

Drunk – driving, relapse pattern and risky driving behavior among participants in a DWI
Prevention Programme.

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Preface

In autumn 2009 I started to work on my master thesis in social – and community psychology. I had already talked to the criminal administration system in Bodø in spring 2009 and made an agreement to write my master thesis based on their wishes for examination. The thesis examines two fields within the relapse pattern and attitudes/behavior area. This thesis contains an introductory article, one article examining the two samples' attitudes and how satisfied the two samples are with their sentence and penal accomplishment. The last article examines relapse patterns among a DWI – sample and a prison – sample. The introduction article presents the general theoretical background for the current study, as well as an overall presentation and discussion of the two separate research articles. The first article aims at examining attitudes towards drunk - driving, risk behavior and traffic safety. A direct evaluation of the contents of the DWI Prevention Programme and the penal accomplishment is also examined. The second article examines relapse among participants in the DWI Prevention Programme after drunk - driving and those who get prison sentence after driving when influenced by alcohol. There may be some repetitions in the two articles when it comes to theory and some in the discussion- part since both have a lot of the same theory foundation.

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Drunk – driving, relapse pattern and risky driving behavior among participants in a DWI Prevention Programme.

Abstract

The overall aim of the study was to examine relapse among participants in the DWI Prevention Programme and those who get prison sentence after driving when influenced by alcohol and to examine the participants' attitudes towards drunk – driving, risk behavior and traffic safety. A direct evaluation of the sentence and penal accomplishment is also examined. The sample of the survey study (see article 1) was 44 from the DWI – sample and 44 from the prison – sample that completed a questionnaire answering about their attitudes towards drunk – driving, risk behavior and traffic safety. The results presented in article 2 are based on transcripts of criminal convicts that participated in the DWI Prevention Programme during the period of 1998 – 2002 in the Salten District ($n = 68$) and a sample of convicts to an unconditional sentence for drunk - driving in the same time periode ($n = 112$). The 1st analysis revealed that the DWI – sample had more ideal attitudes towards drunk – driving, risk behavior and traffic safety. There were also significant differences in how they evaluated their sentence and penal accomplishment. The DWI - sample were generally more satisfied with the penal accomplishment, the way they was treated and how the relationships around them were. They were also more satisfied with the contents of the penal accomplishment. Multivariate analysis, Kaplan – Meier and Cox regression was used in the 2nd analysis calculating if there were significant differences between the samples, survival time and to investigate effects of several variables upon the time a specified event takes to happen. In this study the relapse time was shorter for men than for women and the youngest age – groups had a shorter relapse time than the oldest age – groups. The Kaplan – Meier plot revealed that the prison – group have a shorter relapse time compared to the DWI – group. Based on the results of the two articles we can conclude that the DWI Prevention Programme had a very good effect on the participants compared to those who get traditional prison – sentence. The participants in the programme had the most ideal attitudes and the longest survival time after participating. When it comes to survival time among gender and age, women and the older age – groups had the longest survival time.

Keywords: drunk – driving, attitudes towards traffic safety, DWI Prevention Programme, relapse patterns

1.0 Introduction

Risky driving has been identified as an important contributor to road crashes (Cameron, 1985; Jonah, 1986; Prabhakar, Lee and Job, 1996; Fernandes, Job and Hatfield, 2007). In his review of the literature, Jonah (1986) illustrated a link between various risky driving and road trauma. More recently, Iversen (2004) found that people who had been involved in at least one car crash over the last one – year period engaged in more speeding, drunk – driving, and reckless driving, as well as lower use of seat belts, over the same period (Iversen, 2004; Fernandes, Job and Hatfield, 2007).

When engaging in e.g. drunk – driving, there are good chances of getting caught. If the person got an excessive blood – alcohol limit under 1.0‰, fines and a conditional sentence are used. Between 1.0 ‰ and 1.5 ‰, the law court has to choose between conditional and unconditional sentence in addition to fines (NOU, 1993). The target group of the DWI Prevention Programme is persons with a recognized alcohol problem and that get sentenced for driving with a excessive blood – alcohol level above 1.5 ‰, or repeated drunk – driving. The arrangement can also be used by first – time conviction with an excessive blood – alcohol limit under 1.5 ‰ when it generally would have been an unconditional sentence (Danielsen, 2003).

1.1 Theoretical Background

Traffic accidents cause the society large human damages and economical expenses. It is a superior goal to reduce the amount of traffic accidents and to improve the traffic safety. In this connection reduction of the number of drunk – drivers is central. The drunk –drivers represent a very high accident risk. Drunk – driving research is for instance showing that about 30 % of the killed drivers have been driving with alcohol in their blood, and that the accident risk strongly increases when the excessive blood – alcohol limit is getting higher. Drivers with more than 1.5 causes about 20 % of the drunk – driving, but constitute 80 % of the killed, influenced drivers (NOU, 1993). Several examinations have shown that the probability for relapse increases with increased excessive blood – alcohol level. The recidivists would generally have a higher risk of getting mixed up in many traffic accidents. Action that is assumed to want to reduce relapse, would therefore be important to improve the traffic safety (NOU, 1993).

Drunk – driving attitudes

When it comes to studying the field of drunk – driving, there is important to examine the drunk – drivers' attitudes towards impaired driving and trying to change possible attitudes that are not ideal. Attitudes towards traffic safety can be defined as a person's evaluation of the different aspects by traffic safety. This involves acceptance of violating the rules and speeding, acceptance of being a passenger with a risky driver, acceptance of drunk - driving and so on. In addition, cultural factors, subcultures, social norms and social pressure are also influenced by a person's attitudes (Rundmo and Iversen, 2003). An attitude develops on the basis of an evaluative responding. This is happening when an individual responds evaluatively to an entity on an affective, behavioral or cognitive basis. Evaluative responding can be both overt and covert, and it can produce a psychological tendency to respond with a particular degree of evaluation when subsequently encountering the attitude object. It is not for certain that an attitude is formed, but if the tendency to respond is established, the person has formed an attitude towards the object. It's also established a mental representation of the attitude in the memory, and the representation can be activated by the presence of the attitude object or cues that reminds you of the attitude object (Eagly and Chaiken, 1993). The object can be a person, physical object or facts of the case. This can involve defined objects or situations. The attitude also involves the meaning the person has about the object. The strength in meanings like this is the subjective probability that an object is associated with certain characteristics or an attitude (Rundmo and Iversen, 2003).

The Theory of Planned Behavior (Ajzen, 1985) proposes that attitudes toward health – relevant behaviors are key determinants of *intentions* to engage in the behavior, which, in turn cause performance of the behavior. Relevant attitudes arise from beliefs about outcomes of the behavior coupled with evaluation of those outcomes. For example, a belief that speeding increases the chance of crashing, along with a negative evaluation of crashing, would amount to a negative attitude toward speeding. A belief that speeding increases the chance of arriving at an appointment in time, along with a positive evaluation of arriving at an appointment on time, would amount to a positive attitude toward speeding (Ajzen, 1985; Fernandes, Job and Hatfield, 2007). Iversen (2004) found that drivers with more positive attitudes toward rule violations and speeding were more frequently observed to engage in risky driving behavior (Iversen, 2004; Fernandes, Job and Hatfield, 2007).

Demographical characteristics

The drunk - drivers' demographical characteristics are also a field that is interesting to look at when examining relapse patterns. Demographical information contains e.g. gender, age, education, status, income and so on. One finding was that individuals under the age of 30 are more likely to continue driving under the influence of alcohol and are at greatest risk to receive a subsequent DWI (Nochajski and Stasiewich, 2006). It was also found that males consistently exhibit a greater risky driving compared to females (Evans and Wasielewski, 1983; Job, 1990; Wasielewski, 1996; Fernandes, Job and Hatfield, 2007). Also young drivers were found to drive fast, tailgate, engage in risky overtaking, allow too little time to merge, and fail to give way to pedestrians, compared to older drivers (Cameron, 1985; Job, 1999; Jonah, 1986; Prabhakar et al., 1996; Williams, 1998; Fernandes, Job and Hatfield, 2007).

Studies show that male drivers underestimate the hazards involved in various driving activities (Dejoy, 1992; Yagil, 1998) and assess their driving ability more highly than do female drivers assess theirs (Dejoy, 1992; Matthews and Moran, 1986; Yagil, 1998). For example, McKenna, Stanier, and Lewis (1991) found that men tended to rate their driving skills as better than average in all driving components, whereas such a positive bias was more limited among women. Furthermore, these attitudes toward the commission of violations are supported by social norms relating to gender. For example, Rienzi, McMillin, Dickson, and Crauthers (1996) found that adolescents considered driving after drinking to be more acceptable for boys than for girls (Rienzi, McMillin, Dickinson and Crauthers, 1996; Yagil, 1998).

The effects of alcohol and other intoxicating substances

Alcohol, drugs and medication hazardous to traffic has an impact on the central nervous system. The central nervous system is vital for many functions and is important when you are driving a car. This is a substantial reason that driving while intoxicated increase the risk of accidents. To get a better picture of why DWI- drivers can be dangerous, it can be a useful starting point to look at the driving process (Rusmiddeldirektoratet and Transportøkonomisk institutt, 1995). When the driver is driving, he/she will get a lot of impressions through the senses (chiefly through the sight) from the situation he/she is in. The amount of impressions is generally large and bigger than the impressions the driver deal with. Early in the process it carries out "short – listing" of impressions so that only a small part is kept for further preparing. In this preparation the impressions is interpreted and cohered with the experience material so that the driver get an understanding of what's happening and what's going to

happen in the situation he/she is in. The results in a resolution about what he/she will do, and the resolution leads to action. The action that is carried out will change the situation. The driver senses the new situation, work on the impressions and carries out a new action. The process is going on as long as the driver is driving (Rusmiddeldirektoratet and Transportøkonomisk institutt, 1995).

When it comes to the ability to take in and work on impressions (information), there is clear difference between the persons. Some are capable to handle many impressions at the same time, interpret these impressions quickly and make a quick decision. Others on the other hand can only work on a small amount of impressions at the same time (Rusmiddeldirektoratet and Transportøkonomisk institutt, 1995). Alcohol, drugs and medication are hazardous to traffic and affect all the parts of the driving process, but not as much on all of them. Intoxicating substance impairs the sight and has an effect on the reactivity. Intoxicating substance primarily works on the ability to receive and work on impressions. A person who is influenced by alcohol, can handle less impressions at the same time than a sober person, he/she uses longer time to interpret impressions and often makes the wrong decision (Rusmiddeldirektoratet and Transportøkonomisk institutt, 1995).

The drunk – driving legislation

When people get caught for drunk – driving (and other illegal acts), information about the illegal acts get stored in the Criminal Record Office. The transcripts of criminal convicts give the police an overview over all the criminal acts the person has done. Historically, until 1913 no general provision regulated the use of motor vehicles in Norway. It was all up to each of the country to make by- laws governing the use of the motor vehicles within the particular district in question. None of these laws contained provisions prohibiting and limiting freedom to drive a motor vehicle when influence by alcohol (Hauge, 1978). There were not any special needs for such provisions because of the few motor vehicles that existed. Even though the amount of motor vehicles increased by time, the claim did not occur until 1912 (Hauge, 1978).

As the first country in the world, Norway inducted in 1936 a permanent legal blood alcohol limit. This legal blood alcohol limit was set to 0.5 ‰. This limit implies that if the concentration of alcohol in the blood is over 0.5 (50 milligrams alcohol per 100 milliliters blood), or more, the person is influenced of alcohol in the legal point of view. It does not

matter that the person do not feel influenced or that the clinical test doesn't show that the person is influenced (Rusmiddeldirektoratet and Transportøkonomisk institutt, 1995).

In 1959, a new legislation was made. The legislation implies that it is forbidden to drive under influence of other intoxicating or anaesthetizing drugs than alcohol. The reason for this legislation was the increasing consumption of different medications that influenced central nervous system, and that made the driver unsuited to drive the car (Rusmiddeldirektoratet and Transportøkonomisk institutt, 1995).

The Norwegian Parliament carried out in June 1998 a modification in the response-system for the DWI, a legislation that had been unchanged for 50 years. The aim of the new legislation was to prevent traffic accidents. They also had noticed that the size of the DWI increased by the size of the excessive blood alcohol limit. The legislation has in mind that the punishment shall vary according to the risk, the way we do by speed violations and other traffic violations (Rusmiddeldirektoratet and Transportøkonomisk institutt, 1995). The change of the legislation in 1988 induced a new provision in the DWI – legislation. A permanent limit for the blood alcohol concentration in the exhalation air was set to 0.25 mg alcohol per litre air. This means that the police do not have to take blood tests anymore to test the blood alcohol concentration. Now they can use an instrument that measures the concentration through the exhalation air (Rusmiddeldirektoratet and Transportøkonomisk institutt, 1995).

The road traffic act paragraph 22 forbids driving a motor vehicle when influenced by alcohol. The punishment for driving while intoxicated is fines or fines with conditional and unconditional prison sentence. In addition the driver license gets withdrawn for a shorter or longer period (Rusmiddeldirektoratet and Transportøkonomisk institutt, 1995).

Rehabilitative programmes

There are several rehabilitative programmes aims at preventing undesirable attitudes towards drunk – driving. A program in Phoenix was perhaps the first well – documented preventive effort designed to deal specifically with alcohol – impaired driving (Stewart and Malfetti, 1970, Rider et al., 2006). This program involved a 2 ½ hour session covering four topics: (1) the drinking – driving problem; (2) alcohol and driving skill; (3) problem drinking; and (4) development of a personal action plan to avoid future drinking – driving problems (Rider et al., 2006)

A novel education – program – *Preventing Alcohol – Related Convictions (PARC)* - grew out of a study conducted by McKnight et al., (1995), in which 600 interviews were conducted with first offenders and high BAC (Blood Alcohol Content) drivers in roadside surveys (McKnight et al., 1995; Rider et al., 2006). Results indicated that if DWI offenders left home driving their own cars to a drinking event, there was little chance of preventing them from driving home after drinking. The McKnight et al., (1995) study helped identify three critical decision points faced by drinkers who are at risk for impaired driving (McKnight et al., 1995; Rider et al., 2006). Each decision point is impacted by a different set of environmental, peer, and individual factors:

- (1) *Before leaving home* – individuals are likely to have the greatest control over decision – making because they are not impaired by alcohol, and they are not in an environment where alcohol is being consumed and where drinking companions are influencing their decision. The decision of whether to drive to the drinking location must be made at home. An individual can for instance arrange other transportation before leaving to the party.
- (2) *Upon arrival at the drinking location* – individuals must make decisions about the amount of drinking. An environment where alcohol is readily available or where the hosts are urging for consumption, mitigates against good control of drinking.
- (3) *Upon leaving the location* – options to avoid impaired driving may be severely limited. If individuals have not controlled their drinking, the only safe option is to obtain a ride home. If drinkers use their car to drive to the event, a way to return their cars to their homes must be found before they can be persuaded to accept a ride.

The PARC program focuses on the period when the DWI offender has the most control – *before leaving home* (Rider et al., 2006). It is assumed that leaving the car at home will almost always prevent the owner from driving while impaired (McKnight et al., 1995; Rider et al., 2006).

The *PARC* program is a 2 hour brief intervention that can be substituted for the fourth and final session of the traditional Phoenix – type DWI education program for first DWI offenders. The first of three units in the *PARC* curriculum are similar to the traditional Phoenix – type units:

- (1) Discussion of participants' beliefs about the causes of their arrest for impaired driving.

- (2) Challenge the participants' beliefs that they are not at risk for another DWI offense by pointing out that one in three will recidivate (Voas and Fisher, 2001; Rider et al., 2006).
- (3) Recognizing that they have a problem with impaired driving that needs to be changed because they are at significant risk to be changed because they are at significant risk for future sanctions.

The fourth unit contains two parts (1) participants discuss the impact of another incident on their life goals and determine the responsibility to others in an effort to set the stage for behavior change, (2) participant prepare a plan for avoiding impaired driving in the future, present their plans to the group, and receive feedback

The DWI Prevention Programme

The criminal administration system in Norway has taken in use a preventive programme that aims at reducing drunk – driving. There is assumed that a DWI Prevention Programme would be a good attempt to try to reduce the drunk – driving, and this assumption is based on experiences from the Netherlands. Dr. Bovens have evaluated the trial arrangement of the DWI Prevention Programme from the Netherland (NOU, 1993). The examination showed that the knowledge level considerably increased for the test group when trying out the DWI Prevention Programme. There is also assumed that a well arranged DWI Prevention Programme would counteract relapse also past the programme. The aim of using a DWI Prevention Programme as an alternative punishment is to get the drunk – drivers with alcohol problems to complete a “package” of actions that for instance contains treatment, information about the effect of the alcohol and to reduce the risk of another drunk – driving (NOU, 1993).

The DWI Prevention Programme is an alternative to unconditional prison – sentence by violation of road traffic act § 31, cf. § 22, 1st paragraph. It started as a trial arrangement in 1996, but from 2003 the DWI Prevention Programme were extended to all countries in Norway. The aim of the DWI Prevention Programme is to counteract drunk –driving and to create a safer traffic environment and reduce number of traffic accidents. They also try to get drivers to not drink alcohol before and when they are driving (Danielsen, 2003).

The goal is to increase the consciousness about your own behavior and the consequences of it. The programme will supply the defendant with knowledge about and make possible consequences by driving when influenced visible. In addition there is also emphasized the necessity of to take responsibility of your own actions (Danielsen, 2003). The programme

consists of four elements, (1) lessons, (2) treatment, (3) individual conversations, and (4) control of the accomplishment. The DWI Prevention Programme shall contain of 20 – 30 hours with conversation – oriented lessons divided in two and three months. The lessons can be given either individually or in groups. In addition to the individual conversations, there is also going to be completed a treatment of the alcohol abuse (Danielsen, 2003).

One of the aims of the individual conversation is to motivate the participant to *change*. Motivational conversation is a common method used to motivate to change. The method brings in elements from different therapeutic approaches and is described by Miller and Rollnick (1991) as Motivational Interviewing (Miller and Rollnick, 1991; Danielsen, 2003). The method focuses on the understanding of changing processes with a goal to get the convicted to reflect about their concern when it comes to their own problem behavior and to express arguments for change of this problem behavior. The method emphasize to build up the motivation for change, and to help the convicted to activate actions that leads to change of unwanted behavior.

Evaluation of the DWI Prevention Programme in Norway

The DWI Prevention Programme has been evaluated by Krisoffersen (1999). This is a well – known study of the evaluation of the programme in Norway that was completed three years after the programme started. 126 respondents sentenced for drunk – driving completed a questionnaire. The feedback from the respondents was very positive. They were very satisfied with the programme, but they thought it was very exhausting compared to traditional prison – sentence. The reported alcohol consume after participating showed a reduction, and over half of the respondents answered that they did not want to drunk – drive again. The general impressions of the lessons and treatment was very good, and the lessons were seen as interesting and informative (Kristoffersen, 1999).

Possible reasons why people drink and drive

There is not always so that that people tries to avoid drinking and driving when they are going to a party. Hanson and Engs (1992) suggested that young people with the lack of driving experience and knowledge of the consequences of drunk – driving have a greater probability for drunk – driving than older people. They suggested that young people sometimes do what they think is social acceptable. If their friends think it is ok to drive after they have been drinking, then they will probably also think it is ok. And if they don't have

had negative experiences with drunk – driving (e.g. crashes) they underestimate the risks of drinking and driving (Finken, Jacobs and Laguna, 1998).

