

**Compact accident research**

**Illegal Drugs on the road**

**Imprint**

**German Insurance Association**

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## Introduction

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The intervention agency Oberhausen e. V. (Intob) was commissioned by the UDV (German Insurers Accident Research) to investigate trends in drug use in recent years. In addition, the agency was commissioned to examine whether there had been any changes with regard to drugs on the roads since a study on party and designer drugs on the roads carried out in 2002 (entitled “Party- und Designerdrogen im Straßenverkehr”).

Based on a study of the research literature, different locations/events were selected for the survey (school and party/dance-type events). This also allowed a comparison to be made between urban and rural areas. By widening the scope of the study in this way, it was possible to gain extensive insights into the issue and at the same time to compare the attitudes of people with experience of drugs with those with no experience. While drug use in general has been researched in some depth in Germany, there is a dearth of research into the effects of drugs on the roads.

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## 1 Empirical survey: drug use on the roads

### 1.1 Procedure

Following on from the 2002 study on party and designer drugs on the roads ("Party- und Designerdrogen im Straßenverkehr"), the aim of this new study was to examine in detail current developments with regard to drugs on the roads. While the 2002 study focused primarily on ecstasy users, this study investigates the issue of drugs on the roads by surveying different groups.

Since the results of the new study were to be compared with those of the 2002 study, the survey was based on a similar list of questions to that of the 2002 study. However, certain changes were made (both with regard to the

groups surveyed and the questions themselves). Unlike the 2002 study, which focused primarily on discos, bars and dance events, the new study has four different survey groups:

- Disco/dance events in rural areas
- Schools in rural areas
- Disco/dance events in urban areas
- Schools in urban areas

Although the empirical data collected is not representative of Germany as a whole, it does give extensive insights into an issue about which it is hard to obtain quantifiable information. The list of questions consists primarily of closed questions with set reply categories. In schools, students in possession of a driving license or a license for a moped/scooter of not more than 50cc were given a questionnaire, which was completed anonymously, in accor-

**Table 1: Survey location**

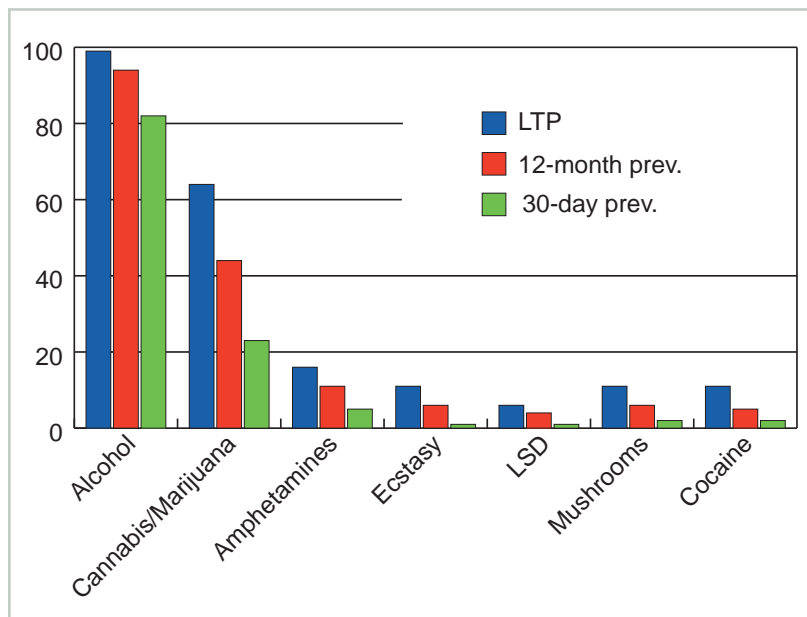
	Frequency	Percentage
Gymnasium (university-preparatory or grammar school) in Essen	40	10.3
Gesamtschule (comprehensive or high school) in the Göttingen area	100	25.6
Gesamtschule Oberhausen	46	11.8
Disco event in Duisburg	71	18.2
Gymnasium in the Göttingen area	46	11.8
Berufsschule (vocational school) in Oberhausen	47	12.1
Disco in the Göttingen area	40	10.3
<b>Total</b>	<b>390</b>	<b>100.0</b>

dance with data protection legislation, and then forwarded on to Intob by the contact person at each school. At disco and dance events, Intob set up a stall and approached students of the target age group. Each respondent who completed a questionnaire in its entirety received free admission to a subsequent event. The questionnaire was 13 pages long and took an average of 20 to 30 minutes to complete. In total, 428 completed questionnaires were collected, 38 of which were rejected due to the lack of a driving license or invalid entries. This survey was carried out at the following locations with the following sample sizes:

