Purpose: The purpose of this study is to discuss the countermeasures against drunk driving regulations in terms of crime prevention because drunk driving is not a simple traffic crime but a potential murder.

One methodology would be to raise the punishment for drunk driving and to improve the public’s awareness and conduct regular traffic accident prevention education so that fundamental problems can be solved and have high efficiency and normative power. In Korea, the ‘Act on the Aggravated Punishment of Specific Crimes, etc.’ and ‘Road Traffic Act’ were amended in Korea following the case of ‘Yoon Chang-ho’, who died in a drunk driving accident in 2018. Drunk driving is a very dangerous behavior, as it can endanger your life as well as the lives of others. Even if an accident does not occur, such an act is a violation of the Road Traffic Act and therefore carries criminal responsibility. In terms of general crime prevention, the penalties for drunk driving are becoming stricter than in the past. In the improved system, even if the blood alcohol level is 0.03% or more and less than 0.08, imprisonment for not more than one year or a fine of not more than 5 million won is imposed. In the case of two or more violations of the strengthened regulations, imprisonment for not less than 2 years and not more than 5 years, or a fine of not less than 10 million won and not more than 20 million won. What used to be a three-out was changed to a two-out for drunk driving. However on November 25, 2021, the Constitutional Court ruled that the provisions of the Road Traffic Act, which required uniform and aggravated punishments for drunk driving more than twice, were against the Constitution(Constitutional Court 2021.11.25, 2019Hunba 446, etc.). In addition, if you injure a person while driving, you will be punished by imprisonment for not less than 1 year and not more than 15 years in prison, or a fine of not less than 10 million won to not more than 30 million won.(Before the amendment, in case of death while driving under the influence of alcohol, he was sentenced to fixed-term imprisonment of more than one year). Drunk driving accidents can lead to criminal punishment, administrative sanctions, and even civil lawsuits. Keep in mind that drunk driving can be a potential killer on the road. Even if you didn’t harm anyone, just drinking and driving can be a big hit in society.

Method: Injuries and deaths due to drunk driving are on the rise. As a countermeasure against this, the standards and level of punishment for drunk driving are being strengthened. First, let’s look at the legal punishment for drunk driving through the laws related to drunk driving. Second, we examine the severity of the damage caused by drunk driving through statistics such as drunk driving accidents, injuries, and deaths in current Korean society. Third, as a comparative legal review, by examining foreign laws on drunk driving accidents, matters to be referred to in Korean laws and regulations are reviewed. Fourth, I would like to make a legislative proposal by reviewing the problems and improvement plans of the drunk driving legal system. Previous studies on drunk driving have mainly focused on strengthening the punishment for drunk driving. This study intends to review the general crime prevention aspect by not only strengthening punishment but also changing the public’s perception through education.

Results: Drunk driving affects not only drunk drivers, but also others and society. It is necessary to keep in mind that drunk driving is a potential homicide, and the prohibition of drunk driving should be strengthened. In addition, if the general prevention effect can be successfully established and nudged against the offenses of
drunk drivers, social costs can be reduced.

Conclusion: For drunk driving, both the 'external motivation' such as punishment, as well as the 'intrinsic motivation' to act in compliance with the norm must be activated. To this end, it is necessary to raise awareness that drunk driving must be caught and punished. The certainty of punishment has a positive effect on crime deterrence. Also, in the case of self-driving cars in the era of the 4th industrial revolution, there are no regulations for drunk drivers, so a review should be carried out.

[Keywords] Drunk Driving, Crime Prevention, Road Traffic Act, Blood Alcohol Concentration, Criminal Liability