There was also found that the individuals' own experiences may contribute to their decisions to drive while intoxicated or to ride with an intoxicated driver. Prior experiences may lead adolescents to underestimate the risks of drinking and driving. Each experience of driving or riding while intoxicated, in which no negative consequences (e.g. accidents, near misses, arrest) occur, may lower the individual's judgments of the riskiness of such behaviors. For example, an adolescent who decides to drive after having six drinks of alcohol and gets to the destination without mishap may attribute the outcome to good judgment (i.e. "I know when I've had too much to drink") rather than to good luck. It may increase the adolescent's assessment of their own "control" of the situation. If no negative consequences result from an act of drinking and driving/riding, and it retains positive association with the social situation, it is likely to be repeated (Finken, Jacobs and Laguna, 1998).

DiBlasio (1986) suggests that adolescents are not overwhelmed by the coercion of momentary peer pressure, but that they define the appropriateness of participation in drinking and driving behaviors by the norms of friends and family. If their friends drink and drive or ride, they will see such behaviors acceptable. In the studies of this age group, females are less likely than males to drink and drive, and they have more negative attitudes about driving under the influence of alcohol, but they are more likely than males to be passengers of drunk – drivers (DiBlasio, 1986; Hayes and Swisher, 1991; Shaw et al., 1992; Finken, Jacobs and Laguna, 1998).

1.2 Aims of the Thesis

Specific Aims of the 1st article

The specific aim of the 1st article is to examine attitudes towards drunk - driving, risk behavior and traffic safety among participants in a DWI Prevention Programme ($n=44$) and those who got traditional prison – sentence after driving while impaired ($n=44$) A direct evaluation of the contents of the DWI Prevention Programme and the penal accomplishment is also examined.

- a) Are there differences in the two samples when it comes to attitudes towards drunk – driving? Attitudes towards drunk – driving are predicted to be significantly more ideal among the respondents in the experimental group (DWI Prevention Programme) compared to the control group (Prison Sentence).
- b) The predictions based on prior research are that attitudes towards traffic safety and risky driving behavior in general will be significantly more ideal in the experimental group compared to the control group.
- c) Which of the two groups are more satisfied with their sentence and penal accomplishment? According the 1st article, it is predicted that participants in the DWI Prevention Programme are more satisfied with their sentence and penal accomplishment compared to the prison – group.

Specific Aims of the 2nd article

The specific aims of the 2nd article is to examine relapse among participants in a DWI Prevention Programme ($n=68$) and those who got prison sentence ($n=112$) after driving when influenced by alcohol by using transcripts of criminal convicts in the period of 1998 – 2002 in nine Norwegian municipalities. In particular these questions will be examined:

- a) According to the 2nd article the frequency of second- time sentence will be significantly lower among participants of the DWI Prevention Programme (experimental group) compared to a sample of convicts to an unconditional prison sentence for drunk - driving (control group).
- b) The predictions, based on prior research is that among second-time convicted the survival time before the next relapse will be greater in the experimental group compared to the control group.
- c) The hypothesis in the 2nd article suggests that young drink – drivers have a greater probability for a quick relapse compared to older drink – drivers.

- d) There is also suggested in the 2nd article that men have a greater probability for a quick relapse compared to women.

2.0 Method

2.1 Sample

The Prison Sample

A stratified sample of convicts who is not included in the DWI Prevention Programme (n=112). In the prison – sample there was 13 % women and 87 % men. The age was divided into the same groups as in the DWI – sample. Here 14 % was under 25 years, 24 % was between 25 – 34, 14 % of the sample was between 35 – 44 and 48 % was over 44 years.

The DWI-Program Sample

A stratified sample of participants of the DWI Prevention Programme in Salten District, Nordland County (n=68). All of the respondents went through the DWI Prevention Programme or had finished the programme in the latest years. In the DWI - sample there was 11 % women and 89 % men. The age was divided into four groups; under 25 (32 %), from 25 – 34 years (21 %), 35 – 44 (21 %) and over 44 years (26 %).

Transcripts of Criminal Convictions

This sample contains transcripts of participants of the DWI Prevention Programme who participated in the program during the period 1998 – 2002 in the district of Salten in Nordland County (n=68). The second sample is a stratified sample of convicts to an unconditional prison sentence for drink driving in the same district as the first sample and for the same time period (n=112).

Questionnaire

The questionnaire asked the respondents to answer questions with a direct evaluation of the penal accomplishment, alcohol use the last month, traffic safety, risk behavior and demographical and other background information (see appendix 1). It was deliberate made short (six pages) so the response rate would be as high as possible.

Demographical characteristics consisted of gender, age, marital status, education level. Other background information consisted of questions about previous sentences (other criminal action or DWI sentence) and whether the sentence was conditional or unconditional.

The measure instruments used in this questionnaire was the AUDIT (Alcohol Use Disorder Identification Test) developed by Babor, Higgins – Biddle, Saunders and Monteiro (1992). This test was utilized to measure alcohol use the last month. . The instrument consisted of 10- items, and had response categories ranging on a five-point scale from *never* to *four times a week or more* (see appendix 1).

Another measure instrument used was a self – report questionnaire developed and validated by Rundmo and Iversen (2004). 16 variables measured attitudes related to traffic safety, e.g. rule violations, speeding and so on. There were also added 7 new variables to the measure instrument to measure attitudes towards drunk – driving. A five-point evaluation scale was applied, and the response options were as follows: ‘*strongly agree*’, ‘*agree*’, ‘*neither agree nor disagree*’, ‘*disagree*’, ‘*strongly disagree*’ (see appendix 1).

The third measure instrument used was a self – report questionnaire concerning risk behavior and comprised of 24 variables related to violations of traffic rules, reckless driving, speeding and so on (see appendix 1). The respondents were asked to assess how often they carried out each of the activities. A five point evaluation scale was used, with the following options: ‘*very often*’, ‘*often*’, ‘*sometimes*’, ‘*seldom*’ and ‘*never*’. Most of the items measuring both attitudes and behavior were based on previous validated scales, evaluated in a Norwegian population, and focusing mainly on violations (developed and validated by Iversen and Rundmo, 2004).

2.2 Statistical Analysis

In the 1st article Cronbach’s α and mean corrected inter – item correlation was used to test the reliability and internal consistency of the self – reported questionnaires. Factor analysis was examining the pattern of correlations (or covariates) between the observed measures.

Pearson’s r coefficients was also measured (effect size) studying the relationship between two variables. Pearson’s r from .10 - .30 shows a small effect, from .30 - .50 shows a medium effect and .50 – 1 shows a strong effect. 0 means that there is no relation between the two variables.

In the 1st article there were also used MANOVA to test whether or not there were a significant difference between the two samples. MANOVA gives overall tests of the effects of dimensions. The effect size was computed using Cohen’s d . According to Cohen (1969) $d =$

.20 indicates a small effect size, $d = .50$ a medium effect size and $d = .80$ a large effect size (J. Cohen, 1969).

In the 2nd article Kaplan – Meier was used to examine the survival time of the DWI – sample and the prison – sample. Cox regression survival analysis was used to investigate the effect of several variables upon the time a specified event takes to happen (Cox, 1972). The covariates (risk factors) added in this study was number of days of the conditional and unconditional sentence and repetition drunk – driving. The survival time variable in this analysis was number of days from the first DWI – sentence to the next DWI – sentence and from the first DWI – sentence and the next sentence. Strata were also added, consisted of gender, current age and age of the first sentence.

3.0 Results

Results from the 1st article

The first and second aim of the 1st article was to examine attitudes towards drunk – driving in the DWI – sample and the prison – sample. As predicted, the attitudes in the DWI – sample were more ideal when it comes to drunk – driving, traffic safety and risk behavior.

The third aim of the 1st was examining how satisfied the two samples are with their sentence and penal accomplishment. It was predicted that the DWI – sample would be more satisfied with the sentence and penal accomplishment than the prison – sample. There were found significant differences in how they evaluated their sentence and penal accomplishment. The prison – sample were generally more satisfied with the penal accomplishment, the way they was treated and how the relationships where they are is, while the DWI – sample were more satisfied with the contents of the penal accomplishment.

Results from the 2nd article

The first and the second aim of the 1st article was to examine the frequency time of second time – sentence among the participants in the DWI Prevention Programme compared to a sample of convicts to an unconditional prison sentence for drunk – driving. By using Kaplan – Meier plot and Cox regression survival analysis survival time was investigated. The Kaplan – Meier plot revealed that the prison – group have a shorter relapse time compared to the DWI – group. The Cox regression survival analysis revealed that the relapse time was shorter for men than for women and the youngest age – groups had a shorter relapse time than the oldest age – groups.

The third aim was examining survival rates among different age - groups. The predictions were that younger age -groups predicted a quicker relapse. The current study also found that there were significant differences in survival time of first – time drunk – drivers. The survival time was shorter in the youngest age – groups in both their first relapse and current age.

The fourth aim of the 2nd article was to examine survival time of gender in the samples. The Cox regression survival analysis revealed that there were significant differences between men and women when it comes to survival time from the first DWI – sentence to the next DWI – sentence and from the first DWI – sentence to the next sentence. Men have a quicker relapse compared to women.

4.0 Discussion

The overall purpose of the study was to examine the satisfaction of the DWI Prevention Programme compared to prison sentence, and to examine attitudes towards drunk – driving, traffic safety and risky driving behavior. Relapse patterns among the DWI – group and the prison – group was also examined. In the following section these results will be discussed in light of the previous made predictions and former research.

The first article presented, examined satisfaction of the DWI Prevention Programme compared to traditional prison – sentence and attitudes towards drunk – driving, traffic safety and risky driving behavior. The second article examined relapse patterns among those participating in a DWI Prevention Programme and those who got traditional prison – sentence after driving while impaired. The majority of the hypothesis' presented in the two studies were supported by previous studies. The hypothesis concerning attitudes towards drunk – driving, traffic safety and risky driving behavior in a DWI – sample and a prison – sample was not possible to find any support of. The studies that dealt with attitudes towards drunk – driving were only the general populations' attitudes and not to the specific groups' attitudes (a prison – group and a rehabilitation – group). The research on drunk – driving is large, but there are very little research found that are dealing with the attitudes of the people who actually experiences getting caught for driving while intoxicated and get either prison – sentence or rehabilitation. What the general population thinks about drunk – driving, traffic safety and risky driving behavior is not as important as to investigate the drunk – drivers' attitudes. In the present study it was found that the participants in the DWI Prevention Programme (a rehabilitation group) had more ideal attitudes towards drunk – driving, traffic safety and risky driving behavior compared to the prison – group. The transcripts of criminal convicts also found that the relapse patterns of those who participated in the DWI Prevention Programme compared to traditional prison – sentence were different. The prison – sample had a quicker relapse compared to the DWI – sample.

It was also found that the participants in the DWI Prevention Programme were very satisfied with their sentence and penal accomplishment compared to the prison – sample. In Norway it has only been completed one known evaluation study of the satisfaction of the DWI Prevention Programme. No other studies on rehabilitation evaluation were found, and it is therefore hard to compare the Norwegian DWI Prevention Programme with other rehabilitative programmes. When looking at results like this, it is important to question what the prison can do to help the prisoners get more ideal attitudes towards drunk – driving. What

does the DWI Prevention Programme do that makes the participants' attitudes change? What can be done to change the relapse patterns among those with prison – sentence? Is there a possibility that more people who get sentenced for drunk – driving can participate in the DWI Prevention Programme?

It was also found that the relapse patterns among young people and men were quicker. Here, both sets of the transcripts were examined (both those in a DWI Prevention Programme and those who got prison – sentence). In article 1 (survey study) we did not examine what age – group who had the most ideal attitudes in the DWI Prevention Programme and the prison – sample. It could have been useful to find out if the age – groups in both article 1 and article 2 correspond with each other. Since we have found a lot of previous studies that support the present study, it is possible to believe that the findings would have been passably similar. Another question that can be asked is if the attitudes and the relapse pattern in the general population have changed from 1998-2002 to 2009-2010? The transcripts of criminal convicts were from 1998 – 2002 and the questionnaires were from 2009-2010. If we have given the people convicted for drunk – driving in 1999 – 2002 the same questionnaires, would the attitudes and relapse patterns have been the same? Would the participants in the DWI Prevention Programme be as satisfied with the programme as the present respondents? In 1998, the DWI Prevention Programme was very new and still in a growing process. Much have changed since 1998, both within the programme and among the general population. If the change have gone in the positive and negative direction is hard to say, but it is most likely positive. It have been more focus on the consequences of risky driving and traffic safety and several campaigns focusing on e.g. seat belt use and “power naps” to prevent road crashes.

4.1 Methodological Limitations

One methodical challenge that is important to keep in mind is that the sample is not representative for the all of the participants in the DWI Prevention Programme and prison – samples in Norway. The current research use samples from the district of Salten in Nordland County and the prison – sample were drawn from Verdal prison. Therefore there is not possible to generalize to the whole population, but there is a possibility to believe that the tendency is passably equal if the samples had been drawn from several of Norway's prisons/participants of the DWI Prevention Programme.

The gender distribution in both transcripts of criminal convicts and the self – completion questionnaires is not equal. There are very few women in the samples. Of the transcripts of

the participants in the DWI Prevention Programme ($n = 68$) there was 91 % men and 9 % women. Of the transcripts of convicts to an unconditional sentence for drunk – driving ($n = 112$) there was 92 % men and 8 % women. When it comes to the self – completion questionnaire ($n = 44$) there was 11 % women and 89 % men in the DWI – sample. In the prison – sample ($n = 44$) there was and 13 % women and 87 % men. This did not affect the results, but in future research it is suitable to add more women to the study if checking for gender differences. It checking for gender differences you also have to let the study go on for a longer time period to capture more DWI arrests among women. The men are still the majority, but more and more women are getting caught for drunk – driving now and what it did ten years ago.

When asked to fill out the questionnaires there is a possibility to believe that some of the participants filled out what they believed was the “right” answer, or what they believed other participants would answer. Social desirability (response bias) aims at presenting oneself favorably. One can be certain that this has happened, but we know that this is a common problem when it comes to self – completion questionnaires.

The design of the present study was a post – sample comparison. Significant differences in attitudes towards traffic safety were found between two groups indicating that the DWI Prevention Programme may have influenced attitudes in a positive direction compared to prison sentence. However, to draw more decisive conclusions, a pre – post design would have been more ideal and further research should look into the possibilities for such a design.

4.2 Future Research Implications

If one in the future want to look at gender differences in the samples, there is practical to add more women to the study. In this case the questionnaires was handed out to anybody in the DWI Prevention Programme and prison - sample (with a current or earlier sentence for drunk – driving) that wanted to answer to get as high response rate as possible. If there had been more time for the research project, there is maybe possible to get more women to answer the questionnaire if more women get sentenced for drunk – driving and get the opportunity to participate in the DWI Prevention Programme.

The sample in the second study was small (44 from the DWI – sample and 44 from the prison – sample). Further research may add more respondents to the samples. As mentioned above, there was no time to try to get more respondents. With a bigger sample there is easier to

Further research should also check for interaction effects between the contents of the programme, alcohol use, risk behavior and attitudes towards drunk – driving. This means to see if there are possible effects between the independent variables in their effect on the dependent variable.

4.3 Conclusion

To sum up, differences in attitudes towards drunk – driving, traffic safety and risky driving behavior were found. The DWI – sample had more ideal attitudes compared to the prison – sample. The DWI – sample were also more satisfied with different contents of the sentence/ penal accomplishment compared to the prison – sample. This shows that the DWI Prevention Programme have a good effect on those participating in the programme, both when it comes to satisfaction and attitude change. It was also found differences in relapse patterns among men and women, where men had a quicker relapse than women. Also age – differences were found, where the youngest age – groups had a quicker relapse.

Despite of the methodical challenges, the current study is believed to have made contributions in examining what kind of sentence that may be the best when trying to prevent drunk – driving. Firstly, it has given the criminal administration system/prison information on what the participants think and mean about their sentence/penal accomplishment. Secondly, the criminal administration system has also got valuable information on what parts of the programme the participants are satisfied with. Finally, it has also been revealed relapse patterns among drunk – drivers, and it have given the criminal administration system/prison something to work further on with.

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1st Article of Master Thesis in Psychology: Evaluation of the “Driving While Intoxicated Prevention Programme” in Norway.

Abstract

The aim of the study was to examine attitudes towards drunk - driving, risk behavior and traffic safety. A direct evaluation of the contents of the DWI Prevention Programme (driving while intoxicated – programme) and the penal accomplishment is also examined. 44 participants of the DWI Prevention Programme and 44 sentenced for drunk - driving participated in a self – completion questionnaire survey aimed to examine the DWI Prevention Programme and the respondents' attitudes towards drunk - driving, risk behavior and traffic safety. The response rate was 71 % in the DWI – sample and 96 % in the prison – sample. Multivariate analysis revealed significant differences between the DWI – sample and the prison – sample in their attitudes towards drunk - driving, risk behavior and traffic safety. The DWI – sample had more ideal attitudes towards drunk – driving, traffic safety and less risky behavior. There were also significant differences in how they evaluated their sentence and penal accomplishment. The DWI - sample were generally more satisfied with the contents of the penal accomplishment, and the way they was treated, while the prison – sample were the most dissatisfied of the samples and had the most negative evaluations concerning the sentence and penal accomplishment.

Keywords: attitudes towards traffic safety, program evaluation, drunk – driving, DWI Prevention Programme

1.0 Introduction

Drunk - driving poses a serious health threat. Driving under the influence of alcohol is strongly related to accidents (Connor et al., 2004; Horwood and Fergusson, 2000; Levitt and Porter, 1999; Morvig et al., 2004; Liourta and van Empelen, 2008). In an international study among university students from 23 countries Steptoe et al. (2004) showed that approximately 20 % of the men and 7 % of the women reported having driven under the influence of alcohol (Steptoe et al., 2004, Liourta and van Empelen, 2008). Reducing the alcohol intake to a blood alcohol content (BAC) below 0.03 mg/ml has shown to lead to a dramatic reduction in the number of accidents (Connor et al., 2004; Liourta and van Empelen, 2008). The driving while intoxicated population represents an appropriate target for secondary prevention strategies with the dual goals of reducing both incidence of subsequent driving risk and the development of more severe drinking problems (Donovan and Marlatt, 1982).

Several studies have shown that risk perceptions and attitudes contributed to risky driving behavior. Influenced drivers often perceive that their driving skills were unaffected by drugs, and that alcohol impaired performance and increased accident risk more than other types of drugs did (Albery et al., 2000; Darke et al., 2004; Matthews, Bruno, Johnston, Black, Degenhardt and Dunn, 2004, Matthews et al., 2009). Positive attitudes towards driving while intoxicated by alcohol (and other drugs), and perceptions of low likelihood of an accident (Jones et al., 2007; Matthews et al., 2009) have also been significant correlates of DWI (driving while intoxicated). Several studies have also shown that individuals less likely to drunk -drive if they perceive that there is a high risk of being detected by the police. However, this association was less clear for drug driving and the chances of being apprehended while DWI were typically perceived to be lower (Darke et al., 2004; Davey et al., 2005; Degenhardt et al., 2004; Matthews et al., 2009).

In the present study, attitudes towards drunk – driving, traffic safety and risk behavior were investigated among DWI Prevention Programme participants and those who got prison sentence after driving when influenced by alcohol. Few studies have dealt with comparison of a prison – group and a DWI – group. The studies concerning prevention were mostly about general models of prevention (not models aimed at preventing drunk – driving). The DWI – group and prison – groups' evaluation of their sentence and penal accomplishment and the survival time of the two samples were also investigated. There are also very few studies aimed at investigating programme satisfaction of prison sentence and the participation in a

DWI Prevention Programme. Consequently, this study aims to examine the participants' satisfaction of a DWI Prevention Programme.