## 2 Results for the survey group as a whole

### 2.1 Drug use overall

65% of all respondents had used illegal drugs. Those over 18 years old were more likely to have used illegal drugs (77%). 52% of the young people up to the age of 18 had used them. In representative studies the prevalence figures are significantly lower than this (see figures 3 and 4). For example, a 2006 study of 18 to 24 year olds by the German Federal Centre for Health Education (BZGA) found



Drugs / prevalence	Alcohol	Cannabis/ mariuhana	Am-phetamines	Ecstasy	LSD	Mushrooms	Cocaine
LTP (lifetime prevalence)	99 %	64 %	16 %	11 %	6 %	11 %	11 %
12-month prevalence	94 %	44 %	11 %	6 %	4 %	6 %	5 %
30-day prevalence	82 %	23 %	5 %	1 %	1 %	1 %	2 %

Figure 1: Drugs use of all respondents, (%)

that 40% had used drugs; the corresponding percentage for this study (65%) is significantly higher. This indicates that the respondents in this study have a much higher prevalence than existing comparison groups.

Since the 2002 study only questioned drug users, a comparison based on lifetime prevalence (people who have taken drugs at least once in their life) is not useful.

## 2.2 Alcohol consumption

Nearly all of the respondents (99%) had experience of drinking alcohol. 83% of them drank alcohol at least once a month. In the 2008 BZGA drug affinity study, 76% of respondents under 18 years old replied that they had drunk alcohol at least once. In the present study more than half of all respondents (53%) said that they drink alcohol every weekend. That indicates that alcohol is the most popular legal drug studied. This value is also significantly lower in the BZGA drug affinity study, which found that a total of 17% of respondents drank alcohol on a weekly basis. Only a very few respondents (4%) said they drank alcohol daily. High levels of alcohol consumption can be seen, above all, among male respondents: 79% of those who drank alcohol daily were male. The 2002 study only investigated the consumption of alcohol in combination with other drugs rather than consumption of alcohol alone, so once again a comparison is not possible here.

## 2.3 Driving under the influence of drugs

More than one in four respondents who used drugs also drove under the influence of alcohol and drugs (29%). 9% said they frequently drove under the influence of drugs. This shows that there are still a large number of people po-

sing a threat to safety on the roads and that, in this respect, not much has changed.

The figures were significantly higher in the 2002 study. Whereas the present study found that 29% drove under the influence of drugs, the figure was 94% in the previous study. Since most of the target group of the present study had only recently acquired a driving license, it can be assumed that their awareness of the dangers of taking drugs and driving was still high.

The risks of taking drugs shortly before or while driving are particularly high. 8% of respondents said that they had even used drugs while driving. However, the numbers of those taking drugs shortly before driving were very much in line with those of the 2002 study. Whereas 26% of respondents in the 2002 study claimed to have done this, the figure for this study was 19%. Taking drugs shortly before driving is thus still an issue of urgent concern that poses a threat to road safety.

