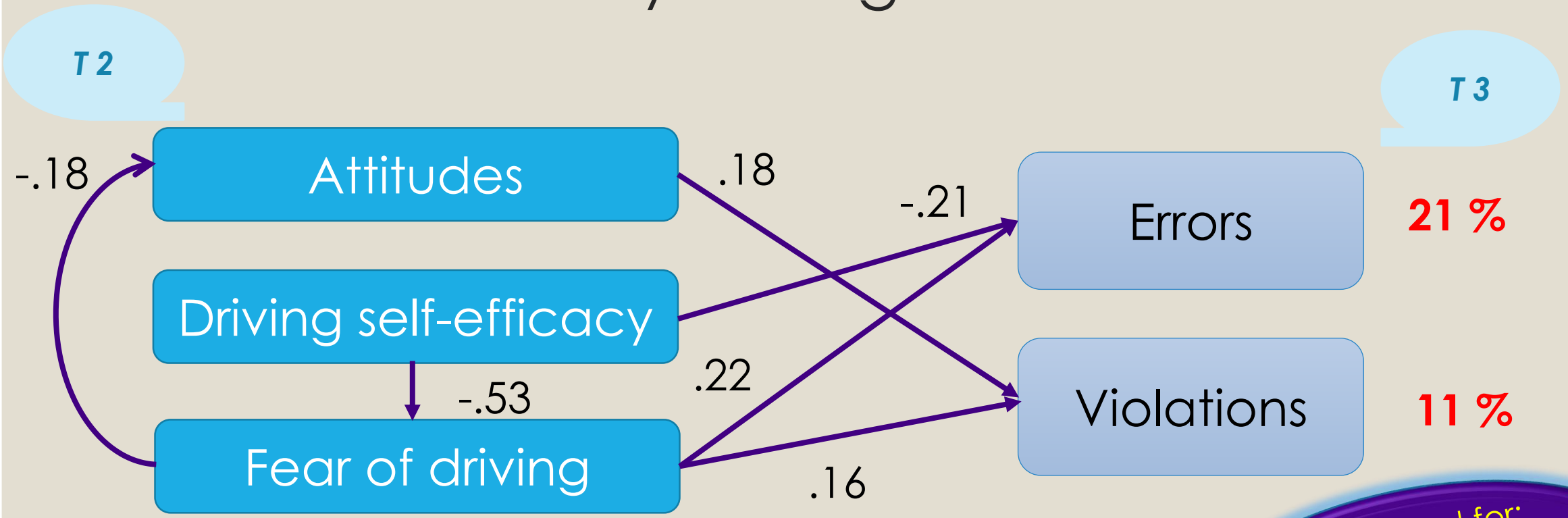


Prediction of risky driving from T1 variables



χ 2 (13) = 16.565, p = .220
CFI = .981, TLI = .958,
RMSEA = .040

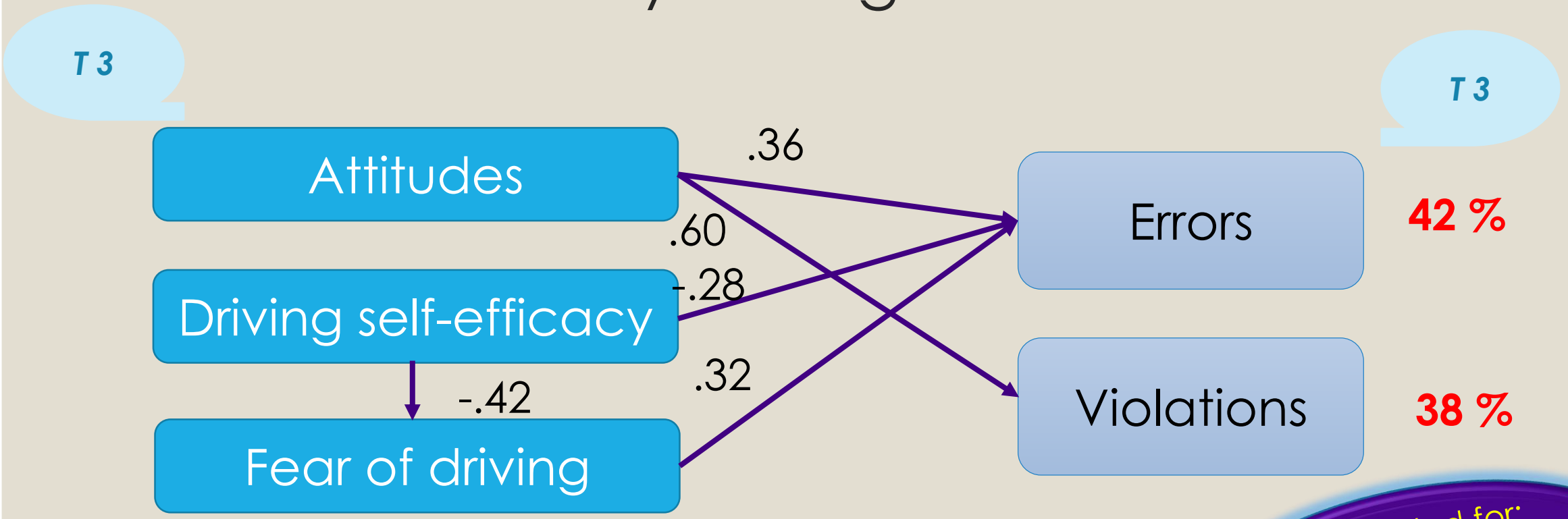