Relationship between attitudes and behavior

Several theories have tried to explain the relationship between attitudes and behavior. Two models are often used to explain these relationships. These models are called The Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1975, Ajzen and Fishbein, 1980) and its extension The Theory of Planned Behavior (TPB) (Ajzen, 1985; Ajzen, 1991). These models are determinants of human behavior which has generated a great deal of interest within contemporary literature. TRA stated that the intentions to display certain behaviors could be predicted on the basis of the person's attitude towards that behavior and the person's personal norm concerning that behavior. In the TPB perceived behavioral control was included as a third primary predictor variable (PBC). PBC reflected the degree of control the individual perceives over performance of the behavior in question; higher perceived behavioral control over a positively evaluated behavior will be associated with stronger intentions to perform the behavior (Ajzen, 1985; Ajzen, 1991).

The TPB model is used to measure attitudes and intentions of drivers toward four driving violations; drunk driving, speeding, close following, and dangerous overtaking. Measures were taken of drivers' attitudes toward these scenarios depicting their commission of the violations. The ability of the TPB to account for drivers' intentions to commit to four specific driving violations is also assessed (Parker, Manstead, Stradling and Reason, 1992). The subjects were surveyed with a questionnaire constructed to measure attitudes toward behaviors, subjective norms, perceived behavioral control and behavioral intentions. The study concluded that the addition of behavioral control led to increments in amount of explained variance in intentions. The relation between subjective norms and behavioral intentions was consistently stronger than that between attitudes toward behaviors and behavioral intentions. (Parker et al., 1992).

Lajunen and Summala (1995) studied skill and safety – motive dimensions in drivers' self – assessments of driving abilities and investigated correlations among three driving inventories and six general personality measures. The skill and safety – motives factors were measured by a questionnaire based on work from Spolander (1993) and Hatakka et al. (1991), and explained 35 % of the variance in the questionnaire. Driving experience was a significant predictor of safety and skill- oriented driving; experienced drivers assessed themselves to be

more fluent in handling the car, but lower in safety aspects of driving. The skill scale correlated strongly with scales expressing an emotional attitude to driving and with a sense of coherence.

Hauge (1978) carried out an investigation about people's attitudes towards drunk - driving through public opinion polls. The respondents perceived drunk - driving to be a serious offence. The situation today seems to be that the majority of the public accept the legal blood alcohol limit and the breath tests and blood samples (Hauge, 1978). When it comes to breath tests, the majority were asked in favor of an extension of the present practice (Hauge, 1978). They think it is acceptable that the police have the right to impose a test even though they have no reason to suspect that the driver of the motor vehicle is influenced by alcohol. But the opinion about the imprisonment and the driving license disqualification was split. Some of the people accept imprisonment in certain cases, but they feel that driving license disqualification is a more severe sanction than imprisonment (Hauge, 1978). It was also a split opinion about the fine they had to pay. A large majority of the people asked were not willing to pay more than a sum amounting to between 14 days and one month's wages in order to avoid 21 days imprisonment for driving under the influence of alcohol (Hauge, 1978). In addition, attitudes, risk judgments and perception of hazards are related to traffic safety.

The DWI Prevention Programme in Norway

In Norway, the DWI Prevention Programme is an alternative to unconditional prison – sentence by violation of the Norwegian road traffic act § 31, cf. § 22, 1st paragraph. By an excessive blood – alcohol level above 1.5, an offer of participating in a DWI Prevention Programme are presented (in addition to a fine). It started as a trial arrangement in 1996, but from 2003 the DWI Prevention Programme were extended to all countries in Norway. The aim of the DWI Prevention Programme is to counteract drunk –driving and to create a safer traffic environment and reduce the number of traffic accidents. The programme aims to get drivers not to drink alcohol before and when they are driving (Danielsen, 2003). The programme is a tertiary intervention that is concerned with reducing recidivism, in which the offender is given a court sentence which may take the form of a fine or may involve some attempt at rehabilitation (e.g the DWI Prevention Programme) (Mann, Leigh, Vingilis, Geniva, 1983).

The programme consists of four elements; (1) lessons, (2) treatment, (3), individual conversations, and (4) control of the accomplishment. The DWI Prevention Programme

contain of 20 – 30 hours with conversation – oriented lessons divided in two and three months. The lessons can be given either individually or in groups. The lessons focus on giving the participants insight into what gets them to drive when influenced by alcohol and what they can do to avoid another influenced driving. They also get asked to think through their own use of alcohol and their own attitude when it comes to drunk – driving. They get knowledge about reasons for drunk – driving and the consequences of it. The adviser also tries to motivate the participants to give up future drunk – driving and get challenged on their attitudes to make conscious and make responsible their own actions. They also learn strategies to avoid driving when influenced by alcohol. In addition to the individual conversations, there is also going to be completed a treatment of the alcohol abuse (Danielsen, 2003).

One of the aims of the individual conversation (motivational interviewing) is to motivate the participant to change. Motivational Interviewing is a practical method that was developed with reference to cure people from alcohol abuse. Because the method has been so practical and easy to use, it has untaught an extension to several fields, and the results have been good (Ingebrigtsen and Horverak, 2000). It also focuses on the relationship between the adviser and the participant of the programme. According to Michael and Rollnick (1991), the ability to create a good atmosphere in the conversation is important to affect the persons' motivation to change. If you attach the importance of creating an atmosphere and empathy, support and exploration, the sentenced would be in better shape to openly explore their experiences and find solutions of their own problems. This is a very important part of motivational interviewing (Michael and Rollnick, 1991; Danielsen, 2003).

The method can be presented as a client-centered conversation style. It is made to help clients explore and reveal ambivalence in pursuant to their own problem behavior. A superior aim in motivational interviewing is to motivate the individual to promote a wish to change their behavior. The method also focuses on an understanding of the process of change, and has an aim to get the client to reflect on their worries when it comes to their own problem behavior, but also express arguments for change (Ingebrigtsen and Horverak, 2000).

Motivational interviewing implies; (1) an understanding around the concept “*change*” and how ready they are to change, (2) avoiding argumentation and resistance, (3) encouraging the client to express both sides of the ambivalence and arguments for change, (4) contributing to an open and safe conversation environment. This method aims to strengthen the client through

building the motivation up for change. It also wants to help the client to start an initiative that leads to change of unwanted behavior.

Attitude change

To change behavior is a long and demanding process. A lot of people's attitude is automated and is also imprinted of cognitive associations that attach the concrete situation to early experiences. These associations are frequently unconsciously and results that the brain activates behavior before the person get the opportunity to reflect what started this particular action. To change behavior it is necessary to restructure both unconscious and conscious cognitive functions. The premise for a successful change is to explore what behavior that should change, argue why change is necessary and how you can attain the aim of lasting behavior change (Ingebrigtsen and Horverak, 2000).

The criminal administration system uses a trans-theoretical model of Prochaska and DiClemente (1982, 1983; Ingebrigtsen and Hoverak, 2000) that describes how individuals generally undergo several repeated cycles when the search for durable behavior change. There are five stages; (1) *Pre-contemplation*, the individual has no wish for change. It may be because the person do not realize what the problem is or because the problem is ignored, (2) *Contemplation*, the individual has started to think about change and is a bit worried about the problem, but there is still ambivalence. This phase can be a time-consuming process because the individual has to admit the problem and accept a certain responsibility for the discomfort that is caused by the problem and for the consequences the problem bring. The individual also has to experience a need for change, (3) *Preparation*, the individual has decided to start an attempt to change. They have plans, but the plans are not tried out yet, (4) *Action*, the individual tries out the plans from the preparation stage, (5) *Maintenance*, tries to maintain the new behavior or lifestyle without the previous behavior (Ingebrigtsen and Horverak, 2000).

There is a possibility for relapse in both stage four and five. A relapse is not threatening itself for the new behavior, but can make the individual see the risk for relapse and give more motivation for further work. However, a relapse can also hasten another relapse, and then result that the individual go back to old problem behavior. People can go back and forth in the cycle, but some of them can stagnate in a particular stage. This can be the result of fear to change, physical barriers or that the individual don't know suitable strategies for change (Ingebrigtsen and Horverak, 2000).

Prison and deterrence

There have been discussions in the in the relapse and prison field if prison – sentence have a deterrent effect on the sentenced, and if people who serve a sentence for drunk – driving or other sentences have a greater probability to repeat their actions compared to rehabilitation. Deeply rooted in the rational choice model, the conception of crime deterrence postulates that human beings weigh both positive and negative consequences of their actions and take advantage of criminal opportunities only if it is in their self – interest to do so (Cook, 1980; Yu, Evans and Clark, 2006). Gibbs (1975) defined deterrence as “*the omission of an act as a response to the perceived risk and fear of punishment for contrary behavior*” (Gibbs, 1975; Yu, Evans and Clark, p.165, 2006). Thus, other things being equal, an increase in the level of punishment for a particular type of crime reduces the rate at which that crime is committed. There are basically two types of deterrence, *general* and *specific*. The former indicates that sanctions of criminals generate fear of punishment in the general public, thus preventing individuals from becoming criminals; the latter means that criminals’ own experiences of punishment increase their fear of punishment, which reduces their chances of involvement in future law violation (Liska, 1987; Nagin, 1998; Yu, Evans and Clark, 2006). The deterrence theory specifies three key factors that influence individuals’ involvement in law violation, namely, the *celerity*, *certainty*, and *severity* of punishment.

Researchers have been interesting to investigate if prison – sentence (also fines, confiscation of the drivers license and so on) have a deterrent effect on repeat drunk –drivers. Researchers have frequently challenged the deterrence theory: for some crimes, certain, harsh, and swift sanctions do not seem to significantly reduce the levels of recidivism (e.g., Paternoster, 1987; Pogarsky, 2002; Yu, Evans and Clark, 2006). Even with dramatic increases in the level of punishment, high recidivism rates were reported among drink – driving offenders (Simon, 1992; Yu and Williford, 1991; Yu, 2000).

Research by Yu, Evans and Clark (2006) focused on the typical sanctions for drunk – driving (i.e., fine, license actions, and jail sentences) and reported sporadic effect patterns of sanctions on drunk – driving recidivism. They also found that fines showed some impact on drunk – driving recidivism in European countries in several early studies (Homel, 1981; Votey and Shapiro, 1985; Yu, Evans and Clark, 2006), but the handful of studies in the U.S. indicated lack of such effects. Jail confinement has not been deemed a significant deterrent measure because of the reluctance of judges to apply jail sentences to drunk – driving offenders (e.g., Nagin, 1998; Ross, 1992; Yu, 2000; Yu, Evans and Clark, 2006).

One main reason for the failure to produce consistent results with sanctions for drunk – driving offenses may be attributed to the absence of the consideration of offenders' addiction problems. Addiction theorists have long been questioning the extent to which addicts, whether they are addicted to substances, gambling, food, or sex can effectively make rational choices to avoid negative consequences as a result of their addictive behavior (Becker and Murphy, 1988; Elster and Skog, 1999; Yu, Evans and Clark, 2006). Researchers have found that especially repeat drunk – drivers tend to display more severe alcohol problems than other criminals. Snowden et al., (1986) reported that convicted drunk – driving offenders were likely to use alcohol frequently and in large quantities and tended to show signs on alcohol problems (Snowden et al., 1986; Yu, 2000). Among known drunk – driving – offenders, Grunewald et al., (1990) noted a high likelihood of continued drinking after the consumption of one alcoholic beverage (Grunewald et al., 1990; Yu, 2000). Controlling high – risk driving behavior, Yu and Williford (1993) examined the relation between problem drinking and repeat drunk – driving offenses and reported that problem drinking significantly increased the chance of drunk – driving recidivism (Yu and Williford, 1993; Yu, 2000). Since the deterrence theory postulates that the fear of punishment is produced by individuals' rational thinking, it appears reasonable to argue that when offenders are addicted to one or several substances (in the current case, alcohol), their rational thinking process tends to be interrupted, and they are likely to commit multiple offenses regardless of their past experiences with certain, severe, and swift punishment for the crime. There may be two negative factors in the recidivism process for addiction involved crimes, especially for drunk – driving: recidivism is decreased by sanctions, but increased by offenders' alcohol addiction problems (Yu, Evans and Clark, 2006).

Taxman and Piquero (1998) focused on the relative merits of punishing and rehabilitating drunk – driving offender by incorporating for both conditions in the analysis. The findings indicated that alcoholism rehabilitative programs reduced drunk – driving recidivism (Taxman and Piquero, 1998; Yu, 2000). Also Wells – Parker et al. (1995) found that compared with standard sanctions (i.e., jail or fines) or no treatment, rehabilitation generated a 7 – 9 % reduction in the incidence of alcohol – related driving recidivism and crashes when averaged across all typed of offenders' rehabilitation. They also indicated that treatments combining punishment strategies, education, and therapy with follow-up monitoring and aftercare were more effective for first – time as well as repeat offenders than any single approach (Wells – Parker, 1995; Hingson, Timothy and Winter, 1999).

“Trafikk og rus” in Norwegian prisons

In Norway there is a possibility for people sentenced for drunk – driving to talk about their illegal action even if they get prison – sentence. The prisoner that gets sentenced for intoxicated driving (alcohol or drugs) gets an offer to participate in a two – day – conversation programme entitled “Trafikk og rus”. The goal of the course is to make the prisoner conscious of the consequences of driving while intoxicated, so that the prisoner would not drink – drive again. The programme goes on for 12 – 40 hours spread over two days. Specific contents of the programme is legal framework and its history, myths and realities of alcohol, occasion of intoxicated driving, knowledge about intoxicating substances, the effects of alcohol use and so on. This is only a “short version” of the DWI Prevention Programme given to those who do not get an opportunity participating in the DWI Prevention Programme. The lesson part of the DWI Prevention Programme is based on ”Trafikk og rus”, but have been extended and further developed by the criminal administration system (Kriminalomsorgen, 2010) . “Trafikk og rus” was evaluated by Wessel, Mitseim and Thorsen (2008). They interviewed six participants. The participants reported that they got new knowledge about traffic safety and consequences about risky driving. They also found it useful to hear other telling their stories and it got them to think about their own drinking – and acting pattern. Also the movie showing traffic accidents was found useful and gave them something to think about. They also felt that they got new knowledge about drunk – driving and it made them reflect about their current situation and the future. Three out of six felt that two days was enough, but the remaining three wanted longer courses so they could let the information “sink more in” over time. Over half of the participants said that they would not drunk – drive again, but some of them said that it is easy to forget oneself when after drinking alcohol (Wessel, Mitseim and Thorsen, 2008).

The sentence/penalty for driving while intoxicated in Norway

In Norway, the sentence /penalty for driving while intoxicated is strict. For the police, observation of the drivers who drive under influence of alcohol and other intoxicating substances is an important and preferred commission. The probability for an arrest when driving while intoxicated is real and probably bigger than the probability for an arrest for other violations of the law. The penalty/sentence in this case can be:

Penalty

According to the legal amendment from 1988, the drunk – driver shall pay a fine even if the driver got a conditional or unconditional sentence. As a guiding norm, the size of the fine was set to 1,5 times gross monthly salary and that it should be over 10 000 NOK. The court of justice has taken in consideration the convicted economical situation and can not follow the suggested norms slavish (Rusmiddeldirektoratet and Transportøkonomisk institutt, 1995).

Conditional and unconditional sentence

The change of the legislation in 1988 also implied a differentiation of the sentence in accordance with the excessive blood alcohol level. With excessive blood alcohol level between 0,5 and 1,0, the sentence is conditional, and between 1,0 and 1,5, the sentence is either conditional or unconditional and between 1,5 the sentence was unconditional. This is concerned with drivers who were not sentenced for drunk - driving earlier (Rusmiddeldirektoratet and Transportøkonomisk institutt, 1995).

Previous evaluation of the DWI Prevention Programme in Norway

There has been one well - known evaluation study of the contents and satisfaction of the DWI Prevention Programme in Norway after the start of the Programme in 1996. This evaluation study was carried out by Kristoffersen (1999). In this evaluation study, 126 respondents sentenced for drunk – driving completed a questionnaire. There were also some participants interviewed. The participants' feedback of the satisfaction of the DWI Prevention Programme was in general very positive, but compared to ordinary sentence, the program was seen as more exacting. The reported alcohol consume after accomplishment of the programme showed a substantial reduction compared to the time before they participated in the programme. Over half of the respondents reported that they did not want to drink – drive again, and the rest of the respondents said that the probability for another drink – driving is small. Of the 79 participants that completed the DWI Prevention Programme a year after, there were only registered three relapses (Kristoffersen, 1999).

Drunk – driving is frequently a symptom of other problems, where the alcohol problem is not necessarily the most important of them all. It seems like the programme in some degree catches the persons that need different forms of support, and that is about to develop severe alcohol problems. The programme can also have a possible preventive effect on other problems than alcohol abuse and drunk – driving (Kristoffersen, 1999). In Kristoffersens'

study there were asked about the general impression of the lessons and treatment. The respondents answered that they in general were very satisfied with the lessons given in the DWI Prevention Programme. They thought the lessons were very interesting and informative. When asked if the treatment programme had an importance for the change of alcohol habits, the majority answered that it had.

1.1 Aims of the Study

The specific aim of this study is to examine attitudes towards drunk - driving, risk behavior and traffic safety. A direct evaluation of the contents of the DWI Prevention Programme and the penal accomplishment is also examined. Based on earlier evaluation studies these hypotheses are made:

- a) Attitudes towards drunk - driving will be significantly more ideal among the respondents in the experimental group (DWI Prevention Programme) compared to the control group (Prison Sentence).
- b) Attitudes towards traffic safety and risky driving behavior in general will be significantly more ideal in the experimental group compared to the control group.
- c) The participants in the DWI Prevention Programme are more satisfied with their sentence and penal accomplishment compared to the prison – group.

2.0 Method

2.1 Sample

A self – completion questionnaire survey was carried out among participants of a Norwegian DWI Prevention Programme (former and current participants) ($n = 44$) and prisoners in Verdal prison sentenced for drunk - driving ($n = 44$). The response rate among the DWI- Prevention Programme participants was 71%. In the DWI- sample some of the questionnaires were sent out by mail to previous participants from the programme. In the prison sample the response rate was 96 %.

All participants were informed that answering the questionnaire was voluntary and that the material would be treated confidential. All respondents were also given information about the study's purpose. All of the respondents went through the DWI Prevention Programme or had finished the programme in the latest years.

In the DWI - sample there was 11 % women and 89 % men. The age was divided into four groups; under 25 (32 %), from 25 – 34 years (21 %), 35 – 44 (21 %) and over 44 years (26 %). In the prison – sample there was 13 % women and 87 % men. The age was divided into the same groups as in the DWI – sample. Here 14 % was under 25 years, 24 % was between 25 – 34, 14 % of the sample was between 35 – 44 and 48 % was over 44 years.

To get permission to collect data (transcripts of criminal convictions and self – completion survey), an application was sent to NSD (Norwegian Social Science Data Services) and the Criminal Administration System for the north region. The approval has been given from both NSD and the Criminal Administration System.

Questionnaire

The questionnaire asked the respondents to answer questions about their direct evaluation of the penal accomplishment, direct evaluation of the DWI Prevention Programme, alcohol use the last month, traffic safety, risk behavior and demographical and other background information (see appendix 1). It was deliberate made short (six pages) so the response rate would be as high as possible.