A further 26% of respondents said that they drove or had driven less than five hours after taking drugs. Of the respondents who said they had taken drugs and then driven under

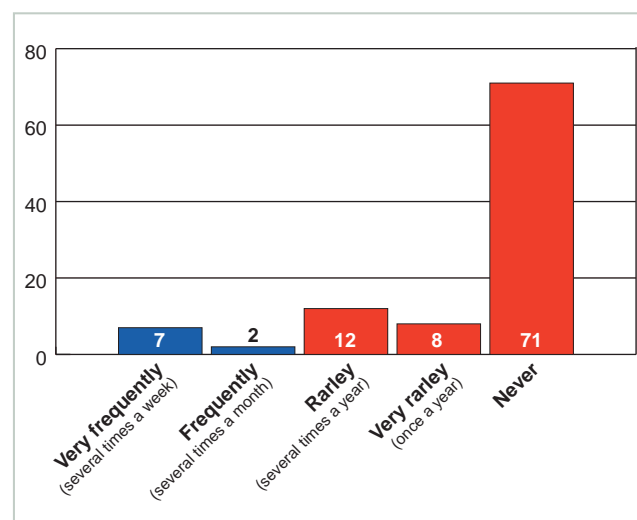


Figure 2: Frequency of driving under the influence of drugs, (%)

their influence less than one hour afterwards, only 46 % were of the opinion that this was a very short time period. In the 2002 study, on the other hand, 56 % of 192 ecstasy users and 84 % of 195 cannabis users said they had driven less than 5 hours after taking drugs. By comparison, “only” 26 % of the 105 cannabis users surveyed in this study said that they drove less than 5 hours after using drugs. This is a very clear downward trend. The numbers of cases were very low for ecstasy and thus scarcely comparable (N 25 – 16 % who had driven less than five hours after taking ecstasy).

The most frequent effect of drugs perceived by drivers was tiredness. It was also possible to specify positive effects in the present study. It was conspicuous that almost a third (33 %) of respondents said that they felt relaxed and cool when driving under the influence of drugs. Nearly one in four respondents experienced hallucinations or had the feeling they were being followed. One in five respondents felt that their concentration was better while driving under the influence of drugs. It is thus

clear that many who drive under the influence of drugs do not perceive it as dangerous and describe it as a positive experience.

Most respondents also said they experienced tiredness after mixing alcohol and drugs. It is striking here that one in five respondents of them claimed to feel safer than usual when driving under the influence of a combination of alcohol and drugs. Overall, however, there were fewer positive effects of combining alcohol and drugs. In addition, one in four said their reactions were slower.

Whereas 49 % in the 2002 study stated that their reactions were “somehow slow”, in this study far fewer respondents specified this as an effect. There were large differences for most effects. Tiredness was the only effect specified by similar percentages of respondents (see table 2).

There were also a number of differences between the surveys in terms of the answers to the questions about driving behavior (see table 3).

**Table 2: Comparison between the 2002 survey and current survey: Effects of drug use**

Effect	2002 study	2009/2010 study (drugs only)	2009/2010 study (alcohol and drugs)
Reactions somehow slow	49 %	23 %	25 %
Poor concentration	45 %	18 %	24 %
Listlessness /exhaustion	43 %	31 %	28 %
Feelings of great happiness /euphoria	39 %	27 %	16 %
Nervousness, fidgetiness and restlessness	34 %	23 %	11 %
Tiredness	32 %	33 %	35 %
Hallucinations	15 %	24 %	13 %
Palpitations /racing heart, rapid pulse	13 %	23 %	15 %
Nausea	15 %	10 %	24 %

**Table 3: Comparison between the 2002 survey and the current survey: effect of drugs on driving behavior**

Effect	2002 survey	2009 / 2010 survey
I had to make more of an effort than usual in order to drive well	55 %	49 %
Didn't notice traffic signs as well	35 %	23 %
Had a problem keeping in lane or on the road	33 %	16 %
Drove at illegal speeds	29 %	15 %
Speed was not consistent	28 %	23 %
Did not pay as much attention as usual to how I was driving	26 %	27 %
Did not wear a seat belt	23 %	12 %
Drove too fast in a bend / approached a bend too fast	21 %	15 %
Misjudged a bend	21 %	14 %