1. Introduction

The seriousness of drunk driving became a big social issue in the wake of the death of the late Chang-ho Yoon by a drunk driving vehicle on September 25, 2018. With this incident as an opportunity, the Blue House National Petition appealed for severe punishment for the perpetrators of drunk driving, saying, "Drunk driving is not a mistake, it is murder, and drunk driving should not be lightly punished so that no more injustice occurs." Since then, the Act on the Aggravated Punishment of Specific Crimes has been in effect since December 18, 2018, and the Road Traffic Act, which strengthens the enforcement standards for drunk driving, has been in force since June 25, 2019. The revised Road Traffic Act, which will come into effect on June 25, 2019, strengthens the minimum blood alcohol level that is judged to be intoxicated from 0.05% or higher to 0.03% or higher, and the standard for revocation of a drunk driving license will also be raised to 0.08% or higher. It was strengthened and it was stipulated that the license would be revoked from the second drunk driving case, but this part was determined to be unconstitutional. The disqualification period for re-acquisition of a license has also been newly added to grant a disqualification period of 5 years if a fatal accident is caused by drunk driving. Penalties for events based on drinking levels were also strengthened. In recent years, the Special Criminal Law has been applied preferentially over the Criminal Law, which is widespread enough to neutralize the normative power of the criminal law[1].

The purpose of punishment for a crime can be said to be retribution and prevention of individual criminals. Retribution is to punish the offender by making the person responsible for the crime as much as he or she has committed the crime. Prevention includes general prevention for the general public and special prevention aimed at improving criminals and preventing recidivism. Retribution and prevention may be emphasized differently depending on the nature of the crime or the circumstances of the times. Sentencing for drunk driving basically emphasizes the function of prevention. This is because, in general crimes, most of the victims exist, but in the case of drunk driving, if there is no traffic accident, there are usually no victims. The police function to crack down on drunk driving is essential for a safe society and the existence of a nation[2]. In addition, it is necessary to prevent crime by conducting urban regeneration and CPTED activities in community activities, including crime prevention activities related to drunk driving[3].

2. Current status of Drunk Driving

Regarding driving, the Supreme Court said, “If we take a look at the legislative purpose and purpose of the Road Traffic Act, the driver’s license system, and the system and contents of the penalties for unlicensed driving, the Road Traffic Act provides. In principle, only those who have obtained a driver’s license in accordance with the procedures stipulated by the Traffic Act are permitted to legally drive a motor vehicle, etc.[4].

In general, victims of drunk driving have accidents in an unpredictable state and cause tremendous damage not only to individuals, but also to their families and society. In particular, it adversely affects the livelihood of families as they cannot work economically. The types of drunk
driving can be broadly classified into knowledge aspect, sensitivity aspect, behavioral aspect, and habitual aspect. Many drunk drivers are optimistic that there will be no arrests and no accidents. Even though it is reasonable to leave the car for a drink or spend the cost of driving a car, it is a pervasive risky choice. First, in terms of knowledge, it is a case in which a drunk driver drives after calculating his or her condition numerically. Overconfidence in their alcohol consumption and driving skills. Alcohol decomposition rate is a case of overconfidence in one's own condition uniformly despite differences occurring due to various factors such as gender, weight, type of alcohol, constitution, and snacks. Second, in terms of sensitivity, it is a case in which the drunk driver thinks that he can control himself and falls into delusion and rationalization due to lack of risk sensitivity. Third, in terms of behavior, it is driving to avoid enforcement. This is based on an availability bias, where someone tells you that you have been drinking and driving and you are not caught, and that it is because you have previously been driving under the influence of alcohol. Fourth, in terms of habit, it is a case of habitual drunk driving despite being punished for drunk driving. Therefore, education on the dangers of drunk driving should be strengthened\cite{5}\cite{6}.


table 1. Drunk driving statistics.

<table>
<thead>
<tr>
<th>Year (Korea)</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drunken drive number of occurrences</td>
<td>19,517</td>
<td>216,335</td>
<td>19,381</td>
<td>217,148</td>
</tr>
<tr>
<td>Number of traffic accidents</td>
<td>217,418</td>
<td>15,708</td>
<td>229,600</td>
<td>17,247</td>
</tr>
<tr>
<td>Number of traffic accidents</td>
<td>209,654</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Korean National Police Agency.

