

Road Safety and Personality Test

Character flaws that affect the suitability of a person to drive a motor vehicle can diminish road safety. In the case of serious offenders, therefore, the relevant authority is likely to call for an expert opinion. On behalf of the Swiss Council for Accident Prevention bfu, the Centre for Test development and Diagnostics at the University of Fribourg in Switzerland has developed an instrument for improving the quality of such expert opinions that can also be used for research purposes. It involves a personality test, which – for the first time – measures the personality traits that are relevant for behaviour in road traffic.



Problem and Objective

A person's suitability to drive can be impaired by various factors. Most important among these are the excessive and repeated consumption of alcohol, prescription or non-prescription drugs; mental illness; performance deficiencies and character flaws. If the presence of such factors is suspected, the relevant administrative authority will require a medical examination and/or a psychological factor analysis to be carried out. In Switzerland there has so far been no uniform and recognized instrument for identifying character flaws. Commissioned by the Swiss Council for Accident Prevention bfu, the Centre for Test development and Diagnostics at the University of Fribourg has therefore developed a new type of personality test that is designed to fill this gap. The new test is in questionnaire form and is especially relevant to behaviour in road traffic.

Procedure

The questionnaire is based on the five-factor model used in personality psychology. Five dimensions were expressed in operational terms – extraversion, emotional instability, conscientiousness, openness to experience, sociability – and scales were constructed for

each which cover all situations, as well as those that are specifically traffic-oriented. In addition, five scales were developed on the subjects of trivialization (control scale, all situations and traffic-oriented), drinking behaviour, experience of infirmities, and reactance (reaction to restrictions of freedom). In a study lasting several years, reliability and inter-correlation coefficients were calculated for the scales, and standardization was carried out by means of a random check in German and French. Lastly, various random checks were carried out (German version) to check validity.

Results

It was shown that the questionnaire registers the surveyed dimensions reliably and relatively independently from each other. Standard scores were determined for different gender and age groups. Finally, there proved to be a link between the surveyed personality traits and conspicuous driving behaviour (fines, accidents, withdrawals of driving licence).

Reliability

With reliability coefficients between .64 and .91, all of the 15 scales proved to be between satisfactory and good. The lowest reliability was for the scale «Sociability, all situations». This corresponds to observations made when using other survey instruments that are based on the five-factor model. The correlation coefficients of the traffic-specific and all-situation scales were between .35 and .60. The other intercorrelations are low, which indicates the independence of the scales from one another. The only other significant correlation coefficient is that of .61 between «Experience of infirmities» and «Emotional instability».

Standardization

Standardization took place using a standard population of 520 people taken from German-speaking Switzerland and 300 people from the French-speaking part of the country. Standard scores were established for the entire population, for gender groups and for gender groups combined with age (up to 24, as well as 25 and older). The standard sample consisted of people who exhibited at most two standard deviations from the mean value with respect to a conspicuousness criterion. Using a table, the raw scores were converted to stanine scores (from 1 to 9) and transferred to a profile sheet.

Validity

Validation took place by comparing with each other various random samples of German-speaking traffic offenders and non-offenders. A conspicuousness criterion – corrected for mileage driven – was developed, which took account of fines, accidents and driving licence withdrawals. It was shown that, depending on a possible trivialization tendency (traffic-specific, all situations or combined), in each case other dimensions are relevant for the assessment. Based on the scale scores, a 70%-correct group classification of all drivers was achieved.

Conclusions

The TVP Test («Test for the registration of traffic-specific personality traits») enables both situation-overarching as well as traffic-specific character traits of the driver with a conspicuous personality to be determined. A major advantage of this instrument is that it can also be used when the person questioned tends towards trivialization. The TVP Test complements traditional diagnostic procedures, such as interviewing, examining mental efficiency, etc. By standardizing registration, analysis and interpretation, it contributes to the standardization and freedom from arbitrariness of psychological investigations. In addition, it is also suitable for use as confrontational material in diagnostic discussions or for research purposes.

Source

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