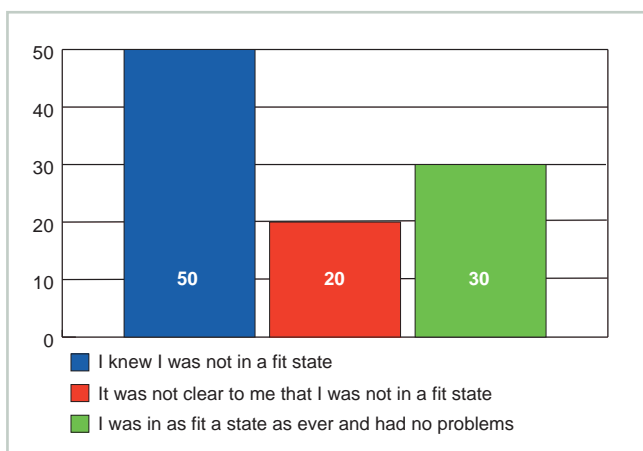
Half of the respondents who had driven under the influence of drugs indicated they knew they were unfit to drive. A further 20 % underestimated the difficulty of driving. Nevertheless, a third of respondents felt there were no problems driving (see figure 3). In comparison to the 2002 study, the respondents in this survey were somewhat more critical about their driving behavior.

Whereas 41 % in the 2002 study said they were not fit to drive, in this study the percentage was 50 %. On the other hand, the answer "I was as fit to drive as usual and didn't notice any problems" was selected by about the same percentage of respondents in both surveys (29 % in 2002 and 30 % in 2009/10), which shows that a not inconsiderable proportion of respondents still ignore the risks and believe the risks of driving under the influence of drugs are low.

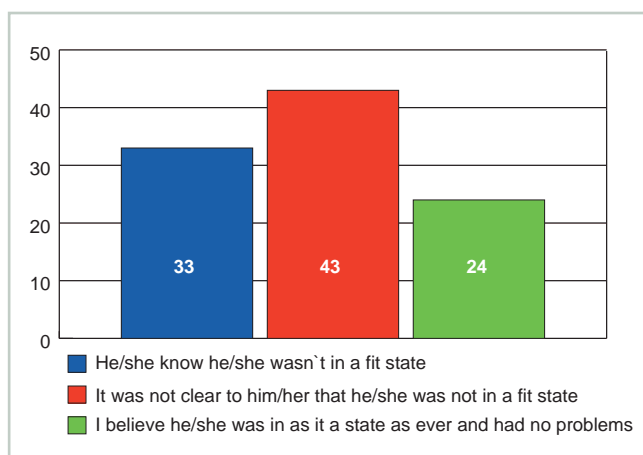
However, the assessment of the passengers was different. Passengers often perceive the

drive very differently from the driver (who has taken drugs), as the following results show: Nearly half of all surveyed passengers said that the driver was driving at illegal speeds. Interestingly, this was stated by only 15 % of the drivers surveyed. Furthermore, more than one in three passengers feared that an accident was going to happen. Several of the respondents who drove under the influence of drugs themselves elaborated on the questionnaire that they would never be the passenger of a driver under the influence of drugs. Thus, although they are aware that they are taking a risk, they ignore this at the time of driving. In other words, when "in the moment" the need to get to a particular place exerts a greater power over them than their fear of the possible dangers.

Figure 4 shows that the passengers' assessments of drivers are much more differentiated. Only 33 % of passengers were of the opinion that the driver knew he was not fit to



**Figure 3: Respondents' assessment of their driving under the influence of drugs, (%)**



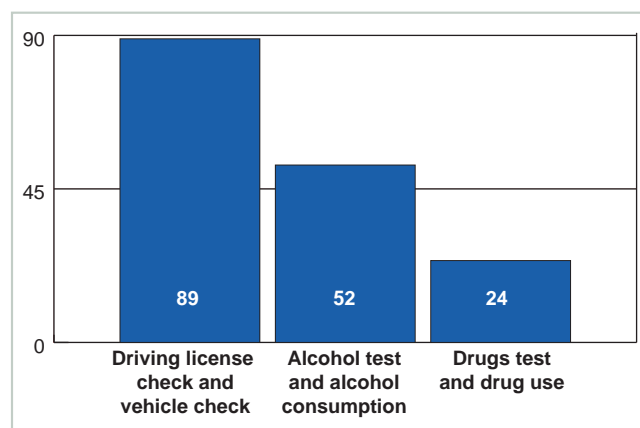
**Figure 4: Passengers' assessments, (%)**

drive, while 44 % believed the driver did not know. The percentage of passengers who said there were no problems was also lower than for the drivers surveyed.