Demographical characteristics consisted of gender, age, marital status and education level. Other background information consisted of questions about previous sentences (other criminal action or DWI sentence) and whether the sentence was conditional or unconditional.

Alcohol Use Disorder Identification Test (AUDIT) (Babor, Higgins-Biddle, Saunders and Monteiro, 1992) was utilized to measure alcohol- consumption the last month. The instrument consisted of 10- items, and had response categories ranging on a five-point scale from *never* to *four times a week or more*.

A self – reported questionnaire comprised of 16 variables measured attitudes related to traffic safety issues such as rule violations and speeding, other people’s driving, the combination of drinking and driving etc. (see appendix 1). A total of 7 variables were added to the measure instrument to examine attitudes towards drunk – driving. A five-point evaluation scale was applied, and the response options were as follows: ‘*strongly agree*’, ‘*agree*’, ‘*neither agree nor disagree*’, ‘*disagree*’, ‘*strongly disagree*’. The measurement instrument was developed and validated by Iversen and Rundmo, 2004.

A self – reported questionnaire about risk behavior comprised 24 items related to violations of traffic rules and speeding, reckless driving, not using seat belts, cautious and watchful driving, drinking and driving, attentiveness to others in traffic and driving below speed limits (see appendix 1). The respondents were asked to assess how often they carried out each of the activities. A five point evaluation scale was used, with the following options: ‘*very often*’, ‘*often*’, ‘*sometimes*’, ‘*seldom*’ and ‘*never*’. Most of the items measuring both attitudes and behavior were based on previous validated scales, evaluated in a Norwegian population, and focusing mainly on violations (developed and validated by Iversen and Rundmo, 2004).

Table 1: Table 1 shows the number of test elements from each measuring instruments used in the questionnaire, Cronbach's α , Average Item – total and Pearson's r correlation.

Evaluation	Number of test elements	Cronbach's α	Average Item-total
The sentence/penal accomplishment			
Evaluation of the sentence	5	.806	.59
Evaluation of the penal accomplishment	4	.783	.53
Attitudes towards traffic safety			
Rule violations	6	.827	.51
Attitudes towards riding with an intoxicated driver	5	.841	.65
Alcohol use	4	.766	.58
Traffic rules	3	.509	.34
Riding with...	2	.534	.36
Risk behavior			
Speeding and rule violations	7	.870	.65
Speed reduction	6	.845	.63
Alcohol use	5	.728	.52
Distraction and inattention	3	.772	.61
Speed limits	3	.499	.34

* $p < .05$, (2-tailed), ** $p < .01$ level, (2-tailed)

Table 1 shows Cronbach's α and Average Item – total from the respondents' evaluation of the penal accomplishment, traffic safety and risk behavior. Some scientists use a rule of thumb for the Cronbach's α . It requires a reliability of .70 or higher before the instrument is worth using. The more test elements used, the higher is the Cronbach's α . The best Cronbach's α we found in the dimension "speeding and rule violations", that contained 7 test elements with a Cronbach's α at .87. Also "attitudes towards riding with an intoxicated driver" had a high Cronbach's α at .84 with 5 test elements. This means that the internal consistency and the reliability were high in both dimensions. The strong effect indicated a perfect positive linear relation. In "traffic rules" and "riding with.." we only had 3 and 2 test elements, and a

Cronbach's α at .50 and .53. This was a very low Cronbach's α , meaning that these two test elements had a low internal consistency and reliability.

Table 2: Table 2 shows Pearson's r correlation of the five dimensions concerning attitudes towards traffic safety.

Pearson's r correlation	1	2	3	4	5
Attitudes towards traffic safety					
1. Rule violations					
2. Attitudes towards riding with an intoxicated driver		-.23*			
3. Alcohol use	.33**	-.45			
4. Traffic rules	.45**	-.19	.25*		
5. Riding with...	.32**	-.28**	.44**	.23*	

* $p < .05$, (2-tailed), ** $p < .01$ level, (2-tailed)

Due to the fact that all the five dimensions intended to measure attitudes, we expected them to be significant correlated, however not strongly. As can be seen in table 2, this was also the case. The results indicates that they all measure attitudes, but various dimensions of attitudes. The strongest relationship was found between alcohol use and attitudes towards riding with an intoxicated driver (-.45). However, the two dimensions are conceptually very different and therefore we decided to keep them as two dimensions.

Table 3: Table 3 shows Pearson's r correlation between the five dimensions concerning attitudes towards risk behavior.

Pearson's r correlation	1	2	3	4	5
Risk behavior					
1. Speeding and rule violations					
2. Speed reduction		-.05			
3. Alcohol use	.47**	.00			
4. Distraction and inattention	.41**	-.11	.43**		
5. Speed limits	.16	.39**	.06	.00	

* $p < .05$, (2-tailed), ** $p < .01$ level, (2-tailed)

In table 3 we also expected the five dimensions to be significantly correlated. They were neither not strongly correlated. The results indicates that they all measure risk behavior, but various dimensions of risk behavior. The strongest correlation we find between alcohol use and speeding and rule violations (.47).

2.2 Statistical Analysis

Cronbach's α and mean corrected inter – item correlation was used to test the reliability and internal consistency of the self – reported questionnaires. Factor analysis with oblimin rotation was applied to detect the underlying dimensions of attitudes as well as risk behavior (Rundmo and Iversen, 2004). Factor analyses were performed by examining the pattern of correlations (or covariates) between the observed measures.

To measure effect size, Pearson's r was used. Pearson's r can vary in magnitude from -1 to 1 , with -1 indicating a perfect negative linear relation, 1 indicating a perfect positive linear relation, and 0 indicating no linear relation between two variables.

Multivariate analysis of variance (MANOVA) was applied to test whether or not there were significant differences in the two samples, DWI Prevention Programme – sample and prison – sample. MANOVA gives overall tests of the effects of dimensions. This may serve to ensure against inflation in the probability of type I errors as the number of criteria increase. In addition, the MANOVA estimates take into account the association amongst the criterion variables. MANOVA also makes it possible to estimate discriminate functions that can be interpreted as latent variables tapped for the individual scales (see e.g. Rundmo and Skorpe Tennfjord, 2007). The effect size was computed using Cohen's d . According to Cohen (1969) $d = .20$ indicates a small effect size, $d = .50$ a medium effect size and $d = .80$ a large effect size (J. Cohen, 1969).

3.0 Results

3.1 Evaluation of the treatment, DWI Prevention Programme vs. prison sentence

Table 4: Differences in programme evaluation between the DWI Prevention Programme – sample and the prison – sample is with their penal accomplishment (results of MANOVA).

	Satisfied	Neither/nor	Dissatisfied	Mean (SD)	F-value	Sig.
How satisfied are you with the contents of your penal accomplishment?					37.20	.000
Prison – sample	34 %	5%	61%	3.25 (.83)		
DWI – sample	58%	33%	9%	4.23 (.61)		
How satisfied are you with the way you have been treated?					12.43	.001
Prison – sample	46%	27%	27%	3.93 (.87)		
DWI – sample	27%	64%	9%	4.55 (.66)		
How satisfied are you with the relationships where you are now?					14.04	.000
Prison – sample	56%	2%	40%	3.42 (.85)		
DWI – sample	52%	30%	18%	4.09 (.74)		

Wilks' $\lambda = .66$, $p < .001$, dissatisfied = interger 1, satisfied = integer 3

Table 4 shows the percentage of how satisfied the two samples are with their penal accomplishment. The lower mean, the more dissatisfied the samples are. The question “*How satisfied are you with the contents of your penal accomplishment?*” showed that 58 % from the DWI – sample were satisfied with the contents of the penal accomplishment, and 33 % were not sure what they think about contents of the penal accomplishment ($M = 4.23$, $SD = .83$). Of the prison – sample there were 61 % that was dissatisfied and 34 % that was satisfied ($M = 4.23$, $SD = .61$). $F = 37.20$, $p < .000$. Here we can conclude that the DWI – sample were more satisfied with the contents of the penal accomplishment compared to the prison – sample. The question “*How satisfied are you with the way you have been treated?*” showed that 46 % of the prison – sample was satisfied with the way they was treated. 27 % either had no opinion of the question or was dissatisfied with the way they had been treated ($M = 3.93$, $SD = .87$). In the DWI – sample, there was 64 % that had no opinion of the question

compared to 27 % that was satisfied and 9 % that was dissatisfied ($M = 4.55$, $SD = .66$). $F = 12.43$, $p < 0.000$. Here the percentage of satisfied people was higher in the prison – sample than the DWI – sample, but the mean was lower in the prison – sample compared to the DWI – sample. Why the percentage and the mean did not go together may be a coincidence. There were altogether fewer that are dissatisfied in the DWI – sample compared to the prison – sample, ergo the DWI – sample are the most satisfied of the two samples. The last question “*How satisfied are you with the relationships where you are now?*” the prison – sample had 56 % that was satisfied with the relationships where they are now, and 40 % that was dissatisfied ($M = 3.42$, $SD = .85$). The DWI – sample had a percentage of 52 % that was satisfied and 18 % that was dissatisfied. 30 % had no opinion of the question ($M = 4.09$, $SD = .74$). $F = 14.04$, $p < .000$. Here there were more dissatisfied in the prison – sample compared to the DWI – sample. The mean was higher in the DWI – sample, this means that the DWI – sample was more satisfied with the relationships where they are now. All of the questions asked were significant ($p < .001$).

Table 5: Means and percent of the two dimensions indicating whether they are positive, neither/nor or negative to the penal accomplishment/sentence.

	Positive	Neither/nor	Negative	Mean (SD)	F – value	Sig.
Dim 1: Evaluation of the sentence					1.12	.354
DWI – sample	53%	18%	29%	3.62 (.71)		
Prison – sample	45%	21%	34%	3.47(.62)		
Dim 2: Evaluation of the penal Accomplishment					4.30	.000
DWI – sample	59%	13%	28%	3.42 (.47)		
Prison – sample	26%	33%	41%	2.77 (.51)		

Wilks' $\lambda = .76$, $p < .001$, negative evaluation = 1, positive evaluation = 3.

Table 5 shows the percentage of both samples evaluation of the sentence and evaluation of the penal accomplishment. The lower mean, the more negative they were. The 1st dimension, *evaluation of the sentence*, 53 % of the DWI – sample was satisfied ($M = 3.62$, $SD = .71$) while 45 % of the prison – sample ($M = 3.47$, $SD = .62$) was satisfied. More people of the prison – sample (34 %) was negative compared to the DWI – sample (29 %). $F = 1.12$, $p > .05$. In the 2nd dimension, *evaluation of the penal accomplishment*, 59 % of the DWI – sample ($M = 3.42$, $SD = .47$) was satisfied, while 26 % of the prison – sample ($M = 2.77$, $SD = .51$) was satisfied. There were more people in the prison – sample that was negative to the penal accomplishment (41 %) compared to the DWI – sample (28 %). $F = 4.30$, $p < .000$

Table 6: Mean showing the drinking pattern last month.

	Never	Once a week or more seldom	2-4 times a month	2-3 times a week	4 times a week or more
How often have you been drinking alcohol last month?					
DWI – sample	17%	14%	52%	7%	10%
Prison – sample	9%	26%	37%	21%	7%
	1-2 units	3-4 units	5-6 units	7-9 units	10 units or more
How many units of alcohol are you drinking on a typical “drinking day”?					
DWI – sample	11%	22%	30%	21%	16%
Prison - sample	21%	15%	15%	28%	21%

In the questionnaire, the two samples were asked questions about their drinking patterns the last month. It was assumed that the prison – sample would not answer the part about alcohol last month since they serve a sentence in prison where no alcohol is allowed. But some of the prisoners did answer the questions about alcohol use the last month. Table 4 shows how often they have been drinking the last month and how many units they have been drinking on a typical “drinking day”. In the DWI – sample, 17 % and 9 % of the prison – sample answered that they never drink. Surprisingly, the prison – sample had a high percentage of prisoners answered that they had been drinking 2-4 times a month. In the DWI – sample 52 % answered that they drink 2-4 times a month. The question about drinking units showed that 11 % of the DWI – sample and 21 % of the prison – sample answered that they are drinking 1-2 units on a typical “drinking day”. 30 % of the DWI – sample are drinking 5-6 units, and 28 % of the prison – sample are drinking 7-8 units.

3.2 Participants' evaluation of the DWI Prevention Programme.

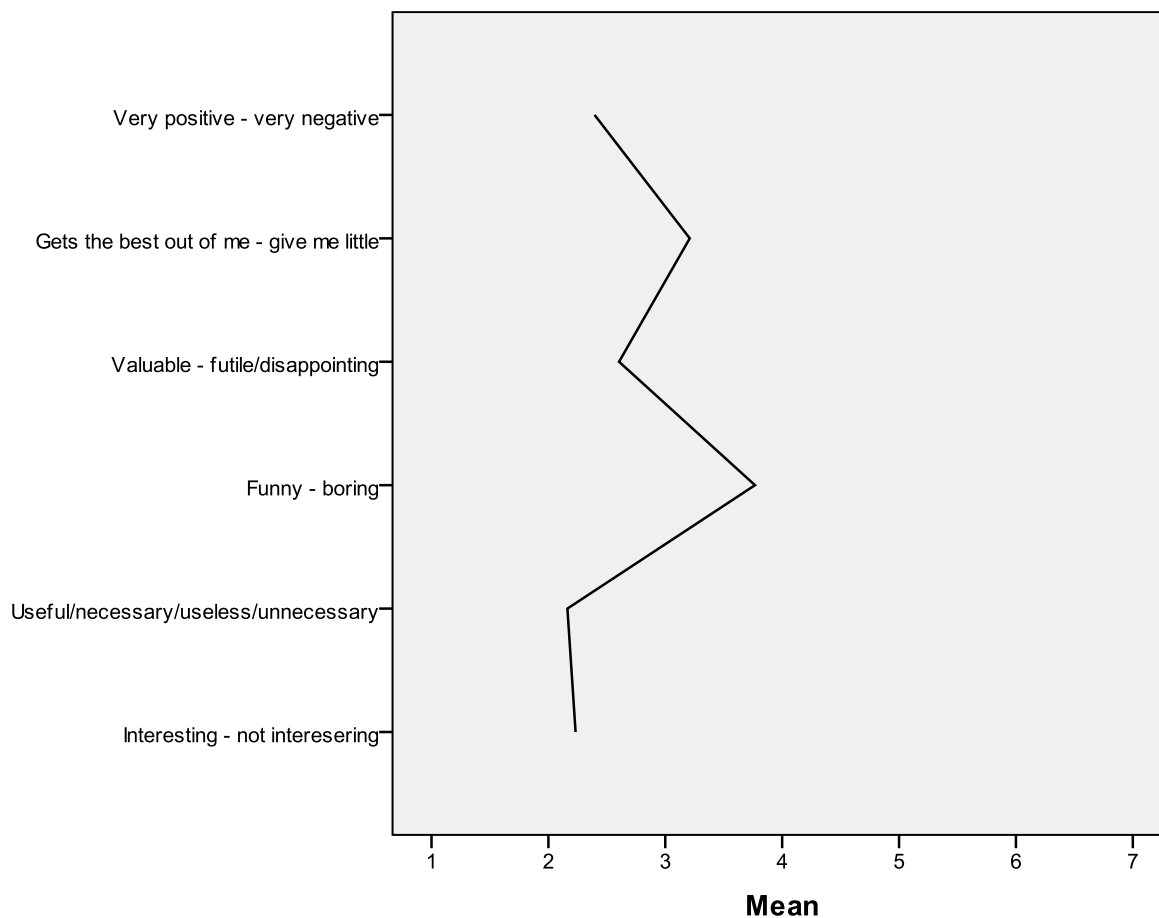


Figure 1: The figure shows the mean of the evaluation of the DWI Prevention Programme

Figure 1 shows how the participants in the DWI Prevention Programme evaluated the programme in general. The question was “*How do you evaluate the Driving While Intoxicated Prevention Programme in general?* “. The participants answered on a seven – point scale, ranging from 1 (positive) to 7 (negative). The figure showed that several of the respondents found the programme interesting. They also found it useful/necessary, valuable and very positive. On the other hand, when they were asked if the programme “*gets the best out of me/give me little*” and if they find the programme “*funny/boring*”, they rated it moderate. This was as expected (the programme do not try to be either very funny or very boring).

Table 7: Showing how satisfied the DWI – sample was with the DWI Prevention Programme.

	Satisfied	Either/or	Not satisfied
How satisfied are you with the lessons of the DWI Prevention Programme?	85%	12%	3%
How satisfied are you with the individual conversations of the DWI Prevention Programme?	94%	6%	
How satisfied are you with the contact with the treatment device of the DWI Prevention Programme?	94%	3%	3%
How satisfied are you with the completion of the DWI Prevention Programme?	83%	13%	4%
How satisfied are you with the information you got before you started the DWI Prevention Programme?	80%	16%	4%

The table gives an overview in percent of how satisfied the participants in the DWI Prevention programme were with the different parts of the programme. The participants were in general very satisfied with the lessons, individual conversations, contact with the treatment device, the DWI completion and the information they got before they started the programme. The participants were especially satisfied with the individual conversations and the contact with the treatment device (both with 94 %). There were also many that answered neither/ nor, indication that they did not have any opinion about the questions. Very few (3 – 4%) were not satisfied with the parts of the programme asked in the questionnaire.

3.3 Differences in attitudes towards traffic safety and self – reported risk behavior: DWI group and prison group compared

Table 8: Means, standard deviation, F – values and Cohen’s *d* for the DWI – sample and the prison – sample concerning attitudes towards traffic safety and risk behavior.

	DWI –sample Mean (SD)	Prison – sample Mean (SD)	F-value	Cohen’s <i>d</i>	Sig.
Attitudes towards traffics safety:					
Rule violation	3.69 (.81)	3.27 (.71)	1.95	.55	.04*
Attitudes towards riding with an intoxicated driver	1.52 (.62)	1.98(.88)	1.63	-.06	.11
Alcohol use	4.54 (.76)	4.09 (.72)	1.49	.60	.15
Traffic rules	3.15 (.66)	2.92 (.78)	2.14	.31	.02*
Riding with...	4.11 (.83)	4.02 (.72)	.63	.11	.79
Risk behavior:					
Speeding and rule violation	3.67 (.67)	3.48 (.69)	1.95	.27	.04*
Alcohol use	4.60 (.51)	4.20 (.70)	1.75	.65	.08
Distraction and inattention	4.09(.70)	4.33 (.59)	.81	-1.91	.00**
Speed limits	3.71 (.55)	3.51 (.72)	2.59	.31	.00**

* $p < .05$; ** $p < .01$; $p < .001$; Wilks’ $\lambda = .615$, $p < .01$

Table 8 shows the differences in traffic safety, risk behavior and evaluation of the sentences between the DWI Prevention Programme – sample and the prison – sample. The scale used was a five – point scale ranging from 1 – 5, where 1 mean “*totally agree*” and 5 means “*totally disagree*”. The mean in the category “*Traffic safety*” showed that when it comes to attitudes towards traffic safety, the DWI Prevention Programme – sample in general had more positive attitudes towards safe driving. The DWI Prevention Programme – sample had the highest scores in rule violation, alcohol use, traffic rules and riding with..., but had the lowest score in attitudes towards riding with an intoxicated driver. In the second category “*Risk behavior*”, the mean in the DWI Prevention Programme – sample also showed that the participants had more ideal attitudes towards traffic safety. The DWI Prevention Programme had the highest scores in speeding and rule violation, alcohol use and speed limits, but when it

came to distraction and inattention, the mean was lower in the DWI Prevention Programme – sample. This means that the prison- sample had the most ideal attitudes when it came to distraction and inattention.

