Evaluation of the Medical and Psychological Assessment (MPA) in Germany

Horst Ziegler², Norbert Hilger¹, Georg Rudinger¹, Don DeVol², Johannes Jansen², Gerhard Laub², Karin Müller², Wolfgang Schubert²

¹ University of Bonn, Center for Evaluation and Methods ZEM
² Association of Technical Control Boards VdTÜV
Agenda

1. Starting point
2. Questions
3. Study design
4. Results
5. Summary
Medical-Psychological Assessment

Driver
Applies for regranting of license

Authority
Doubts driver’s aptitude and requires MPA

Chooses MPA-Center and undergoes MPA

MPA
Examines MPA-expertise and decides on regranting the license

Assesses the driver and sends him the written expertise
Medical-Psychological Assessment

MPA

Medical Examination
1. Medical history
2. Physical examination
3. Laboratory analyses

Psychological performance test
1. Reaction capacity
2. Visual perception
3. Concentration

Psychological Interview
1. Warming-up phase
2. Collection of biographical data
3. Report on the traffic offences
4. Evaluation of offence-relevant behavior- and attitude-changes

Evaluation of the findings by psychologist and physician
Possible Outcomes of the MPA

**Negative Outcome:**
- The driver's license **cannot** be regranted
- Recommendations are given according to the MPA-results
- The MPA must be repeated

**Partially Negative Outcome:**
- Participation in a driver-improvement course (§70)
- Then the driver's license **can** be regranted

**Positive Outcome:**
- The driver's license **can** be regranted

MPA
MPA in Germany 2010

- Drugs/medication: 20%
- Other reasons: 12%
- First alcohol-related offence: 29%
- Repeated alcohol-related offences: 17%
- Traffic related offences: 15%
- Physical illness: 0.5%

About 100,000 MPA in 2010:
MPA in Germany 2010

- Drugs/medication: 20%
- Other reasons: 12%
- First alcohol-related offence: 29%
- Repeated alcohol-related offences: 17%
- Traffic related offences: 15%
- Alcohol and traffic related or criminal offences: 8%
- Physical illness: 0.5%

Total: 46%
MPA results 2010 (alcohol related cases only)

- Positive: License regranted 49%
- Negative: no regranting of license 38%
- Rehab: License regranted after DI course 13%
Starting point 2008

**Reasons for the study**
- No up-to-date recidivism figures available for the MPA in relation to drink-driving
- Further development and standardized application of the MPA assessment criteria
- Repeated examination of effectiveness of driver’s license measures necessary

**Intermediate changes of conditions**
- Introduction of the 0.5‰ legal alcohol limit for drink-driving
- Changes in the framework conditions in Germany, including development and expansion of psychological advisory measures
The data position in 2008

![Graph showing the data position in 2008 with various studies and their recidivism rates. The reference value is 18.8%.](image)
Starting point 2008

Organisations in the Association of Technical Control Boards (VdTÜV) and the University of Bonn – ZEM

ABV (TÜV Rheinland)
DEKRA
TÜV Hessen
TÜV Nord
TÜV SÜD
TÜV Thüringen
1. How high are the recidivism rates of drink-drivers after an MPA in Germany?

2. Do the recidivism rates of drivers with a positive MPA outcome differ from those of drivers who have to undergo a § 70 driver improvement course?

3. How do the recidivism rates of drink-drivers without an MPA compare?
Study design

- Retrospective recidivism analysis based on the Central Traffic Register (VZR)
- Drawing a sample of MPA clients from the records of members of the Association of Technical Control Boards (VdTÜV)

**MPA sample**
- drink-drivers
- male MPA clients without other offences
- first drink-driving offence vs. multiple drink-driving offences
- positive prognosis vs. § 70 DI-course
- proportional sampling in accordance with the distribution of MPA alcohol cases in 2006 for the participating organisations (VdTÜV)
Study design

- **Control group: Alcohol-related offence (OWi) sample**
  - men with a first alcohol-related offence
  - stratified according to state-by-state distribution of the MPA groups


- **Sample sizes**

<table>
<thead>
<tr>
<th>MPA</th>
<th>first offence</th>
<th>repeated</th>
</tr>
</thead>
<tbody>
<tr>
<td>positive</td>
<td>n = 400</td>
<td>n = 400</td>
</tr>
<tr>
<td>§ 70</td>
<td>n = 400</td>
<td>n = 400</td>
</tr>
<tr>
<td>OWi</td>
<td>n = 3,200</td>
<td></td>
</tr>
</tbody>
</table>

- **Recidivism criterion**: drink-driving offence within three years
In connection with the predictive validity of the MPA and the effectiveness of § 70 courses, the following hypotheses can be established:

- The recidivism probabilities of the MPA groups are not higher than the recidivism probability of the OWi group

- The recidivism probabilities of the MPA groups are the same
Recidivism rates

<table>
<thead>
<tr>
<th>Alcohol</th>
<th>first offence</th>
<th>repeated</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>positive</td>
<td>6.5% (21/325)</td>
<td>8.3% (27/326)</td>
</tr>
<tr>
<td>§ 70</td>
<td>8.0% (25/312)</td>
<td>6.8% (20/296)</td>
</tr>
<tr>
<td>OWi</td>
<td>8.2% (261/3180)</td>
<td></td>
</tr>
</tbody>
</table>

- The recidivism probabilities of the MPA groups are not higher than the recidivism probability of the OWi group.
- The recidivism probabilities of the MPA groups do not differ significantly ($p = .768$).
Recidivism trend

The recidivism speeds of the different groups are very similar.
Recidivism rate (with 95% confidence-interval)
### Age distribution of the groups

<table>
<thead>
<tr>
<th>Age Group</th>
<th>OWi</th>
<th>MPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>- 21 years</td>
<td>14.1%</td>
<td>6.8%</td>
</tr>
<tr>
<td>22 - 24 years</td>
<td>9.0%</td>
<td>10.2%</td>
</tr>
<tr>
<td>25 - 34 years</td>
<td>21.5%</td>
<td>28.7%</td>
</tr>
<tr>
<td>35 - 44 years</td>
<td>23.4%</td>
<td>26.3%</td>
</tr>
<tr>
<td>45 - 64 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>65 years and more</td>
<td>3.5%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Total</td>
<td>$n = 3180$</td>
<td>$n = 1259$</td>
</tr>
</tbody>
</table>
Summary

- **92% of the drink-drivers assessed do not re-offend within three years.** The positive trend of non-reoffending after MPA over recent decades is confirmed by the results obtained.

- **Despite their poorer starting point**, which is what triggers an MPA in Germany, the **recidivism rates for the MPA groups are not higher than for the OWi group and do not differ compared to each other MPA group.**

- The submitted results can therefore be interpreted as **empirical evidence of the predictive reliability** of the MPA for drink-drivers and of the preventive effect of the present German procedure for regranting the driver‘s license.
The data position in 2011

- **Stephan study**
- **ALKOEVA study**
- **EVAGUT study**

**Reference value**: 18.8%
Verband der TÜV e. V. (VdTÜV)
Friedrichstraße 136
10117 Berlin

www.vdtuev.de

Telefon: +49 30 760095-400
Fax: +49 30 760095-401
E-Mail: berlin@vdtuev.de