43 % of respondents who admitted experience with drugs stated that they had been passengers in a car driven by someone under the influence of alcohol and drugs, as opposed to only 14 % of those who had no experience of using drugs. This indicates either that non-drug users are less willing to get into a car driven by someone who has just consumed alcohol or drugs or that they don't recognize that there is a problem.

## 2.4 Police checks

Nearly a third of the respondents (32%) had already experienced at least one police check. Most checks were for driving licenses and vehicle inspections. But there were also many who had experienced checks for drugs and alcohol: half of the respondents who had been checked by the police had also been tested for alcohol. Nearly one in four respondents had been tested for drug use.



**Figure 5: Type of police check, (%)**

It is striking that 27 % of the 92 respondents who had been stopped by police claimed that their drug use had not been discovered. 43 % of the respondents who were currently taking illegal drugs and had already experienced a police check continued to drive while under the influence of drugs and alcohol.

In the 2002 study, many more respondents had experienced a police check at least once (over 50 % in 2002, 32 % in 2009 / 2010). Since the 2002 study was mostly carried out at night and the respondents were largely attending dance events, the likelihood of being stopped and checked by the police was, of course, significantly higher. Nevertheless, it was evident that police checks were no more effective than a number of years ago (although a representative comparison is not possible due

**Table 4 : Comparison of the 2002 survey and current survey: police checks experienced by respondents**

Question	2002 survey	2009 / 2010 survey <sup>1)</sup>
Have you ever been stopped/checked by the police?	126 (56 %)	110 (32 %)
Have you ever been stopped by the police after taking drugs and the police haven't noticed?	90 (40 %)	25 (27 %)
Have you been checked by the police and had the police discover you had been taking drugs?	8 (3.5 %)	8 (9 %)

<sup>1)</sup> Specified as a valid percentage

to the different settings in which the surveys were carried out). Whereas in 2002, 71 % of the cases of drug use were not discovered by the police checks, only 27 % of cases remained undiscovered in this study.

Table 4 compares the case numbers directly: A direct comparison of the two surveys indicates that police checks have become more effective. However, just because there have been some successes does not mean we should rest on our laurels; on the contrary, targeted checks, prevention work and training to raise awareness must continue.

## 2.5 Traffic offenses with points

17% of respondents said they had points on their driving license for traffic offenses. Amongst those who were still drug users, the percentage was slightly higher (19%). The main traffic offenses mentioned were as follows:

- Speeding (65 %)
- Red light violation (25 %)
- Illegal, improper or unsafe passing (17 %)
- Tailgating (15 %)
- Offenses in which other drivers are forced to take evasive action or that, for example, involve violation of right of way (8 %)

Of the 56 respondents who indicated they had points for traffic offenses, 63 % knew how many points they had. One in four (26 %) had 3 points or more. 60 % of the respondents who were currently drug users knew how many points they had. 29 % of them had 3 points or more. Slightly more of the drug users therefore had points on their driving licenses compared to all respondents.

In the 2002 study the figures were considerably higher (90 respondents had penalty points on their licenses due to traffic offenses in 2002, whereas only 56 respondents had points in 2009/2010). However, there are parallels between the studies in terms of traffic offense types. In both the 2002 survey and this one, for example, the respondents most frequently mentioned speeding and red light violations. The numbers of medical psychological assessments or MPAs (required by German law for those seeking to regain their driving license) are also comparable. In 2002 six respondents reported needing an MPA, whereas in this study it was seven.

The results clearly show that the potential for danger has remained the same and that delinquent behavior has not changed much either.

## 2.6 Accidents while under the influence of drugs

Seven respondents had had an accident whilst under the influence of drugs. They reported using or consuming cannabis, alcohol and cannabis, amphetamines, cocaine and alcohol. In half of the cases, there was less than an hour between taking the drugs and starting to drive.