Examining the two samples about their attitudes towards traffic safety, risk behavior and evaluation of the sentences, MANOVA was conducted with the three variables just mentioned as dependent variables. The independent variables were if they were in the DWI Prevention Programme or in prison, if they earlier had been sentenced for crime and if they earlier had been sentenced for drunk - driving. The effect size was also examined using Cohen's d to measure the relationship between two variables. When it came to the category "*Traffic safety*", the effect size of rule violation showed a medium effect (Cohen's $d = .55$). Attitudes towards riding with an intoxicated driver showed a Cohen's d at $-.06$. The effect here went in a negative direction. Alcohol use showed a medium effect (Cohen's $d = .60$). Traffic rules showed a small effect (Cohen's $d = .31$), and riding with.. showed a very small effect (Cohen's $d = .11$). In the category "*Risk behavior*" the effect size of speeding and rule violation (Cohen's $d = .27$) and speed limits (Cohen's $d = .31$) showed a small effect. Alcohol use showed a medium effect (Cohen's $d = .65$). Speed reduction showed a Cohen's $d = -.01$. The effect went in a negative direction. Distraction and inattention had a Cohen's $d = -1.91$. In the last category "*Evaluation of the sentence*", the sentence showed a low effect (Cohen's $d = .22$). The evaluation of the penal accomplishment showed a very strong effect since the effect size number was over one (Cohen's $d = 1.32$).

An additional MANOVA analysis was carried out with alcohol consumption, dimension 1 (evaluation of the sentence) and dimension 2 (evaluation of the penal accomplishment) as covariate. The results were identical with the 1st analysis. It was no overall differences depending on the evaluation of dimension 1 (Wilks' $\lambda = .89$, $p < .10$) and dimension 2 (Wilks' $\lambda = .89$, $p < .10$). The scale was re-coded into 3 groups. The less the consumption of alcohol, the more ideal was the attitudes, and the less risky driving behavior was reported.

4.0 Discussion

The core aim of this study was to examine attitudes towards drunk – driving, risk behavior and traffic safety and to examine the direct evaluations of the sentence and penal accomplishment of the participants of the DWI Prevention Programme and those sentenced for an unconditional sentence after driving when influenced by alcohol. The hypothesis that was displayed earlier based on previous studies suggested that attitudes towards drunk – driving, traffic safety and risky driving behavior were more ideal among those who participated in a DWI Prevention Programme compared to those who got prison - sentence. Since there are not found any previous studies that examine attitudes towards drunk – driving, traffic safety and risky driving behavior among prisoners and a group of people receiving rehabilitation (e.g. DWI Prevention Programme), there was not possible to find any support of these research questions. The studies found that dealt with attitudes towards drunk – driving were only the general populations attitudes and not the to specific groups' attitudes (a prisoner – group and a rehabilitation - group).

The evaluation of the DWI Prevention Programme pointed out that the participants in general were very satisfied and positive to the programme. This support a previous study completed by Krisoffersen (1999) indicating that the participants were very positive to the programme. The results showed that the participants in the DWI Prevention Programme found the programme valuable, useful and very positive. The participants were satisfied and positive to the programme. The programme in general had a positive effect for those participating. There may be several reasons why the participants were satisfied. When participated in the DWI Prevention Programme, the participants got an opportunity to have a focus of the process of attitude change (motivational interviewing). They also got the chance to work positively and constructively to change the attitude that led to drunk – driving. Increased skills of how to think and solve problems was also in focus. The convicted got the responsibility to define his/her own problems and decide what he/she should do with it. There were also a focus on finding strong sides with the convicted and they also got the opportunity to practice on different skills. In the lessons, the participants got insight in why they were drunk – driving, what they could do to avoid drunk – driving and knowledge of the reasons and consequences for drunk- driving. When focused on personal skills, motivation, consequences and so on, the DWI Prevention Programme participants had a greater chance for changing the disadvantageous attitude that triggered the drunk – driving.

Other factors that may have been contributing to the effectiveness of the DWI Prevention Programme was the therapeutic relation to the adviser. It has been a great focus on the relationship between the adviser and the participant in the DWI Prevention Programme. In general, a good relation to the adviser/therapist makes it easier to trust and to open up to him/her. The DWI Prevention Programme has been focused on this relationship. They have also been focusing on creating a good atmosphere to get the person to relax, and showing empathy and support make the participant more comfortable with the individual conversations.

Kristoffersen (1999) evaluated the lessons of the DWI Prevention Programme. The lesson – part of the programme took place in small groups. For some of the participants, sitting in groups were seen as a good way of dealing with the problems. Some people got more motivated by meeting other people in the same situation as they are in. Talking to them, doing exercises with them and sharing different experiences with them felt good for some of the participants. But for someone, sitting in groups did not work out for the best. Some of the participants felt that it was hard to open up in a group of 9 people. The current lesson – groups of the programme are smaller containing 4 – 8 participants, a number that is probably easier to deal with when trying to open up. It is possible to believe that the changing process depends on what stage they are in. In general, the lessons happened before the individual conversations. If the participants still are on the pre – complementation or contemplation stage of Prochaska and DiClemtes' model (1983, 1983; Ingebrigtsen and Hoverak, 2000), the possibility that the participant works good in groups are small. In the two first stages, the person do not want to change or has just started to think about change. Trying to “force” a person who do not want to change to participate in groups is difficult. The participants should preferably be in the preparation stage where he/she has decided to start an attempt to change before there is any point of trying group – lessons. If it is hard to make the person get to the preparation stage, there is possible that he/she can get lessons alone. Since we did not get any specific feedback of what the participants thought about the lessons and the individual conversations there is possible to believe that the participants had some of the same general opinions about the contents of the lessons/individual conversations as Kristoffersen's (1999) sample did. We know that 85 % of the sample was very satisfied with the lessons, and 94 % was very satisfied with the individual conversations. We can see clearly that the participants of the DWI Prevention Programme were very satisfied with about almost everything concerning the programme. Kristoffersen's evaluation in 1999 may have been a great

contribution to the programme and given a programme in development something to reach for.

The results also showed that a DWI Prevention Programme is preferable when serving a sentence for drunk – driving. Earlier studies that wanted to see if prison had a deterring effect (if a prison - sentence “deter” people from repeating their drunk – driving) on the drunk – driver, found that deterrence only reported sporadic effect patterns of sanctions on drunk – driving recidivism. Fines reported having a small impact on the drunk – driver in Europe, but how prison – sentence had an effect on the drunk – driver was not seen as a significant deterrent measure because of the great focus on alcohol problems (Evans and Clark, 2006).

Several of the studies presented earlier are engaged in the fact that drunk – drivers have alcohol problems. If some drunk – drivers have severe alcohol problems, putting the person into prison with no possibility to talk about their drinking – problems with a therapist/adviser, is not seen as the best way to reduce recidivism. When the person sentenced for drunk – driving get out of prison, the probability that the he/she get into the same patterns again are high (especially those with drug problems). Every offender that get sentenced for a DWI will not receive some form of treatment (e.g. education, self – help via Alcoholics Anonymous (AA), outpatient counseling, detoxification, and/or residential treatment. Actually, a significant part of DWI offenders in prison do not receive any form of treatment. There may be several explanations of why it was a “lack” of treatment among those sentenced for prison. One explanation may be that the prison is taking is short – listing the sentenced because of limited treatment resources. They are focusing more on the subgroup of “problem drinkers”. Therefore there is important to find a reliable and valid tool to separate the problem from the social drinkers, so that the person who really need help, get help. There is likely that the prisons look at a combination of factors (type of treatment, availability, cost, effectiveness of treatment and so on) when they develop specific policies and practices. The alcohol addiction does not disappear by itself, and there are recommended prevention programmes to try to reduce drunk – driving and prevent relapse. As Taxman and Piquero (1998) suggested, punishing a drunk – driver by sending him/her to prison has not a great deterring effect. The findings of their study indicated that alcoholism rehabilitative programs tend to reduce drunk – driving recidivism more than a prison – sentence does. (In the current study there have not been possible to find out if the respondent has a drinking problem or not. Alcohol use the last month was measured, but there is not possible to conclude by looking at the questionnaires if the respondent has a severe drinking problem or not. By looking at the drinking habit and

other questions concerning drinking and repeat drunk – driving there is a possibility to believe that the respondent uses alcohol as a remedy to relieve pain, forget problems and so on. However, persons with alcohol problems may also under report their drinking habits because they don't want to admit that they have problems with alcohol.

The great focus on the fact that drunk – drivers have alcohol problems have taken the attention away from other factors that may have been contributing to the drunk - driving. For someone the drunk – driving act is a one – time incident because the driver drove to early after drinking alcohol. Others may have been acted in affect after fighting with their wife/husband and not thinking about the consequences when they drove away. There are several possibilities why the person have been drinking and driving, and the previous literature on this field may be seen as a little narrow.

The two –day programme “Trafikk og rus” have not been evaluated in this study, but the respondents answering questionnaires in prison were participating/have been participating in the two - day programme. The questionnaires were handed out in prison aimed at looking at attitudes towards drunk- driving, risk behavior and traffic safety among those sentenced for drunk – driving. A previous evaluation of “Trafikk og rus” (Wessel, Mitseim and Thorsen, 2008) have showed that only half of the participants of the two – day programme were certain that they would not drunk – drive again, but the other half was not sure. Most of the participants felt that they had learned something by participating in the programme, but half of the people wished that the programme could have lasted longer. It is possible to believe that the sample that had the more ideal attitudes towards drunk – driving, risk behavior and traffic safety (DWI – sample) have a smaller probability for relapsing. In the DWI Prevention Programme they got longer time to process the information they get from participating in the programme. They also got several ways of dealing with the problem in form of individual conversations, group – lessons, contact with the treatment device. For those with severe alcohol/drug problems, a two – day programme is not seen as enough. They need longer time to deal with their problems. Several lessons of therapy are needed, and for someone two days is not enough time to do that on.

4.1 Practical Implications

There are some practical implications to keep in mind after studying these two groups. Since there are so many that participated in the DWI Prevention Programme that were satisfied with the programme and that had a longer survival time, there is important to question if there in some way are possible to extend the target group for the action. Normally, those who have 1.5 ‰ or more get the opportunity to participate in the DWI Prevention Programme in Norway. One question that can be asked is if there are possible to include more people in the action since the survival time of the DWI – group are longer? This question is a matter of time, money and resources. Some of the people who get sentenced for drunk – driving have a severe alcohol problem. One suggestion may be to include those with severe alcohol problems in the DWI Prevention Programme if it is well documented that they have an alcohol problem. This may be very helpful for the person with the alcohol problem. He/she get the opportunity to talk about their alcohol problems and possible other problems. If they do not get the opportunity for help, there is a great probability that they continue in the same patterns again after getting out of prison. The themes of the conversations also get the opportunity to mature more since the programme go on for several months.

The questionnaire also had a few comment fields. Some of the participants of the DWI Prevention Programme came with suggestions for improvements of the programme or other actions that can be made to prevent drunk – driving. One suggestion was to have a greater focus of the consequences of impaired drinking in the driver education courses. It is important to start as early as possible to learn adolescents about the consequences about impaired driving and other elements related to risky driving behavior. There was also expressed a wish for more focus on impaired driving of other conveyances than cars, e.g. boat, ATV, snow scooter and so on. There was also a wish that the DWI Prevention Programme should be spread out to the rural districts since a lot of the drunk – driving happens in rural districts where there is less police controls compared to in the cities.

4.2 Methodological challenges

It is important to keep in mind that the respondents in the current study are not representative of all the participants in the DWI Prevention Programme and prison – sample in Norway. The respondents were few, and the DWI - sample were chosen from nine municipalities of the district of Salten in Nordland County and the prison – sample were

chosen from Verdal prison. Even though the sample was small, the sample was big enough to investigate the possible differences between the two groups.

Another methodical limitation that is important to keep in mind that often is present in self – report measures is that the participants may be influenced by response bias when they are answering the self – completion questionnaire. The response bias involves answering what seems social desirable. Social desirability can be viewed as a tendency to present oneself favorably, or to obtain approval by responding in a culturally and socially acceptable manner (Crowne and Marlowe, 1960; Logan, Claar and Scharff, 2008). Since this was an anonymous questionnaire there is a greater chance that the respondents answered what they really was thinking and not what they thought other around them would want them to answer. There is no point of presenting oneself favorable when the questionnaire is anonymous and no one else than the researcher will see what the respondents answered.

The gender distribution of the sample was not equal. There were very few women in the sample. There were 11 % women and 89 % men in the DWI – sample and 13 % women and 87 % men in the prison - sample. This did not affect the results of this study and we can see clear significant differences between the two groups. In the future it is suitable to add more women to the sample if checking for gender differences.

In the questionnaire there was a measure instrument aimed at measure the respondents' drinking patterns the last month. Some of the prison respondents answered about their drinking patterns last month. But the respondents had been in prison for over a month. Why they answered the questions about drinking patterns when they had not been drinking last month (since they were in prison) is not easy to say. One possibility is that they have misunderstood the question and answered the question based on the last month they had access to alcohol. Even though some of the prison respondents answered that they had been drinking, this did not affect the results of the study.

4.3 Future Research Implications

Based on these evaluation studies some suggestions for future research have been made. One of the most important suggestions is to have a bigger sample. However, in the present study it was not possible to get a bigger sample because of limited time. To examine gender differences, it is also important to add more women to the sample. However, the majority of participants in a DWI Prevention Programme and the prison sentenced are men. Therefore it

is practical to follow the two samples over a longer time period to get more women added to the sample. There is also a possibility to make use of samples from all over the county to get a greater evaluation study. Then there is easier to say something about the programme as a totality and it is easier to draw a conclusion of how the programme works. If it is used samples from all over the country it is also possible to get a closer co-operation between the various regions where they can make plans for possible improvements and changes.

4.4 Conclusion

The results in the presents study is believed to be useful in showing a DWI – sample and prison – samples attitudes towards drunk – driving, traffic safety and risky driving behavior. The results are important because it compares two different sentences to see what works best (rehabilitation vs. prison) in order to prevent drunk – driving. The DWI Prevention Programme is in the present study seen as the best alternative to help the sentenced. It is also useful since it have given the criminal administration system information on what the participants think and mean about the DWI Prevention Programme. The results also lay the foundation for further research on attitudes (e.g. with a bigger sample and over a longer time period in Norway or other countries).

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2nd Article of Master Thesis in Psychology: Differences in survival rates among participants of a DWI Prevention Programme and a prison – sample.

Abstract

The aim of the study was to examine relapse patterns among participants in the DWI Prevention Programme and those who got prison sentence after driving when influenced by alcohol. The sample consisted of transcripts of criminal convicts that had participated in the DWI Prevention Programme during the period of 1998 – 2002 in nine Norwegian municipalities ($n = 68$) and a sample of convicts to an unconditional sentence for drunk - driving in the same time period ($n = 112$). The results were based on analysis of the transcripts and contained information about for instance number of sentences, age of their first drunk – driving sentence, current age, gender and so on. Kaplan- Meier plot and Cox regression survival analysis revealed significant differences between the DWI – sample and the prison – sample when covariates were added in the analysis. A covariate is a variable that is possibly predictive of the outcome under study. In this study the covariates was the number of days of the conditional and unconditional sentence and repetition drunk – driving. The strata in the Cox regression analysis were gender, their current age and the age of their first sentence. In this study the relapse time was shorter for men than for women and the youngest age – groups had a shorter relapse time than the oldest age – groups. The Kaplan – Meier plot revealed that the prison – group have a shorter relapse time compared to the DWI – group.

Keywords: drunk – driving, relapse patterns, DWI Prevention Programme, driving while intoxicated

1.0 Introduction

Social expenses caused by offenders driving while intoxicated have inspired much research of the prevalence and causes of DWI in various countries. Drivers convicted of impaired driving are overrepresented in alcohol – related fatal crashes. Because many such offenders continue to drive with suspended licenses, monitoring their post conviction driving is a significant problem for the criminal justice system (Voas and Marques, 2004; Hubicka, Laurell and Bergman, 2008). Knowledge of the characteristics of DWI's and in particular hard core DWI's (persons who drink and drive regularly) also called repeat, persistent and multiple offenders, is important for successful prevention and rehabilitation in order to improve public safety and reduce expenses (Simpson, Beeriness, Robertson, Mayhew and Headland, 2004; Hubicka, Laurell and Bergman, 2008).

The object of the legal provisions relating to drinking and driving is to reduce the number of traffic accidents. Acting on the lessons of experience that the influence of alcohol increases the risk of accidents, the law tries to motivate drivers of motor vehicles to avoid the combination of alcohol and driving. The threat of punishment has twofold aim: to achieve a deterrent effect and to influence people's attitudes towards indulging in alcohol and driving motor vehicles. The best evidence that the law has achieved its object would be provided by reliable data showing that it has reduced the frequency of accidents. In analyzing the law's effects there may be good reason for making a sharper distinction than is usually made between the effect of the penal provisions on people's conduct, and on the number of accidents (Andenaes, 1978).

There have been some discussions about the effects of prison – sentence in general, but also if prison – sentence are effective when it comes to repeat drunk – drivers. Does prison have a deterrent effect on the sentenced? Does people who get prison – sentence for drunk – driving repeat their actions more often than people who do not get prison – sentence? In Norway, the DWI Prevention Programme was introduced as an alternative to prison – sentence. However, the effects of the programme have not previously been examined. The research of the present study is following: How does the DWI Prevention Programme works compared to traditional prison – sentence? Are there several aspects of the programme that are more effective than other? How satisfied are the participants in general with the programme?

The drunk – driving legislation in Norway

The legislations concerning drunk – driving vary for each country. In some countries the legislations are taken very seriously, while in other countries they are not so engaged in following the legislations. Norway is one of the countries with a very strict legislation about drink driving. This legislation is supposed to *prevent* drunk - driving. If the legislation shall have as good effect as possible, the drivers should have knowledge about the legislation. In connection to the change in the legislation in 1988, there was carried out a research among the drivers to find out what kind of knowledge they had about the legislation (Rusmiddeldirektoratet and Transportøkonomisk institutt, 1995). The results showed that 60 % of the drivers knew what the legal blood alcohol limit was. About 20 % could not answer the question because they did not know, and 20% thought the legal blood alcohol limit was under 0,05 ‰ (this was in 1988, the legal blood alcohol limit in Norway has changed after that). 2 % thought the limit was over 0,05 ‰. This shows that a large part of the Norwegian population had weak knowledge about the most fundamental part of the legislation, the legal blood alcohol limit (Rusmiddeldirektoratet and Transportøkonomisk institutt, 1995).

Rehabilitation vs. prison

In order to deter drunk – drivers, public policy has been centered around two sentencing strategies: *rehabilitation* (e.g. DWI Prevention Programme) and *punishment* (e.g. prison). The rehabilitation approach argues that offenders are in need for some sort of treatment to curb their use and abuse of alcohol through a variety of interventions. The purpose of rehabilitation is to change behavior by treating offenders' alcohol/drug problem.

Others contend that punishment is the more appropriate response for drunk – drivers because of the potential seriousness of the crime. The goal of the punishment approach is to deter the average road user from drinking and driving through the imposition of sanctions and/or the fear of punishment. The punishment may include, but may not be limited to fines, license restrictions, liberty restrictions and/or incarceration. Although both approaches attempt to change behavior in different ways, the end result for both is the same – to prevent drunk - driving (Taxman and Piquero, 1998).