Prediction of risky driving from T2 variables



$\chi^2(17) = 22.824$, $p = .155$
CFI = .966, TLI = .944,
RMSEA = .044

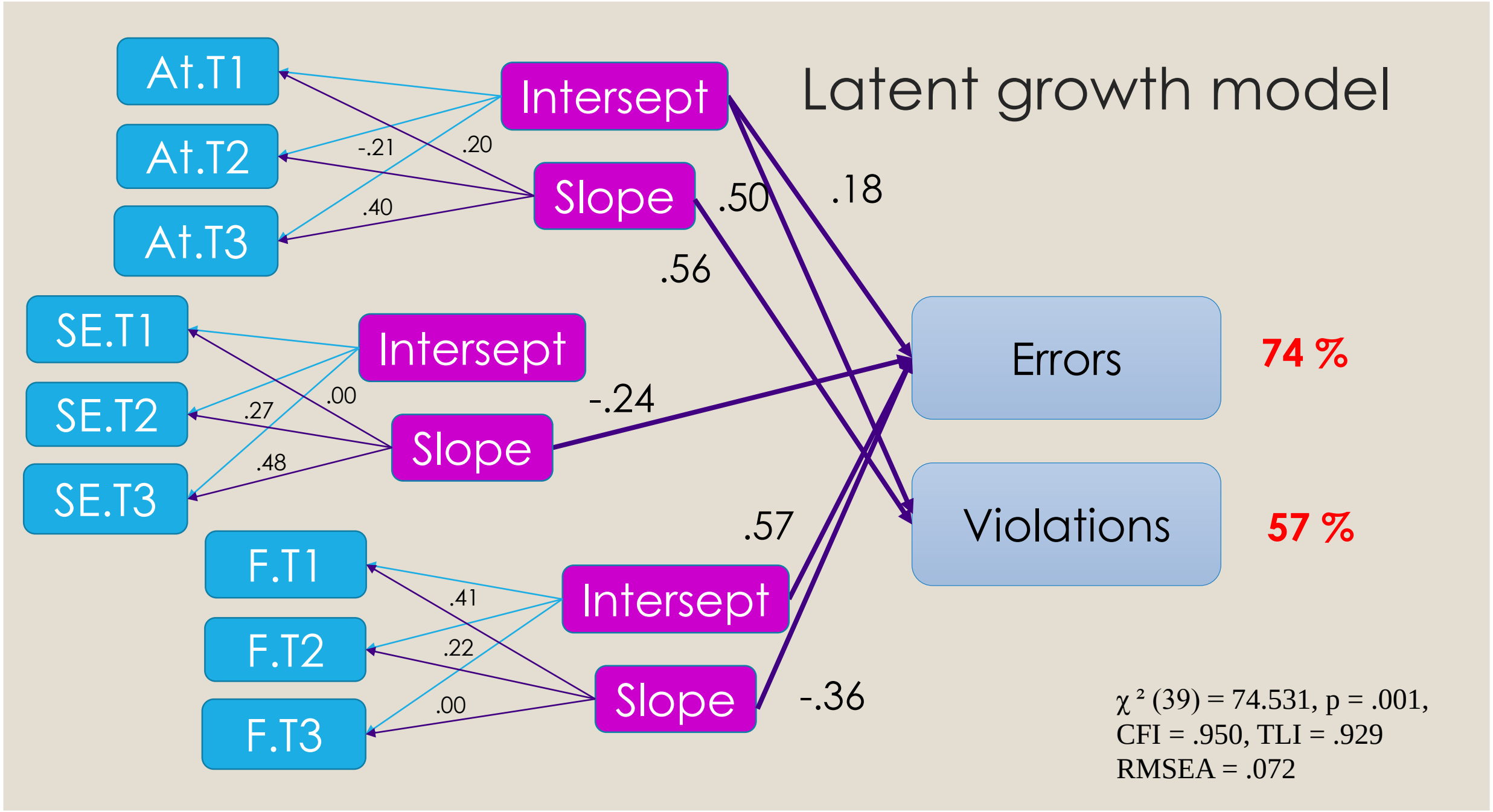
Controlled for:
gender
social desirability
place of residence