Drivers under the influence of drugs only when involved in an accident most often mentioned the following effects: “feelings of great happiness”, “too hot” and “poor concentration”. Drivers under the influence of a combination of alcohol and drugs, on the other hand, mentioned the following effects most: “poor concentration”, “nausea”, “slow reactions” and “tiredness”. In drives in which the driver was under the influence of drugs but that did not result in an accident, the effects felt were different. For example, “poor concentration” was only mentioned by a quarter of respondents.

Although the number of accident cases was very low and not representative, these drives were perceived very differently from drives under the influence of drugs that did not result in an accident. However, this could also be due to there being a greater awareness of the problem after a drive in which an accident occurred. In other words, whereas concerns and feelings of guilt and shame are to be expected in the one case, those involved try to free themselves of such feelings in the other case.

One accident happened on an autobahn (freeway), one in a built-up area and the others on roads outside built-up areas. The following causes of the accidents were given:

- Roads in which the road ahead cannot be seen easily
- Rain / snow

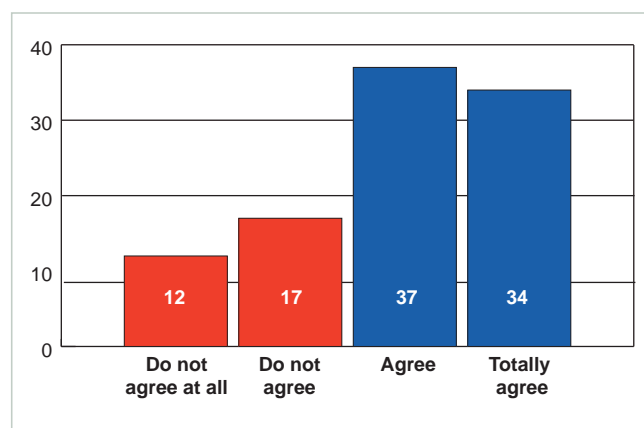
- Street lighting
- Overtaking maneuver
- Fog
- Partial responsibility of the other driver

For two of the drivers this was not their first accident; they had had at least four accidents before this. They had clearly not learned from their experiences and had continued to behave recklessly.

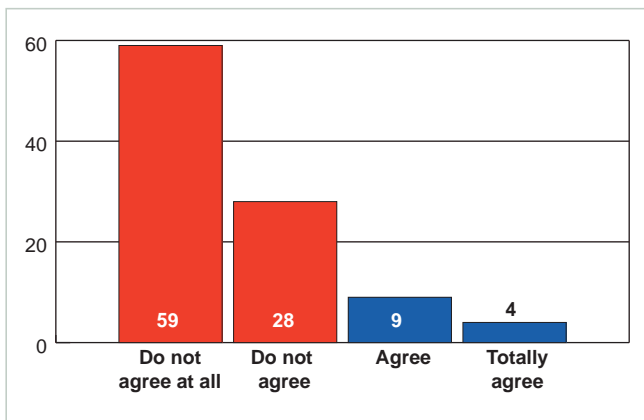
In the previous study, a significantly higher number of accidents occurred while the driver was under the influence of drugs. A total of 32 respondents in the 2002 survey said they had had an accident while under the influence of drugs.

## 2.7 Opinions on the issue of drugs on the roads

71% of respondents (N=345) were of the opinion that most people underestimate the problem. 52% of respondents in the 2002 survey were of this opinion as well. This shows that a majority of the respondents in this study took a more considered view of the threat to road safety than the respondents in the 2002 study.