Studies done by Taxman and Piquero (1998) found that several forms of rehabilitation have the potential for reducing recidivism among high – risk drunk – drivers suggesting the importance of targeting the offender's needs or risk factors. For offenders receiving alcohol education, the risk of recidivism was 22% less than offenders without alcohol education.

Similarly, offenders with alcohol treatment had a 17% lower risk of recidivism than offenders without this condition (Taxman and Piquero, 1998). The second finding of this study concerned with the relationship between previous traffic convictions and drunk – driving recidivism. Offenders with a history of traffic convictions were more likely than those without previous traffic convictions to be reconvicted for another drunk – driving offense. These results are consistent with those obtained by Ross et al. (1995) that found that those individuals who had a history of prior convictions of driving under influence of alcohol (and drugs) were more likely to incur a future DWI as well as refuse police breath test (Ross et al., 1995; Taxman and Piquero, 1998).

Applegate et al. (1996) found a negative relationship between the level of intoxication and punishment suggesting that people may regard a high level of intoxication as indicating a drinking problem and a need for treatment rather than punishment. Woodall et al. (2004) found that offenders who had been sentenced for a DWI program had a lower probability of re-arrest than offenders sentenced to some other penalty. Also Maxwell, Freeman and Davey (2009) suggested that rehabilitation (e.g. prevention programmes) are effective in preventing relapse. They are targeted to first – time offenders and are generally delivered in classroom setting of 10 – 15 hours, and they assume that lack of knowledge about alcohol and the risks of drinking and driving result in a poor decision – making. They may also encourage participants to recognize a drinking problem and consider alternatives to drinking and driving when over the legal limit (Global Road Safety Partnership, 2007; Maxwell, Freeman and Davey, 2009). These education programs are possible to get if you get sentenced for drunk – driving and get the opportunity to participate in the DWI Prevention Programme. In prevention programmes like the DWI Prevention Programme in Norway you get the chance to increase the consciousness about your own behavior and the consequences of it. You get the opportunity to participate in lessons, get treatment, individual conversations and a control of the accomplishment (see article 1).

The relapse among drunk - drivers is large. Research concerning relapse among drunk - drivers showed that the people who got a new sentence was connected to the legal blood alcohol limit and the age of the driver. It is evident that the tendency for a new sentence increases with increased legal blood alcohol limit and is higher among young drivers than old. This might have a relation to the detection risk (Rusmiddeldirektoratet and Transportøkonomisk institutt, 1995). A substantial reason that the drunk - drivers are getting detected is that they are involved in accidents. Young drunk - drivers and drivers with high

legal blood alcohol limit have a very high accident risk. Therefore they will also have a high chance for detection and a high chance for a new sentence. The drivers with a high legal blood alcohol limit often have severe alcohol problems. They are very often influenced by alcohol, and they got a blunted relationship when it comes to legislations and norms. This may be a reason for frequent drunk - driving (Rusmiddeldirektoratet and Transportøkonomisk institutt, 1995).

A high relapse is worrying because it indicates that the sanctions getting used have a limited effect on the drunk - drivers. The tendency to get new sentences reflects the frequency of drunk - driving. Effective interventions that reduce the tendency of relapse may therefore be an important attempt to reduce the accidents (Rusmiddeldirektoratet and Transportøkonomisk institutt, 1995). An example of an intervention that tries to reduce relapse is the DWI Prevention Programme. The aim of the DWI Prevention Programme is to counteract drunk –driving and to create a safer traffic environment and reduce number of traffic accidents. They also try to get drivers to not drink alcohol before and when they are driving (Danielsen, 2003).

Drunk – driver characteristics

When it comes to the drunk – drivers’ demographical characteristics, there is found a significant association between DWI offender status and gender, age, ethnicity, education, employment, status, income and marital status. By far, the most consistent finding is that males are much more likely than females to be repeat DWI offenders. Cross – sectional studies show that the repeat DWI offenders are generally older than the first – time DWI offenders (Nochajski, Wieczorek, 2000; Caviola, Strohmets, Wolf, Lavender, 2003; Nochajski, Stasiewicz, 2006). In contrast, longitudinal studies found that individuals under the age of 30 are more likely to continue driving under the influence and are at greatest risk to receive a subsequent DWI (Nochajski and Stasiewicz, 2006). Lapham, Skipper, Hunt and Chang (2000) found that young age predicted higher recidivism among males, but that that does not concern women. The risk factors concerning relapse were the same among both males and females. It was also found that males consistently exhibit greater risky driving compared with females (Evans and Wasielewski, 1983, Job, 1990; Wasielewski, 1996, Fernandes, Job and Hatfield, 2007). Harre, Field, and Kirkwood (1996) found that males were significantly more likely than females to report engaging in speeding, drink – driving, and breaking rules associated with being on a restricted license (Fernandes, Job and Hatfield, 2007). Taxman and Piquero (1998) found that age were consistent predictors of recidivism.

First after peaking in offender's early twenties, drunk – driving reconvictions and the number of prior traffic convictions declined with age.

Research has demonstrated significant differences in risky driving behavior between specific driver age groups (Begg and Langeley, 2001; Jonah, 1990; Fernandes, Job and Hatfield, 2007). In particular, young drivers were found to drive fast, tailgate, engage in risky overtaking, allow too little time to merge, and fail to give way to pedestrians, compared to older drivers (Cameron, 1985; Job, 1999; Jonah, 1986; Prabhakar et al., 1996; Williams, 1998; Fernandes, Job and Hatfield, 2007). They suggested that there were several reasons that the younger drivers drink – drive more often than the older ones. They suggested that the younger drivers have lack of driving experience and they do not always understand the consequences of their actions and exposure (Fernandes, Job and Hatfield, 2007).

Johnson, Grunewald and Treno (1998) suggested that men were characterized as heavier drinkers compared to women. They also suggested that any observed gender difference in driving while intoxicated might be explained by differences in drinking patterns. According to Nolen – Hoeksema (2004) predictors of heavy drinking and alcohol use disorders are more similar than different in women and men, but women may be less likely than men to carry certain of these risk factors. Gender differences in the consequences of drinking alcohol are large and consistent. Specifically, women appear to suffer serious negative consequences of alcohol consumption earlier and to a greater degree than men. The proximal consequences (e.g., negative effects on cognitive and motor functioning at low doses of alcohol) may discourage most women from excessive alcohol intake, and the distal consequences (e.g., poor reproductive health) may have created selection pressures against heavy alcohol consumption in women, resulting in lower rates of alcohol use disorders or alcohol-related problems in women compared to men (Nolen – Hoeksema, 2004).

Quinlan et al., (2005) found that young men aged 18 – 20 reported drunk – driving more frequently than any other age group. The young drivers were also more likely to both drink and drive and drug and drive compared to other age groups (Quinlan et al., 2005, Fergusson et al., 2008, Maxwell, Freeman and Davey, 2009). Hanson and Engs (1992) also found that young people were drinking and driving. He studied college freshmen and found that 43.4 % of them had been drunk – driving (Hanson and Engs, 1992, Finken, Jacobs and Laguna, 1998).

1.1 Aims of the study

The specific aim of this study was to examine relapse among those who participated in a DWI Prevention Programme after drunk - driving and those who got prison sentence after driving when influenced by alcohol. Based on earlier studies, the present study hypothesis are:

- a) The frequency of second-time sentence will be significantly lower among participants of the DWI Prevention Programme (experimental group) compared to a sample of convicts to an unconditional prison sentence for drunk - driving (control group).
- b) Among second-time convicted the survival time before the next relapse will be greater in the experimental group compared to the control group.
- c) The younger drink – drivers have a greater probability for quick relapse compared to the older drink – drivers.
- d) Men have a greater probability for quick relapse compared to women.

2.0 Method

2.1 Sample

Transcripts of criminal convicts were discharged from the police office in Salten District, Nordland County. The sample consisted of participants of the DWI Prevention Programme during the period of 1998 – 2002 in the Salten District ($n = 68$) and a sample of convicts to an unconditional sentence for drunk - driving in the same time period ($n = 112$).

All of the transcripts contained information about the persons sentences, not only the drunk - driving sentence, but also other possible sentences. The drunk - driving sentences among other variables were extracted out of the transcripts and put into SPSS (*Statistical Package for the Social Sciences*). In the DWI – sample ($n = 68$) there was 91 % men and 9 % women. In the prison – sample ($n = 112$) there was 92 % men and 8 % women. Their present age ranged from 28 – 77 years in the DWI – sample and 29 – 72 years in the prison – sample. The age of their first sentence ranged from 14 – 64 years in the DWI – sample and 15 – 53 years in the prison – sample.

Transcripts of criminal convicts

The transcripts contained information about all their sentences, for instance what legislation and paragraph they got sentenced after, where the criminal act happened, information about the fine and so on. It also contained personal information about gender, current age, the age of their first criminal act and what city they live in. The relevant information was extracted out of the transcripts, and in this case the relevant information was; number of sentences, current age, age of their first drunk – driving sentence, number of days from the first drunk – driving sentence one till the next drunk – driving sentence, number of days from the first drunk – driving sentence till the next sentence (independent of the sentence), and number of days from the first drunk – driving sentence till the last drunk – driving sentence.

2.2 Statistical Analysis

Kaplan - Meier Plots (also called product limit estimate) were used to estimate the survival function of the data in both samples. Kaplan Meier Plots (1958) were the first who carried out the solution of a problem to estimate the survival curve in a simple way while considering the right censoring. Kaplan- Meier Plots (KMP) calculated how many subjects in the sample survived the time t in percentage (Akbar, Pasha and Naqvi, 2009).

Cox regression survival analysis was performed to investigate the effect of several variables upon the time a specified event takes to happen. Enter method was used .It forces all covariates into the model in a single block. The Cox proportional hazard is a survival analysis is analyzing for instance several risk factors (covariates) on relapse or any other event of interest. The covariates can be *continuous*, *dichotomous* or *categorical* (Cox, 1972). The covariates added in this study were number of days of the conditional and unconditional sentence and repetition drunk – driving. The time variable (days, weeks, months) is usually continuous and operates as a counter of time units until the relapse happen. In this study we operate in number of days. Strata are also added, consisting of gender, current age and age of the first sentence. The effects of the risk factors on the time to relapse are interpreted through hazard ratios (hazard function). The hazard ratios are expressions of how a risk factor alters the odds of relapse

3.0 Results

3.1 Survival time of DWI Prevention Programme and prison sentence (no program)

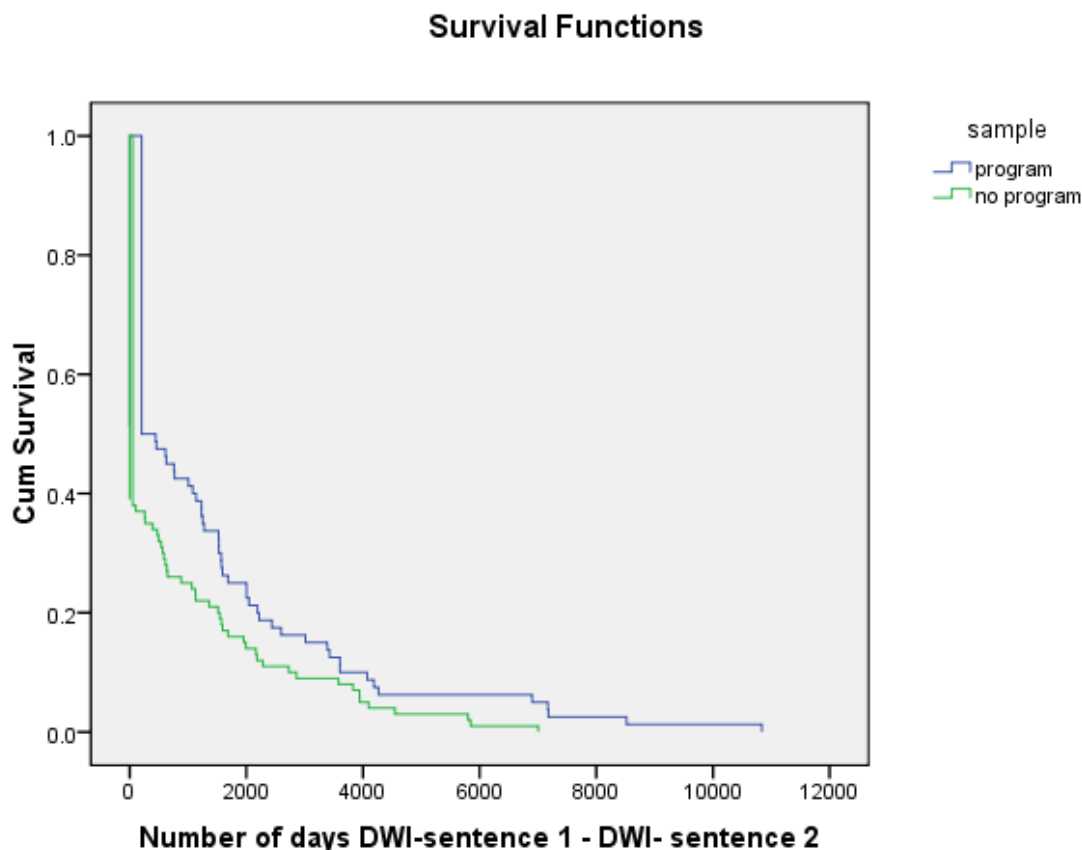


Figure 1: *Survival time of the DWI – sample (program) and the prison – sample (no program).*

Figure 1 shows the survival function of the DWI – sample and the prison – sample. The graph shows that the prisoners have a quicker relapse time compared to the participants in the DWI Prevention Programme. The steeper the fall is, the greater are the probability for relapse are. An independent sample t-test was performed on the two independent groups to see if the groups differ. The sample size in both samples were equal ($n = 44$). The results of the independent sample t-test showed that there were significant differences between the two groups ($t = 2.14, p < .05$). It is also interesting to note that the majority of relapses happened a short time after treatment.

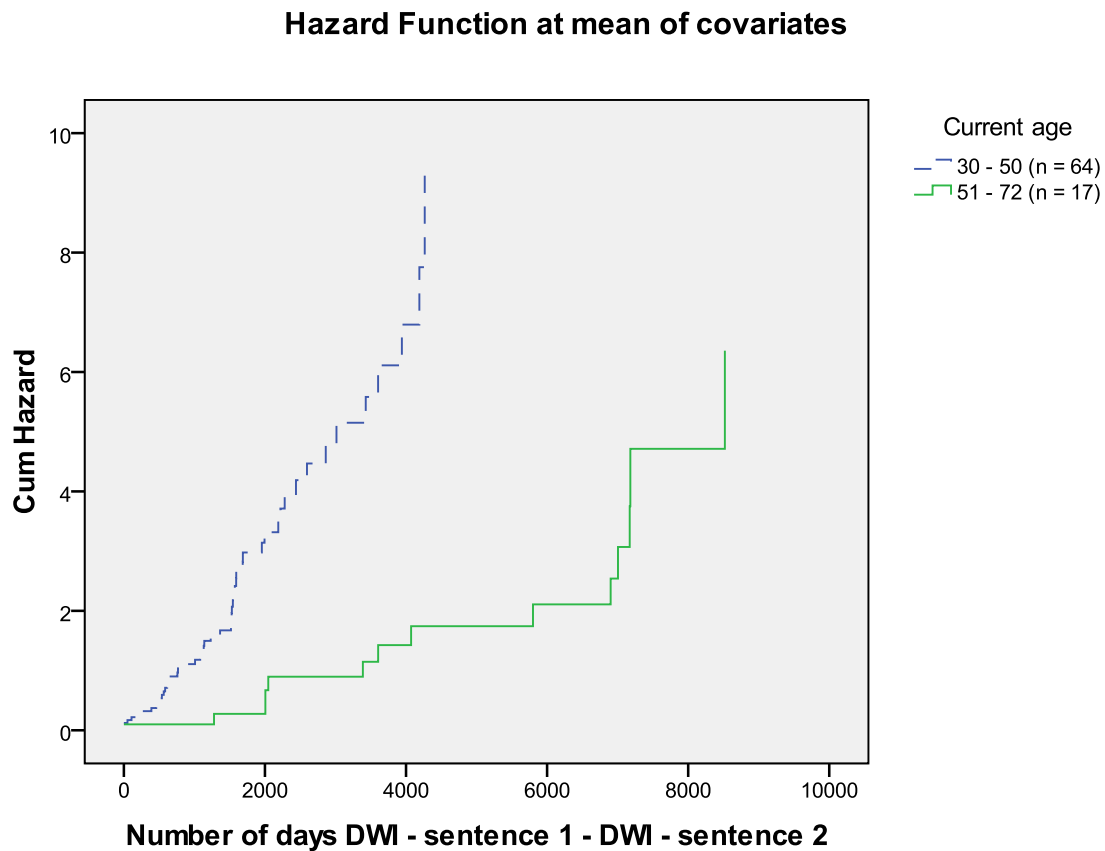


Fig 2: Hazard function for current age from DWI – sentence 1 – DWI – sentence 2.

The figure illustrates that the relapse time for the age – group 30 – 50 was shorter compared to the age – group 51 – 72. Covariates were added, containing number of days of conditional and unconditional sentence and repetition of drunk – driving. A covariate is a variable that is possibly predictive of the outcome under study. Here we can see that is a significant difference between the two age – groups from DWI – sentence 1 – DWI – sentence 2 ($p < .001$, hazard ratio = 67) Chi – square (goodness of fit) was also calculated to see whether there is a “good fit” between the data (observed frequencies, the actually observed data) and the theory (expected frequencies, the expected frequencies if the null hypothesis were true). The model had a chi – square of 60, indicating that the model has a good fit.

Hazard Function at mean of covariates

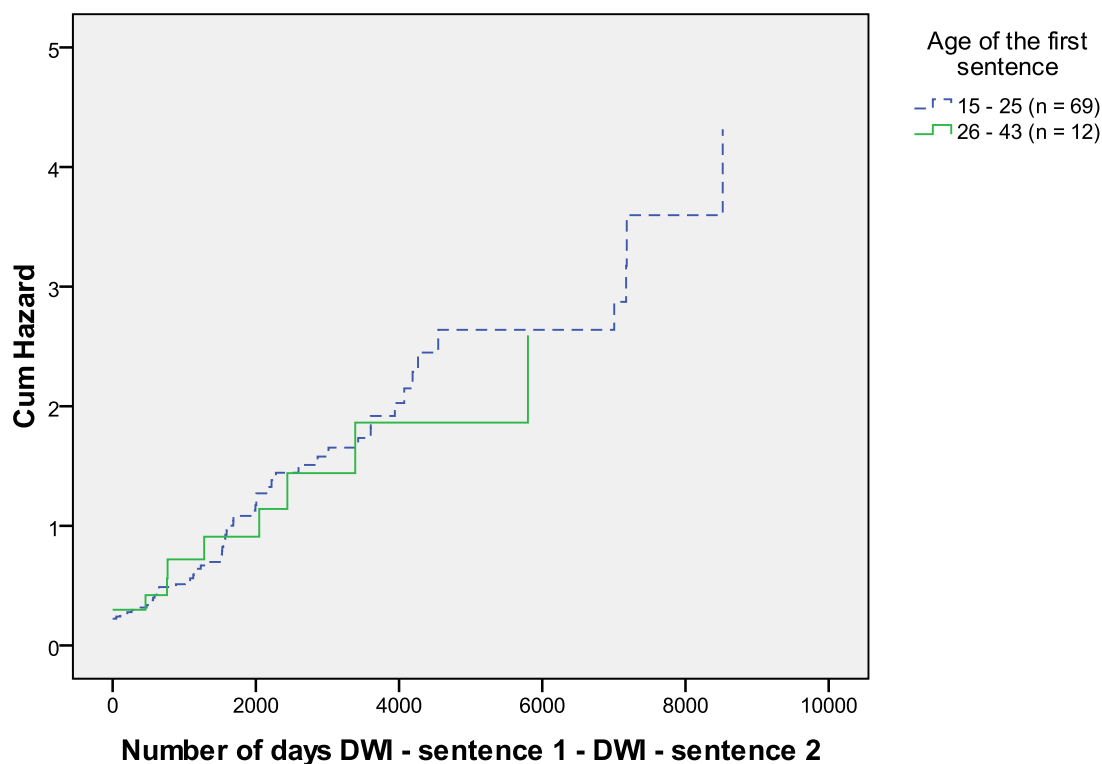


Fig 3: Hazard function for age of their first sentence from DWI – sentence 1 – DWI – sentence 2.