3. Responses to Drunk Driving in Each Country

3.1. United States of America

In the United States, traffic crimes such as drunk driving, driving without a license, and reckless driving are regulated by traffic laws. However, the federal courts have jurisdiction over traffic offenses in territories owned or controlled by the federal government under applicable federal law. Most states treat up to two drunk driving offenses as an offense if there are no fatal accidents, and instead of criminal punishment such as detention or license suspension, demerit points and fines are imposed through civil and administrative sanctions\cite{7}. However, if the drunk driving causes serious damage such as property damage or personnel accident, it is treated as a felony. For example, New York State classifies drunk driving into DWAI(Driving while ability impaired by alcohol) and DWI(Driving while intoxicated)\cite{8}. WAI is when intoxicated but has a blood alcohol concentration of 0.08% or less(§ 1192(1)) and DWI is higher. Most states in the United States have enacted implied consent, which means that all drivers who drive on public roads are deemed to have consented to a chemical test to measure breath. In case of suspicion of drunk driving, the US police largely measure it through field sobriety tests or chemical tests. Chemical tests include breath tests, blood tests and urine tests\cite{9} If a driver refuses to take a breathalyzer test, he/she will be subject to criminal punishment or suspension or revocation of his/her driver's license. If you are caught driving under the influence of alcohol, there are many restrictions on overseas travel. Even in EU countries including the United States, Japan, Taiwan, Sweden, Australia, the United Kingdom, Canada, and New Zealand, if there is a history of drunk driving and a criminal record on the immigration form or electronic travel permit, visa-
free entry is highly likely to be denied. must be issued separately. For example, New York State classifies drunk driving into DWAI(Driving while ability impaired by alcohol) and DWI(Driving while intoxicated)[10]. In addition, if you are caught driving under the influence of alcohol, it will be difficult to use car rental services abroad. In the case of the United States, it varies from state to state, but in some states, if a person is injured by drunk driving, it is not a crime of drunk driving, but second degree murder, and in this case, it is not subject to the special pardon of the president. In Michigan, if your blood alcohol level is above 0.1%, you will be charged with attempted murder. In Washington state, if a drunk driver kills someone, it is a first-degree murder and can be sentenced to life in prison. In addition, according to US federal law, if your license is revoked for drunk driving, you will not be able to re-acquire your license for at least 2 to 5 years. In the United States, secondary preventive education and secondary preventive rehabilitation programs are implemented. Implement group and person-centered intervention programs. The same program as in the UK is conducted[11][12].

3.2. Japan

The purpose of the Road Traffic Act in Japan is to prevent dangers on the road, to promote the safety and smoothness of other traffic, and to contribute to the prevention of obstacles caused by road traffic. However, drunk driving is strictly regulated by the Road Traffic Act because there is a high risk of impeding not only the driver's own safety, but also the safety of the body and life of other traffic participants and smooth traffic[13]. In Japan, according to the Automobile Driver Accidents Punishment Act, if a motor vehicle is driven under the influence of alcohol or drugs in a state where it is difficult to have a normal right-of-way, the person who injures a person shall be sentenced to up to 15 years in prison, and the person who kills another person shall be punished by imprisonment for not more than one year. In cases where there is a violation of the duty of relief under the Road Traffic Act, the person who injures them shall be sentenced to up to 22 years and 6 months in prison, and in the case of death, up to 30 years in prison. In Japan, the blood alcohol concentration control standard was strengthened from 0.05% to 0.03% in 2002, and there is a penalty clause that holds the driver responsible for driving under the influence. If a person who has been driving under the influence of alcohol is caught driving under the influence of alcohol, the passenger, the driver, and the vehicle provider and the alcoholic beverage provider are also punished. Alcoholic beverage providers may require drivers to sign an oath upon entering the restaurant or refuse to sell alcohol if there is a possibility of attempting to drive under the influence. In addition, the penalty points for drunk driving are higher than when a fatal accident is caused by a traffic accident. In Japan, the number of drunken accidents has decreased because of the frequent enforcement of hidden patrol vehicles, which are indistinguishable from ordinary civilian vehicles.

3.3. Germany

In Germany, the maximum penalty for drunk driving is 5 years. In addition, the maximum disqualification period for a drunk driving license is 5 years, and in some cases, it can be permanently revoked. In Germany, a penalty is imposed for two years after obtaining a driver's license or for exceeding 0.0% blood alcohol level if under the age of 21. In other words, the danger of drunk driving is imprinted at the stage of obtaining a license. Germany is implemented in three forms, taking into account the age of the drunk driver, the severity of the drinking, and the number of crimes. Divided into improvement programs for drivers who have been convicted of serious drunk driving. AFN(Gesellschaft fur Ausbildung, Fortbildung und Nachschulung), an accredited organization, supports individual education for drunk drivers.
4. Improvement Plans for Drunk Driving Regulations