**Figure 6: Opinions on drugs on the roads: Most people (including myself) underestimate the problem (N=345), (%)**

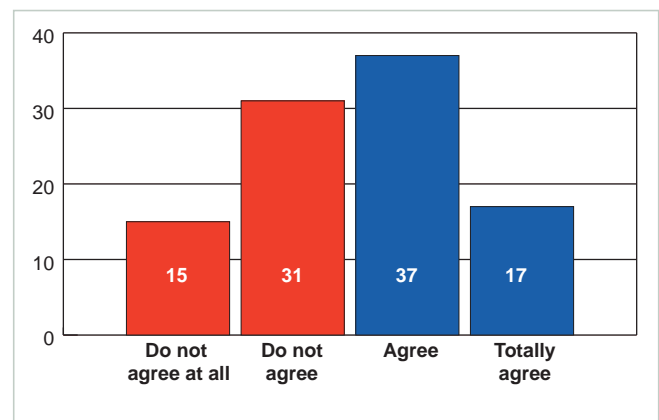


**Figure 7: Opinions on drugs on the roads: The problem is exaggerated; it is possible to drive after a few hours, (%)**

87% of the respondents disagreed with the statement that it is possible to drive safely a few hours after taking drugs and that the problem is exaggerated. It is thus clear that a not insignificant proportion of people continue to ignore the problem and are highly likely to assess their own driving behavior under the influence of drugs differently.

In 2002 significantly more respondents (20% in 2002, 13% in 2009/10) agreed with the statement, “The problem is exaggerated; it is possible to drive after a few hours” (see figure 7).

More than half of the respondents (N47 – 54%) said they did not believe that the police do not carry out enough checks. If the responses are broken down, the rejection of this statement becomes even clearer. The statement was rejected by 46% of those who had used drugs. A much larger proportion of those who do not take drugs were thus convinced that the police do not carry out enough checks, whereas those who are or were drug users did not want more checks. The proportion of current drug users who rejected the statement was even higher (52%).



**Figure 8: Opinions on drugs on the roads: The police don't carry out enough drug tests on drivers, (%)**

The same trend can be seen for the statement, “There are too many police checks for people driving while under the influence of drugs”. 13% of respondents with experience of using illegal drugs agreed with this statement, whereas only 14% of those with no experience of illegal drugs agreed. The percentage of current drug users agreeing with the statement was again higher, at 25%.

There are large differences between the 2009/10 responses to the statement “The police don't carry out enough drug tests on drivers” and the responses in 2002. Whilst in 2002 one in five respondents (21%) agreed with the statement, in 2009/v10 it was one in two (54%). That is a difference of 30% and indicates a different attitude from the group surveyed in 2002, since even a relatively high percentage of current drug users agreed with it. In contrast, more respondents in this study agreed with the statement that there are too many police checks for drug use by drivers (7% of all respondents in 2002 agreed, whereas 19% did so in 2009/10).

### 3 Outlook for road safety

#### 1) Socially acceptable patterns of drug use are changing

Whilst party and designer drugs were extremely popular in 2002, it is clear from this study that their popularity has declined. However, this is not true for cannabis. Cannabis remains a socially acceptable drug, and when people experiment with drugs for the first time, they usually choose cannabis. The pattern of use is often similar to that for alcohol. Those trying drugs for the first time rarely drive whilst under their influence. If they do, it is usually a short drive and a one-off event. The picture is different among current drug users, who take a variety of drugs.

#### 2) Who drives under the influence of drugs and when?

It is clear that most cases of driving under the influence of drugs take place because drivers are reliant on their cars to pursue their activities. The respondents want to experience something and use drugs at the same time. Inevitably, the time comes when they want to go home or move on to a different place. Most of them know that they are taking a risk by driving, but their desire to use their car is stronger than their fear of the consequences. To them, taking drugs is an integral part of their social life. Ultimately, however, the effects of the drugs wear off and they want or have to return to their everyday life. If the driver has been driving under the influence of drugs for some time without incident (no police checks, police checks without discovery of drug use, subjective feeling that driving under the influence of drugs is no different from normal, no accidents, no other disadvantages, etc.), then any sense of danger the driver might feel is abstract and comparable with that of a

sixteen-year-old whose parents tell him that smoking can cause cancer and an early death. The individuals perceive this danger to be not as great as the risk of being bored without the effects of the drugs. By deceiving themselves about the danger in this way and effectively dismissing it, they put driving in a different light and make it easier for themselves to take the risk. As long as the consequences remain abstract, their attitudes do not change.