As illustrated in figure 3, relapse time was shorter in the age – group between 15 – 30 years compared to individuals who are between 31 – 43 years old. Covariates were also added here, containing number of days of conditional and unconditional sentence and repetition of drunk – driving. There was found a significant difference between the two age - groups ($p < .001$, hazard ratio = 68) and with a chi – square of 60 meaning that the model has a good fit (there was a good fit between the expected and the observed data).

Hazard Function at mean of covariates

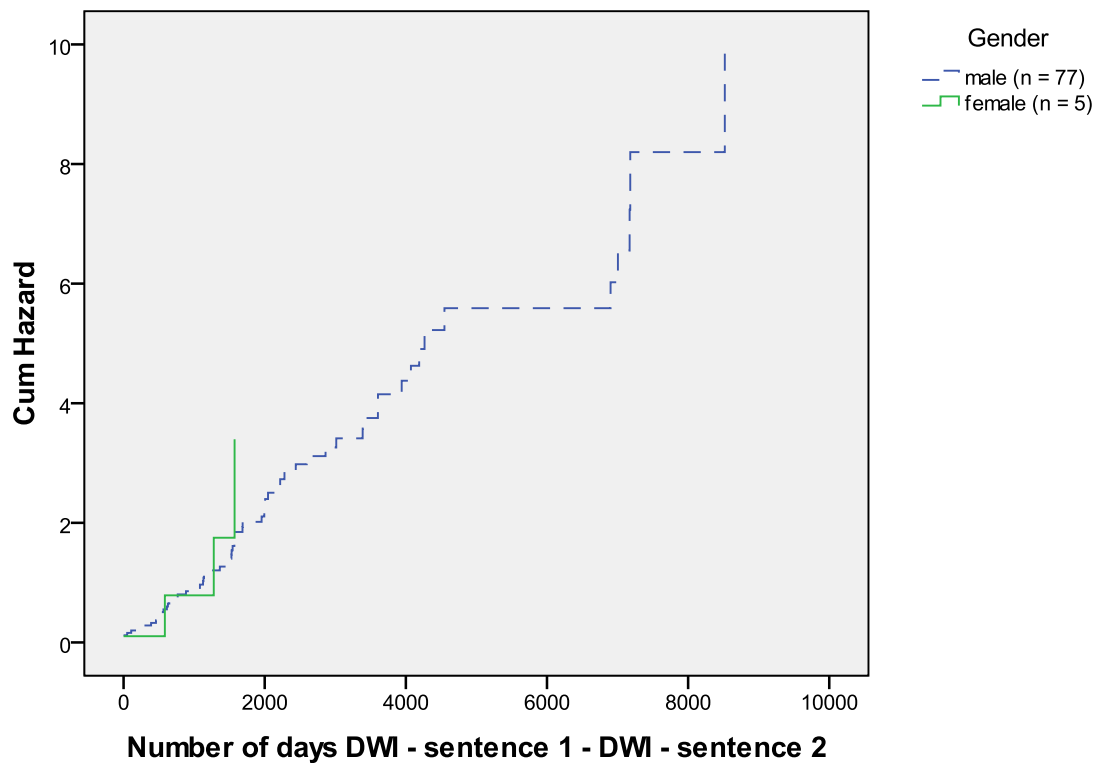


Fig 4: Hazard function for gender from DWI – sentence 1 – DWI – sentence 2

The figure illustrates that the relapse time were shorter for men than for women. Cumulative hazard at a time t is the risk of dying between time 0 and time t , and the survivor function at time t is the probability of surviving to time t . The more steep the line are, the shorter are the time for relapse. Covariates were added, containing number of days of conditional and unconditional sentence and repetition of drunk – driving. There was found significant differences between men and women ($p < .001$, hazard ratio = 69) and the model had a chi – square of 61 meaning that the model has a good fit (at least one of the covariates have a relation to drunk – driving). A hazard ratio greater or less than one means that the survival is better in one of the groups.

Hazard Function at mean of covariates

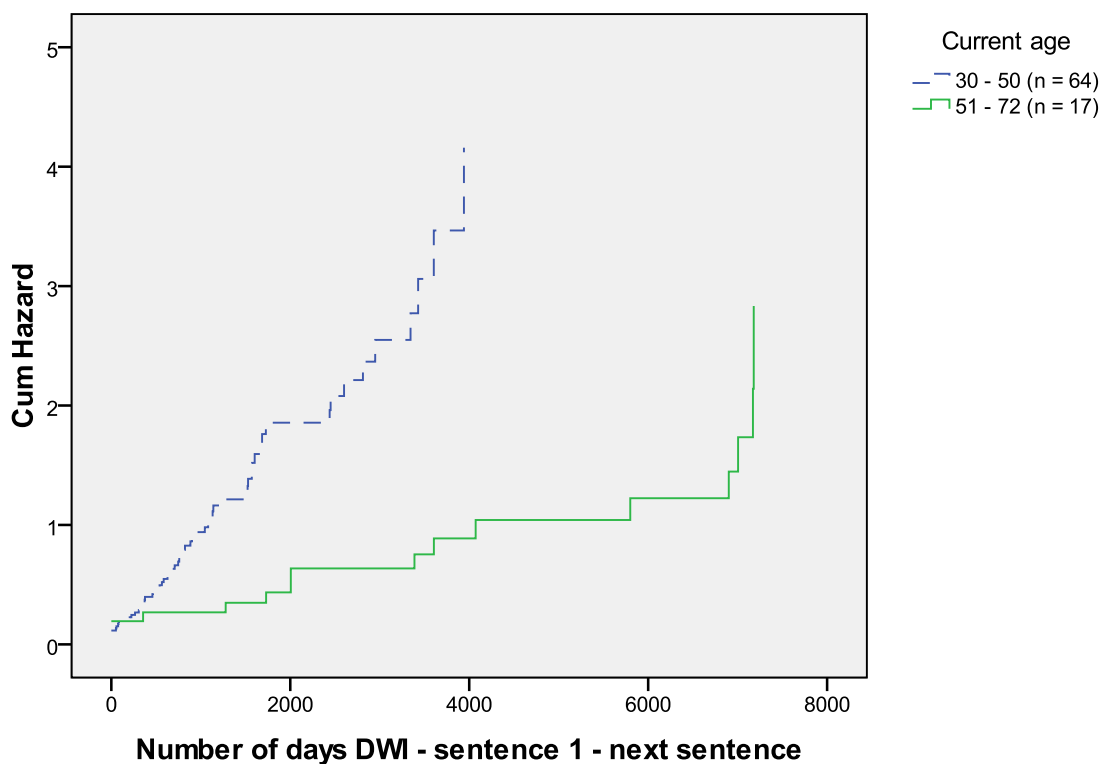


Fig 5: Hazard function for current age from DWI – sentence 1 – the next sentence.

The figure illustrates that relapse time was shorter for the age – group 30 – 50 years compared to the older group (51 – 72 years). Covariates were also added here, containing number of days of conditional and unconditional sentence and repetition of drunk – driving. There were significant differences between the two age - groups ($p < .001$, hazard ratio = 1.7) and the model had a chi – square of 4.7 meaning that the model had a good fit.

Hazard Function at mean of covariates

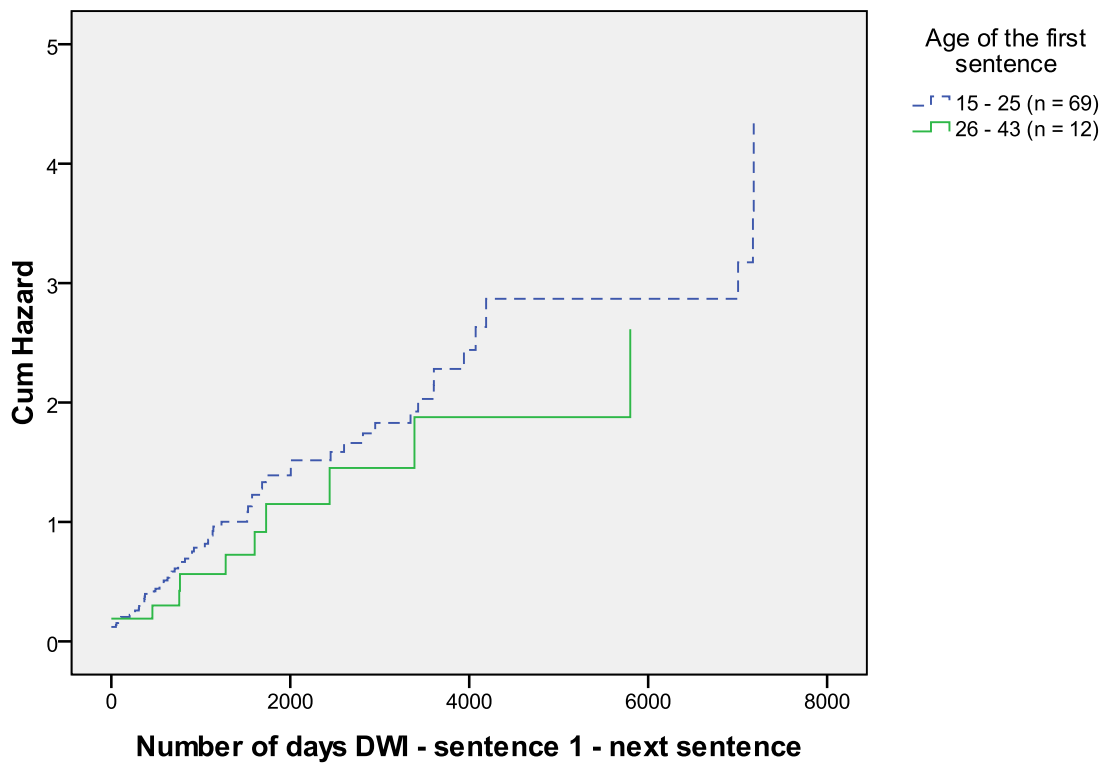


Fig 6: Hazard function for the age of the first sentence from DWI – sentence 1 – the next sentence.

The figure illustrates that relapse time was shorter for the age – group 15 – 30 years than the age – group from 31 – 43 years old. Covariates were added, containing number of days of conditional and unconditional sentence and repetition of drunk – driving. It was significant differences between the two age – groups ($p < .001$, hazard ratio = 2.3) and the model has a chi – square of 9.7 meaning that the model had a good fit.

Hazard Function at mean of covariates

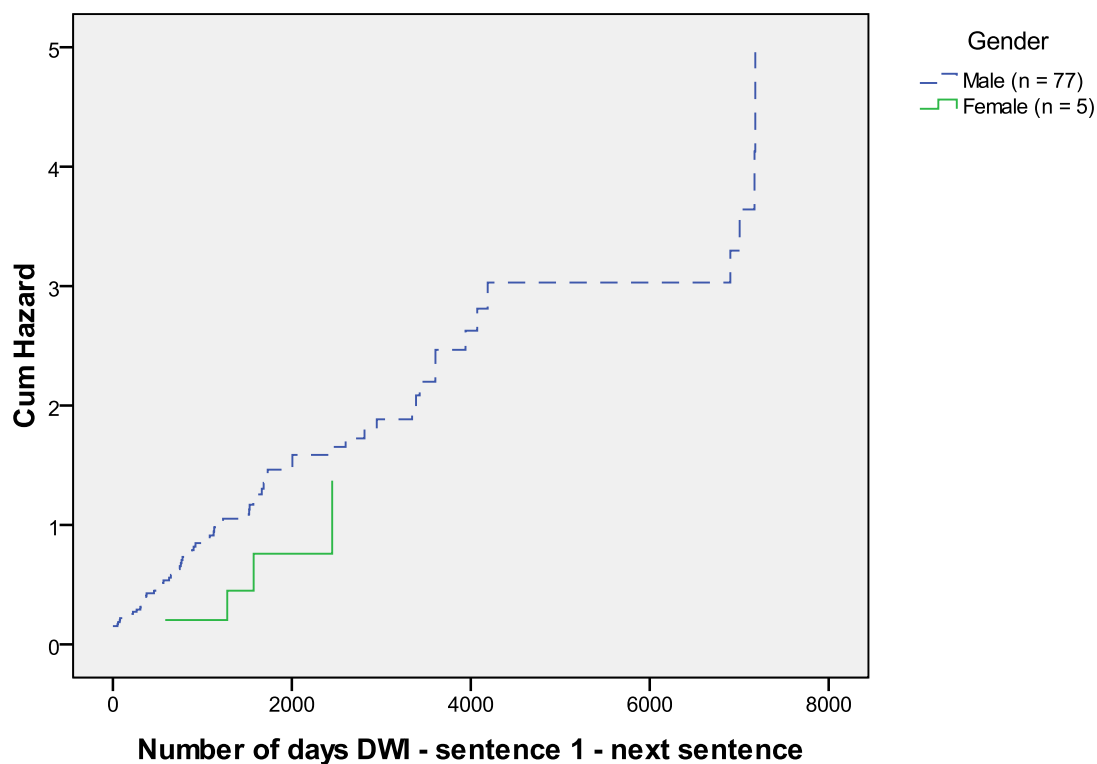


Fig 7: Hazard function for gender from DWI – sentence 1 – the next sentence.

Figure 4 illustrates that relapse time was shorter for men than for women. Covariates were added, containing number of days of conditional and unconditional sentence and repetition of drunk – driving. There was a significant difference between men and women ($p < .001$, hazard ratio = 2.4) and the model had a chi – square of 10 meaning that the model had a good fit.

4.0 Discussion

This study was designed to examine relapse patterns among participants in a DWI Prevention Programme and those who got prison- sentence after driving when influenced by alcohol. The results revealed that there are significant differences in survival time between a prison – group and people who have participated in a DWI Prevention Programme, i.e. survival time without a new sentence. It may be several reasons why the participants in a prevention programme have a longer survival time compared to a people sentenced for prison after driving while intoxicated. In a DWI Prevention Programme, the participants get the opportunity to talk about their illegal drunk – driving act. They participate in both group lessons and get the chance to talk about their actions through individual conversations. Getting the opportunity to reflect over their life – situation, their drunk – driving act and other aspects concerning their life over a longer time period have been seen as a good way of preventing another drunk – driving act. This may be helpful when trying to change the undesirable behavior. It is also seen as important to process the information you get through the lessons and individual conversations. In the DWI Prevention Programme the participants get the opportunity to process the information over a longer time period. Several people need to take small steps in order to change their way of thinking. The process happens gradually, and the months they get in order to change are seen as very important months in the changing process. Another important factor that may be contributing to the DWI – groups' longer survival time may be that the DWI – group have a great amount of people behind them that are supporting them. First of all they got the support from the criminal administration system leading the groups and the individual conversations. They also got support from the treatment device. To have a good support system around to motivate when trying to change is seen as very important, not only support from the criminal administration system, but also friends and family. Even though the conversations and lessons happen at the criminal administration system, the importance of keeping the motivation for change up at all times is important.

The Cox regression survival analysis found that there were significant differences between men and women when it comes to survival time from the first DWI – sentence to the next DWI – sentence and from the first DWI – sentence to the next sentence ($p < .001$). Men have a quicker relapse compared to women. The results support earlier studies done by Nochajski et al. (2006) where they found that males are more likely to be repeat DWI offenders than females (they drink – drive more often). This result also provides support for the hypothesis that was presented earlier in the study.

There may be several reasons why there are differences in relapse among men and women. One suggestion by Nolen- Hoeksema (2004) was that women drink less alcohol (they have a different drinking pattern) and therefore had fewer alcohol – related problems than men have. Women appear to be less likely than men to manifest certain risk factors for alcohol use and problems and are more likely to have certain protective factors against these problems. Also Johnson, Grunewald and Treno (1998) suggested that men were characterized as heavier drinkers compared to women. They also suggested that the gender differences in drunk – driving might be explained by differences in drinking patterns. Differences in drinking patterns is one of the reason presented in several studies of why there are gender differences in drunk – driving and relapse. Men tend to use alcohol as a social matter when they e.g. watch a football game, go fishing, relaxing after work and so on. Alcohol is not only used in the weekends, but sometimes also on daily base. Nolen – Hoeksema (2004) suggested that men and women have a different way of thinking about consequences on. Women tend to think more about what happens next if they e.g. drunk - drive, while men think more of what happens here and now and not what happens if they get caught. Another suggestion may be that women have a greater control over their alcohol intake, and therefore have e greater control over their actions. Women may for instance make an agreement with a sober friend to bring them home after a party, while some men (with a lower control over their actions) may think that it is ok to drive home after drinking “only a few beers”. Some underestimate the amount of alcohol they have been drinking and drive under the influence of alcohol.

The current study also found that there were significant differences in survival time of first – time drunk – drivers. The survival time was shorter in the youngest age – groups in both their first relapse and current age. These results also provide support for the hypothesis presented earlier in the study. The results support previous studies by Taxman and Piquero (1998) revealed that age was consistent predictors of recidivism. They found that recidivism were more common in the early twenties. First after peaking in offender’s early twenties the drunk – driving reconvictions and the number of prior traffic convictions declined with age. Another study that gives support is Quinland et al.,’ (2005) study. They suggested that young men reported drunk – driving more frequently than any other age – group. This measurement shows that the relapse percent vary between gender and age – group. The most important measure in this study were that there was the younger male drivers (especially the “fresh” drivers that recently got their drivers license) that had the highest percentage of relapse compared to older age – groups. The finding confirms the need to strengthen relapse

preventing contributions toward a central target group in the programme. It is also important to focus on and strengthen the individual conversations for the participants where the circumstances of life are harder than for other participants. The most vulnerable of the participants needs a strengthened individual follow – up, since they are the ones that usually are repeat offenders because of their problems in life or severe alcohol problems.

There may be several reasons that the younger drivers both are overrepresented when it comes to risky driving behavior and have a quicker relapse than the older age – groups. Fernandes, Job and Hatfield (2007) suggested that the younger drivers had lack of driving experience and they did not always understand the consequences of their actions and exposure. There is possible to believe that several of the reasons presented in this study are the most “common” reasons why young people get sentenced for drunk – driving. Young people that just got their drivers license have lack of driving experience. One of the consequences of little driving experience was believed to be an inadequate ability to cope with deviations from “normal” driving conditions (such as varying weather conditions). Young people with a limited experience engage in risky driving behaviors without fully understanding the consequences of their actions are a common problem in the traffic. If they have not been in a risky situation, some of the young drivers are “fearless” when it comes to risky driving. There are also drivers (both young and older) that find the thought of getting caught exciting, and repeat their risky driving behavior over and over again until they get caught or an accident happen.