It is necessary to examine the criminology theory to prevent drunk driving. Reinforcing punishment for drunk driving is a policy based on the deterrence theory. Classical criminologists Beccaria and Bentham advocated the theory of deterrence. Beccaria argued that punishment is not a means of retribution, but a means of preventing crime in society, and that it should be limited to the minimum necessary for the purpose of preventing crime. Also, it was considered that the degree of punishment is sufficient to cause the offender to slightly exceed the loss he or she loses through the punishment than the profit gained by the crime. By emphasizing general prevention, he argued that not only the amount of punishment, but also the degree of speed, certainty, and severity of the execution method of the punishment can prevent crimes. Increasing the severity of punishment can reduce crime to some extent. However, it is more effective to increase the certainty of detecting and punishing crimes rather than increasing the intensity of punishment.

Beccaria also asserted that “the most effective way to prevent crime lies in certainty, not cruelty, of punishment[14].”

There are also many empirical studies that show ambiguity[15][16].

Also, there are scholars who argue for the introduction of negligent drunk driving in case there is a case where the burden of proof is difficult even though drunk driving is an intentional offence[17]. And efficient monitoring and monitoring of drunk driving is inevitably required[18].

Table 2. Standard of punishment.

<table>
<thead>
<tr>
<th>Alcohol concentration results</th>
<th>0.03% to less than 0.08%</th>
<th>0.08% or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Punishment</td>
<td>Criminal punishment, suspension of license for 100 days</td>
<td>Criminal penalties, license revocation</td>
</tr>
<tr>
<td></td>
<td>Criminal penalties for non-compliance with measurement, license revocation</td>
<td></td>
</tr>
</tbody>
</table>

Note: In case of criminal punishment: imprisonment for not more than 5 years or a fine not exceeding 20 million won.

4.1. Introduction of the ignition lock

The introduction of an ignition lock is proposed as a countermeasure to prevent drunk driving in advance. Those who have been punished for driving under the influence of alcohol more than twice are obliged to drive only cars equipped with a drunk driving prevention device[19]. In other words, after the driver supplies power to the ignition key and turns on the ignition switch, when the ignition lock completes warming up, it measures the exhaled air for a few seconds and prevents the engine from starting if the alcohol level is 0.03 or higher. In particular, policy measures that can effectively prevent habitual drunk driving include supplementing administrative measures that can directly block drunk driving in addition to criminal punishment, and an electronic technology device that blocks drunk driving as a means of suppressing drunk driving. The public should be aware of the dangers of drunk driving through the introduction, reinforcement of customized education and training to correct drunk driving habits of habitual drunk drivers, and active policy promotion and educational activities[20].

4.2. Improvement of insurance system

In the case of drunk driving traffic accident perpetrators, under the current automobile insurance terms and conditions, drunk driving perpetrators are charged 3 million won for personal accidents and 1 million won for property accidents as self-pay.

Even if a drunk driving accident occurs, if the perpetrator pays only a certain amount, the insurance company pays the rest, and there is no additional responsibility, so he can lament “moral hazard.”
Therefore, it is necessary to raise the co-payment for drunk driving perpetrators by three times or more than the current one.

4.3. Reinforcement of education when acquiring a driver’s license

It is necessary to strengthen education on prevention of drunk driving in the requirements for obtaining a driver’s license.

When acquiring a driver’s license, it is necessary to reinforce the perception that drinking and driving is not a single drink while driving by instilling the awareness that drunk driving is a murder and imprinting the impact on the safety of citizens. There is no legal basis for the current voluntary crime prevention activities[21][22][23].