Prediction of risky driving from T3 variables



χ^2 (11) = 18.752, p = .066
CFI = .927, TLI = .957,
RMSEA = .064

Controlled for:
gender
social desirability
place of residence


Latent growth model
At.T1
At.T2
At.T3
Intersept
Slope
-.21
.20
.40
.50
.18
.56
SE.T1
SE.T2
SE.T3
Intersept
Slope
.00
.27
.48
-.24
Errors
74 %
Violations
57 %
.57
F.T1
F.T2
F.T3
Intersept
Slope
.41
.22
.00
-.36
χ ² (39) = 74.531, p = .001,
CFI = .950, TLI = .929
RMSEA = .072

Conclusions

What effect might cause special psychological interventions?

- Important psychological changes occurred with the trainees during the typical driving training, even without special interventions.
- Driving self-efficacy increased and driving fear decreased during the training and in the first year of driving, which probably reflected the growing manoeuvring skills of novice drivers.
- Risky attitudes were decreasing during the training and a year after for women. They decreased during driving training for men as well, but later increased during independent driving and reached the initial level.

How to maintain or increase the reached effect for safety attitudes during the most dangerous year of independent driving?

Conclusions and discussi

- Attitudes towards traffic safety, especially measured before training and at follow-up, were good predictor of both driving errors and intentional violations.
- Driving self-efficacy predicted less of self-reported driving errors in each instance of measurement.
- Fear of driving was significant in predicting errors only after gaining some experience. Higher fear of driving at the end of training can predict even later violations.

Could be the selection variable for intervention? Or the target of intervention?

The effect of self-reported measurement might account for the results. More objective measures are needed

Is that a learned helplessness? Drivers with the fear after training should receive additional interventions

Conclusions and discussion (3)

- Changes during driving training course and one-year later were informative when explaining self-reported driving errors and violations. Understanding of the changes added significantly to explanation of risky driving behaviour.

- The riskier became attitudes, the more of intentional violations drivers reported after gaining experience. Decrease in self-efficacy, increase in fear and risky attitudes were related to more of self-reported errors.

The standard driving training could be elaborated more by including psychological aspects of driving.

Limitations

- Self-reported measurement.
- Low exposure to driving.
- Substantial non-random drop out of the subjects.

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Questions...
Comments....

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