#### 3) How can the problem be solved from the perspective of the drug users?

If it was possible to get home by public transport after taking drugs, many drug users would choose not to drive whilst still under their influence. Almost two-thirds of current drug users specified this as a preventive measure. This shows that driving under the influence of drugs is affected by the transport problem, above all. It is unrealistic to suppose that a target group motivated by the desire to seek pleasure would change their behavior as a result of seeing shocking images or perceiving the threat of sanctions. This approach can only be successful with those trying drugs for the first time and is part of the reason why a number of drugs are now used less. Regular (current) drug users do not regard this as an option. They want to take drugs and still remain mobile. There is clearly egotism at play here: they give a higher priority to seeking pleasure than to the potential dangers to themselves or others. Drug users who drive at the same time do not want to have to do without drugs; they want others to do something for them instead (make transport available, for example). The only thing that matters to these drug-using drivers, who are a danger to themselves and others, is living in the moment and their own wellbeing; they disregard the risks to those around them and the environment.

#### 4) The awareness of illegality

One in four (25%) of the respondents who used drugs were not aware that it is illegal to drive whilst under the influence of drugs. This has been reported in the media and conveyed in various campaigns, resulting in only marginal changes in driving behavior. Intensive drug users, in particular, do not let this stop them driving under the influence of drugs.

#### 5) Drug checks

Although the scope for detecting drug use by drivers has increased statistically as far as the police are concerned, the estimated number of undetected cases is still very high. Obstacles of a political, financial and media-related nature, in particular, are preventing improvements to the efficiency of detection. For instance, drug use in schools is not addressed because of fear of the negative consequences (for the reputation of the school, for example). Various political situations do not allow for awareness of the issue to be raised. When elections are imminent, for example, high numbers of cases could lead to negative consequences. The media contribute in various ways that make it more difficult to take measures against drugs or influence popular opinion in an unhelpful way (in the debate about legalizing cannabis, for example). The undetected use of drugs by drivers, in particular, is a problem whose solution is still a long way off.

#### 6) Empirical data on the issue of drugs on the roads continues to be scarce

There are hardly any representative statistics in Germany that address the effects of drugs on the roads over the long term. Only the UDV's studies shed light on these problems, but unfortunately they are not representative of Germany as a whole. A follow-up study

with the same groups but more respondents would be useful in this connection. Internationally, there have been many large-scale studies, but in Germany most of the studies have been individual surveys of limited value. Based on the findings of these UDV studies, only a rough estimate can be made of the actual level of danger in Germany. The 2002 study concluded that the number of undetected cases of driving whilst under the influence of drugs had been underestimated. The same can be said following this study in 2010; there has been hardly any change in the intervening eight years.

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## 4 Conclusions for road safety

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### 1) Successes of police checks in the short term

Intensive police checks are important because they quickly reduce the levels of danger on the roads. However, this is only successfully achieved when checks are carried out intensively and persistently, as shown by several studies in the USA. In addition, all police checks must be supported by preventive measures to ensure long-term success, as in the "don't drug & drive" campaign, for example.

### 2) Focus on those who pose a threat to safety

The majority of people correctly assess the dangers on the roads. However, it has been clear for years that a certain group of people pose a threat to safety: drug users who recognize the dangers to some extent yet ignore them due to an egotistical desire to pursue their own pleasure. More research is needed into this group in order to determine how to discourage them from endangering themselves and others. Preventive measures, deterrents and existing sanctions have met with little success with this group so far. Yet they

pose a very considerable threat to road safety. The following questions therefore have to be asked:

- (1) How can this group of people be targeted?
- (2) Are the sanctions too weak?
- (3) Is the deterrent effect of the penalties too insignificant?

The other measures (preventive measures, sanctions in the form of penalties, etc.) must remain in place for those trying drugs for the first time, since these people are influenced by them, as are more insightful regular drug users.

If road safety is to be ensured, the dangers of drugs must be described in detail. Although there are countless representative studies of general drug use, the same cannot be said for the use of drugs and its effects on road safety. Even the German federal authorities base their assumptions on numbers of recorded offenses and small-scale studies. Not until the extent of the problem and the patterns of thought of the great variety of drivers who drive under the influence of drugs are known will it be possible to solve the problem effectively. Post-mortem examinations of people killed in road accidents could be revealing.

**Further information: [www.udv.de](http://www.udv.de)**

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