Since young males were overrepresented of the repeat drunk- drivers, there is important that there is completed an education programme aimed at informing and helping a specific age – group of drivers before they get into risky driving. In Norway, the people who are getting their drivers license have to take a short course where they among other things briefly talk about consequences of risky driving. But the course is short and they mostly focus on other things e.g.traffic signs, first aid and so on. The DWI Prevention Programme is a good alternative for learning about the consequences about drunk – driving, but the participants go through the programme *after* they have been caught for drunk – driving. The current study support Voas and Fisher’s (2001) study that suggested that specially young and new drivers should participate in education programs. They think that giving first – time offenders an education programme is the best way of getting people (especially young people) to not repeat the act. They mean that some people (mostly young people) have lack of knowledge about alcohol and its effect on the person driving. An education programme like the one suggested

can also help people realize/admit that they have a drinking problem and help them getting on the right track again or giving them directions of what they should do (e.g. refer them to a drug addiction clinic, a psychologist and so on).

Another reason why there is a high percentage of young drunk – drivers may be that it is seen as social acceptable. This means that the adolescents try to do what they mean is acceptable among their friends in order to fit in. Since we in the current study did not ask the respondents about why they drink – drive, there is possible to believe that in some cases, the young drivers do what they think their friends want them to do. Hanson and Engs (1992) discussed this in their study, and found that 43 % of the college freshmen did what they thought was social acceptable. When adolescents drink in social contexts they have to get home at some time. If they drive to the party there is possible that they also drive home by automobile if they find out that their friends accept it (and may even encourage). When the adolescents are going back from a party, the “most sober” person has to drive the car. In such social settings, passengers are often involved and they may encourage or discourage the driver to drive after drinking.

4.1 Practical Implications

There are som practical implications to keep in mind after seeing the results. The results of this study found that the youngest age – groups have shortest survival time compared to the older age – groups. There was also found that men relapse faster compared to women. Therefore there is important to strengthen relapse preventive contributions aimed at that specific target group. A suggestion after seeing these findings is to have a greater focus on impaired driving in the driver education courses. It is important to learn more about consequences of impaired driving, attitudes, risk behavior and so on. There is also important to strengthen the individual conversations where the participants have more difficult living conditions than others (strengthen the individual follow – up).

4.2 Methodical challenges

One methodical challenge may be that there were few women in the sample. Of the transcripts of the participants in the DWI Prevention Programme ($n = 68$) there was 91 % men and 9 % women. Of the transcripts of convicts to an unconditional sentence for drunk – driving ($n = 112$) there was 92 % men and 8 % women. The small sample of women did not influence the results of the analysis. We can clearly see the significant differences in spite of few women in the sample.

Another methodical challenge to keep in mind is that some of the transcript of criminal convicts may have been misinterpreted by the researcher. It took some time to learn what information one could draw out of the transcripts and what it meant. There could have been some misunderstanding of the information given in the transcripts and how to use it in the research. There is only a small probability that this has happened because the researcher asked the criminal administration system what the different parts of the transcripts meant if there was some insecurity.

There is also a possibility that there could have been some typing error when all the information from the transcripts of criminal convicts was entered in the SPSS (*Statistical Package for Social Sciences*). All of the 180 transcripts had to be typed in by hand, and there can easily be done some typing errors because of the big amount of numbers in the transcripts. Some small errors were discovered on the way, but it was fixed when the analysis was made. This has not affected the results of the analysis. The analysis was completed several times to check for error before the analysis was finished.

4.3 Future Research Implications

Since the researcher had scarcely of time, there was not possible to capture more relapses. Because DWI arrest is relatively infrequent events, prospective studies will need to employ longer follow – up periods to capture a sufficient number of relapse events. It can also be practical to investigate relapse patterns using transcripts of criminal convicts from several municipalities to get a greater overview of the relapse patterns in Norway.

4.4 Conclusion

The results of the current study might be useful in showing relapse patterns among different age – groups and gender. The results of the current study have found that younger people and men have the quickest relapse. That gives foundation for further research on the field of relapse patterns. The results of the current study also give the criminal administration system and other entities something to work further on, in order to prevent drunk – driving and new relapses.

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Appendix 1

EVALUERING AV «PROGRAM MOT RUSPÅVIRKET KJØRING» SPØRREUNDERSØKELSE

Denne undersøkelsen er en evaluering av Kriminalomsorgens tiltak «Program mot ruspåvirket kjøring» (prosjektleder: Birger-Jan Johansen, friomsorgen, bodø). Hensikten er å evaluere tilbudene som Kriminalomsorgen gir den enkelte, og å undersøke tilbakefall for de som gjennomgår «Program mot ruspåvirket kjøring» og de som idømmes fengselsstraff for ruspåvirket kjøring. Resultatene fra undersøkelsen vil bli brukt i undertegnede mastergradsavhandling ved Norges teknisk-naturvitenskapelige universitet (NTNU).

Det er frivillig å delta i undersøkelsen, og opplysningene vil bli behandlet konfidensielt. Resultatene vil bli presentert slik at ingen enkeltpersoner kan gjenkjennes. Ved prosjektslutt, senest ved utgangen av 2010, vil datamaterialet bli anonymisert ved at alle personidentifiserende data slettes. Prosjektet er meldt til Personvernombudet for forskning, Norsk samfunnsvitenskapelig datatjeneste (NSD AS), og er godkjent av Kriminalomsorgen, region Nord.

Det er ingen «rette» eller «gale» svar på spørsmålene - det vi er interessert i er dine oppriktige oppfatninger og dine umiddelbare reaksjoner. Det er viktig at du besvarer alle spørsmålene.

Skjemaet returneres i lukket konvolutt, og leveres tilbake til den samme personen du har fått det utdelt fra. Skjemaene returneres deretter samlet og uåpnet til NTNU.

Har du spørsmål angående undersøkelsen kontakter du Julie Jensen Aavik, tlf. 971 97 024, eller Torbjørn Rundmo, tlf. 73 59 16 59.

På forhånd takk for at du ønsker å delta! Ditt bidrag er viktig!

Julie Jensen Aavik
mastergradsstudent
Psykologisk institutt

Torbjørn Rundmo
professor, veileder
Psykologisk institutt



LES DETTE FØR DU STARTER!	Skjemaet skal leses maskinelt. Følg derfor disse reglene: <ul style="list-style-type: none"> • <i>Bruk svart/blå kulepenn. Skriv tydelig, og ikke utenfor feltene. Kryss av slik: <input checked="" type="checkbox"/>.</i> • <i>Feilkryssinger kan annulleres ved å fylle <u>hele</u> feltet med farge. Kryss så i rett felt.</i> • <i>Sett bare ett kryss på hvert spørsmål om ikke annet er oppgitt.</i>
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A. DINE VURDERINGER AV STRAFFEGJENNOMFØRINGEN

1. Hvor befinner du deg nå? ⇨ Verdal fengsel..... ₁ Deltar i «Program mot ruspåvirket kjøring» ₂

2. Hvor fornøyd er du med følgende sider ved straffegjennomføringen? *Ett kryss på hver linje.*

	Svært misfor- nøyd 1	Mis- for- nøyd 2	Verken /eller 3	For- nøyd 4	Svært for- nøyd 5
1. Hvor fornøyd er du med innholdet i straffegjennomføringen?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Hvor fornøyd er du med måten du blir behandlet på?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Hvor fornøyd er du generelt med forholdene der du befinner deg nå?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Hvor enig eller uenig er du i disse påstandene?
Ett kryss på hver linje.

	Svært enig 1	Enig 2	Verken /eller 3	Uenig- 4	Svært uenig 5
1. Jeg er dømt på et feilaktig grunnlag	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Dommen er altfor streng i forhold til det jeg har gjort.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- | | Svært enig
1 | Enig
2 | Verken /eller
3 | Uenig
4 | Svært uenig
5 |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 3. Dommen jeg har fått er en helt riktig reaksjon fra samfunnet | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Jeg er uskyldig dømt..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Jeg er dømt for noe noen andre kan ha gjort..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Jeg blir behandlet godt under straffegjennomføringen | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Jeg synes det er store mangler ved straffegjennomføringen..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- | | Svært rettferdig
1 | Noe rettferdig
2 | Verken /eller
3 | Noe urettferdig
4 | Svært urettferdig
5 |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 4. Hvor rettferdig synes du dommen du har fått er? ⇨ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

5. Vennligst ta stilling til følgende spørsmål:
- | | Svært utilfreds
1 | Ganske utilfreds
2 | Litt utilfreds
3 | Litt tilfreds
4 | Ganske tilfreds
5 | Svært tilfreds
6 |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. Forholdene tatt i betraktning, hvor tilfreds er du med måten du gjennomfører straffen på? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- | | Ikke i det hele tatt
1 | Litt
2 | Moderat
3 | Ganske mye
4 | Svært mye
5 |
|--|---------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 2. Vil du si at du har blitt positivt overrasket over innholdet i straffegjennomføringen? .. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Har forholdene under straffegjennomføringen så langt svart til dine forventninger? .. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

6. Deltar du i tiltaket «Program mot ruspåvirket kjøring»? ⇨ Nei.....1 Ja.....2

NB: Hvis du ikke deltar i «Program mot ruspåvirket kjøring», hopper du til del B (neste side).

7. Din mening om «Program mot ruspåvirket kjøring»:
Ett kryss på hver linje.
- | | Svært misfornøyd
1 | Misfornøyd
2 | Verken /eller
3 | Fornøyd
4 | Svært fornøyd
5 |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. Hvor fornøyd er du med undervisningen i «Program mot ruspåvirket kjøring»? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Hvor fornøyd er du med de individuelle samtalene i «Program mot ruspåvirket kjøring»? .. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Hvor fornøyd er du med kontakten med behandlingsapparatet i «Program mot ruspåvirket kjøring»? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Hvor fornøyd er du med måten «Program mot ruspåvirket kjøring» gjennomføres på? .. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Hvor fornøyd er du med informasjonen du fikk på forhånd om innholdet i «Program mot ruspåvirket kjøring»? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

8. Hvordan vurderer du «Program mot ruspåvirket kjøring» generelt? Ett kryss mellom hvert ordpar.

- | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
|---------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------|
| 1. Interessant | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Uinteressant |
| 2. Nyttig/nødvendig | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Unyttig/unødvendig |
| 3. Morsomt | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Kjedelig |
| 4. Givende | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Bortkastet/skuffende |
| 5. Får ut det beste i meg | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Gir meg lite |
| 6. Svært positivt | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Svært negativt |

9. Har du andre kommentarer om forholdene under straffegjennomføringen eller «Program mot ruspåvirket kjøring», kan du skrive her ↴

Vanlig håndskrift.
Vennligst skriv tydelig.

B. ALKOHOLBRUK DEN SISTE MÅNEDEN

AUDIT

Her er noen spørsmål om alkohol. Spørsmålene gjelder den siste måneden. For hvert spørsmål krysser du av for det alternativet som stemmer best for deg. Vennligst svar så riktig og nøyaktig som du kan!

- | | 1 | 2 | 3 | 4 | 5 |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. Hvor ofte har du drukket alkohol den siste måneden?..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

1 gang pr. måned el. sjeldnere
2-4 ganger i måneden
2-3 ganger i uka
4 ganger el. mer i uka

NB: Hvis du svarte «Aldri»: Hopp til del C «Tilbakefall» på neste side.

- | | 1 | 2 | 3 | 4 | 5 |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 2. Hvor mange alkoholenheter tar du på en «typisk drikkedag»?
En alkoholenhet er ca 10-15 gram etanol, dvs. ca en halvliter pils, ett glass brennevin, ett «vanlig» glass rød/hvitvin, en «vanlig» drink el.l..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Hvor ofte den siste måneden har du drukket seks alkoholenheter eller mer? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Hvor mange ganger i løpet av den siste måneden har du ikke vært i stand til å stoppe å drikke etter at du hadde begynt? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Hvor ofte har du i løpet av den siste måneden unnlatt å gjøre ting du skulle ha gjort på grunn av din drikking?..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Hvor ofte har du i løpet av den siste måneden trengt en drink om morgenen for å komme i gang etter sterk drikking dagen før? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Hvor ofte har du i løpet av den siste måneden hatt skyldfølelse på grunn av drikking? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Hvor ofte har du i løpet av den siste måneden ikke husket hva som hendte kvelden før på grunn av drikking?..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

1-2 enheter
3-4 enheter
5-6 enheter
7-9 enheter
10 enheter el. mer

1 gang pr. måned el. sjeldnere
2-4 ganger i måneden
2-3 ganger i uka
4 ganger el. mer i uka

- | | <i>Nei</i> | <i>Ja, men ikke i løpet av den siste siste måneden</i> | <i>Ja, i løpet av den siste måneden</i> |
|---|--------------------------|--|---|
| | 1 | 2 | 3 |
| 9. Har du eller noen annen blitt skadet (psykisk eller fysisk) som følge av din drikking? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Har en slektning, venn eller lege (eller annen helsearbeider) engstet seg over drikkingen din, eller antydnet at du burde redusere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

C. TRAFIKKSIKKERHET

Hvor enig eller uenig er du i hver av disse påstandene?

- | | <i>Heft enig</i> | <i>Enig</i> | <i>Både /og</i> | <i>Uenig-</i> | <i>Heft uenig</i> |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | 1 | 2 | 3 | 4 | 5 |
| 1. Mange trafikkregler kan ikke overholdes hvis det skal være flyt i trafikken..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Det er fornuftig å kjøre litt for fort for å komme forbi lusekjørere..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Man bør overholde trafikkreglene uansett hvordan kjøreforholdene er | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Det er ikke rart at folk bryter fartsgrenser i Norge, så lave som de er..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Det er helt greit å kjøre på gult lys like før det skifter til rødt..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Sjåførere som tar sjanser og bryter noen trafikkregler er ikke nødvendigvis mindre sikre sjåførere enn de som kjører helt lovlig..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Det er greit å ta sjanser når det kun er deg selv som utsettes for risiko | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Trafikkregler er ofte for kompliserte til at de kan følges i praksis..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Hvis du er en dyktig sjåfør er det akseptabelt å kjøre litt fort | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Det er greit å kjøre i 100 km/h på en rett strekning når ikke andre er i nærheten..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Det skulle vært strengere straffer for å bryte fartsgrensen | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Det er greit å sitte på med en uforsiktig sjåfør hvis det ikke er andre måter å komme seg hjem på | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Jeg ville ha sittet på med en som råkjører hvis andre gjør det | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Jeg risikerer ikke liv og helse ved å sitte på med en dårlig sjåfør..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Jeg ville aldri kjørt etter å ha drukket alkohol..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. Jeg ville aldri ha sittet på med en sjåfør jeg vet har drukket alkohol..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. Hvis alkoholinntaket er moderat, så er det greit å kjøre bil selv om man har drukket litt..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18. Hvis det lukter alkohol av en sjåfør, ville jeg aldri kjørt med han eller henne..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 19. Alkohol er neppe så viktig for trafiksikkerhet som man hevder | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 20. Hvis det er lite trafikk er det ikke så galt å kjøre bil hjem etter en sen nattetime selv om man har drukket litt..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 21. Jeg kjører fint bil selv om jeg har drukket fire pils..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 22. Hvis det lukter alkohol av sjåføren går jeg alltid ut av bilen | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 23. Hvis en jeg kjenner har drukket alkohol og forsøker å kjøre bil, prøver jeg alltid å forhindre det | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

D. RISIKOATFERD

Fra tid til annen bryter de fleste trafikkregler.

Hvor ofte forekommer det at du ...

- | | <i>Svært ofte</i> | <i>Ofte</i> | <i>Av og til</i> | <i>Sjelden</i> | <i>Aldri</i> |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | 1 | 2 | 3 | 4 | 5 |
| 1. ... bryter fartsgrensen i tettbygd strøk med 50 km sone (mer enn 10 km for fort)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. ... bryter fartsgrensen på landevei med 80-90 km sone (mer enn 10 km for fort)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. ... kjører forbi bilen foran deg selv om den holder fartsgrensen? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. ... bryter trafikkregler for å komme smidigere fram?..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

	Svært ofte 1	Ofte 2	Av og til 3	Sjelden 4	Aldri 5
5. ... ignorerer trafikkregler for å komme deg raskere frem?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. ... kjører litt raskere for å nå fram til en avtale?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. ... er så nær bilen foran at du ikke ville vært i stand til å stoppe hvis den plutselig bremset?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. ... blir distraheret av ting rundt deg når du kjører?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. ... skaper farlige situasjoner som følge av at du er uoppmerksom?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. ... kjører slik at du ikke har tilstrekkelig sikkerhetsmargin?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. ... fortsetter å kjøre når du er sliten og egentlig trenger en pause?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. ... kjører korte avstander i bil uten å bruke bilbelte?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. ... kjører lengre turer i bil uten å bruke bilbelte?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. ... senker hastigheten fordi en bil bak deg prøver å kjøre forbi?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. ... reduserer farten og kjører under fartsgrensen når du ser et fareskilt?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. ... reduserer farten når kjøreforholdene er vanskelige selv om tillatt fartsgrense er høyere?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. ... reduserer hastigheten til langt under fartsgrensen når det er glatt?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. ... kjører etter å ha drukket flere glass pils eller vin?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. ... kjører morgenen etter du har drukket alkohol, uten å være sikker på om alkoholen er ute av kroppen?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. ... sitter på med en person som du vet har drukket for mye alkohol?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. ... reduserer farten til under 30 km/h der skilt informerer om at barn leker?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. ... senker farten i områder hvor barn leker, selv om ingen barn er å se?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. ... kjører under fartsgrensen i 30 km sone?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. ... kjører under fartsgrensen i 50 km sone?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

E. BAKGRUNNSINFORMASJON

1. **Kjønn:** Kvinne.....1
Mann.....2
2. **Alder:** Under 25 år.....1 35 – 44 år.....3
25 – 34 år.....2 Over 44 år.....4
3. **Sivil-status:** Singel.....1
Samboer.....2
Gift.....3
Separert/skilt.....4
Enke/enkemann.....5
4. **Din høyeste fullførte utdanning:** Ikke fullført grunnskole.....1
Grunnskole.....2
Videregående/gymnas.....3
Høgskole/universitet.....4
5. Har du tidligere vært innsatt eller dømt for kriminalitet? ⇨ Nei.....1 Ja.....2
6. Har du tidligere vært straffet for promillekjøring? ⇨ Nei.....1 Ja.....2
7. Hvis ja, hvor lenge er det siden siste gang?
Oppgi antall år og/eller måneder siden. ⇨ år siden måneder siden
8. Hvis ja, hvilken type straff fikk du? ⇨ Fængselsstraff.....1 Program mot ruspåvirket kjøring.....2
9. Har du vært tiltalt for promillekjøring mer enn to ganger? ⇨ Nei.....1 Ja.....2

10. Hvor lang er din soning/straffeperiode? ⇨ Under 2 mnd.... ₁ 2 mnd. – 1 år ... ₂ Over 1 år. ₃

11. Hvis du følger «program mot ruspåvirket kjøring»,
hvor langt har du kommet i programmet? ⇨

1 – 2 mnd.	<input type="checkbox"/> ₁	4 – 6 mnd.	<input type="checkbox"/> ₃
2 – 4 mnd.	<input type="checkbox"/> ₂	6 – 8 mnd.	<input type="checkbox"/> ₄
		8 – 10 mnd.	<input type="checkbox"/> ₅

Har du en kommentar til denne undersøkelsen eller temaene som tas opp, kan du skrive her. ↴