4.4. Revision of the road traffic act when introducing autonomous vehicles

Article 44 of the Current Road Traffic Act (prohibition of driving while intoxicated) states, “① Anyone who is intoxicated with automobiles, etc. Hereinafter, the same shall apply in this Article, Article 45, Article 47, Article 93(1) 1 through 4, and Article 148-2, streetcars or bicycles shall not be driven. ② When a police officer deems it necessary for traffic safety and danger prevention, or if there are reasonable grounds to admit that he or she has driven a motor vehicle, streetcar, or bicycle while intoxicated in violation of paragraph(1), the driver is intoxicated It can be measured by breathing survey. In this case, the driver shall comply with the police officer’s measurement. ③ For a driver who is dissatisfied with the measurement result under paragraph(2), the driver may obtain the consent of the driver and take another measurement, such as blood collection. ④ The standard for being intoxicated, which is prohibited from driving pursuant to Paragraph 1, shall be when the driver’s blood alcohol concentration is 0.03 percent or higher.” In other words, the Road Traffic Act prohibits driving when there is a risk of normal driving due to the influence of drunk driving, overwork, disease, drugs, etc.

Therefore, self-driving cars, which do not perform the entire process of driving directly, can be driven even in the case of drunkenness, so the regulation of regulations is required[24]. Self-driving cars are a useful tool in the era of the 4th industrial revolution that can change the quality of human life, but there is a risk at every moment.

In addition, legal issues regarding the attribution of liability in the event of an autonomous vehicle accident arise, so consideration is required. The participation of the most representative residents in the local community is expanded through the local community open call system for organizing and operating the advisory group, where various residents can directly experience police activities and, through this, it will be necessary to establish an institutional mechanism to actively raise their opinions[25].

4.5. Reinforcement of punishment for non-compliance with breathalyzer

The offense of not complying with a breathalyzer was not regulated when the Road Traffic Act was enacted in 1961, but was newly established with the amendment of the Road Traffic Act in 1980. In the background, the number of automobiles increased in the 1980s, and drunk driving emerged as a social problem, and when there were frequent cases of drivers refusing to take a breathalyzer when cracking down on drunk driving, it was legislated as a countermeasure. In Article 148-2 (Penalty Provisions) of the current Road Traffic Act, Article 148-2 (Penal Provisions), “a person who has reasonable grounds to admit that he or she is intoxicated and who does not comply with the measurement of a police officer under Article 44(2) (such as a motor vehicle or a road surface) (limited to those who drive a streetcar) shall be punished by imprisonment for not less than 1 year and not more than 5 years, or by a fine of not less than 5 million won and not more than 20 million won.” However, in some cases, it is criticized that the punishment for not complying with a breathalyzer test is weaker than that for drunk driving. Therefore, it is appropriate to increase the level of punishment for non-compliance with breathalyzer tests by considering it as an act of drunk driving[26].
4.6. Strengthening education of drunk drivers

Currently, education for drunk drivers in Korea is subject to the order of attendance even for adult offenders who have been sentenced to probation under the Criminal Act from January 1, 1997 as the Criminal Act was amended in December 1995 and the Act on Probation, etc. was amended in December 1996. It is being implemented on the basis. The order to take courses is successful by requiring that criminals, such as drugs, drunk driving, domestic violence, and sexual violence, receive education and treatment for a certain period of time, who are highly likely to repeat the same type of crime due to mental or psychological causes or wrong problem recognition and behavioral habits. It is a system to actively prevent recidivism by improving. In Korea, education is conducted in the form of 8 hours a day for 5 consecutive days, and long continuous classes are considered to be a factor that halves the effectiveness of education as concentration decreases. In addition, it is a process in which individual services and counseling are impossible while providing large-group education rather than small-group education. The lack of professionalism due to frequent replacement of program facilitators is also pointed out as a problem. Therefore, in the case of drunk drivers, in order to prevent recidivism, it is necessary to efficiently allocate the time to complete education on social adaptability and mental health issues, and to implement customized programs according to the motives for drunk driving[27]. In particular, active follow-up management is required to prevent recidivism by conducting intensive or short-term counseling along with participation in education. Continuous and active follow-up management should be established by establishing a cooperative system with local community organizations for those who are ordered to take drunk driving lessons.

4.7. Improvement of blood alcohol level measurement

According to Korea’s Road Traffic Act, the offense of drunk driving is per se law, in which if the blood alcohol concentration is above a certain level, it is immediately established without examining whether the driving ability has deteriorated[28]. For the blood alcohol concentration, respiration measurement, blood pressure measurement, and estimation by Widmark’s formula are used. Article 44(2) of the Road Traffic Act states, “There is no substantial reason to admit that a police officer was driving a motor vehicle, streetcar, or bicycle while intoxicated in violation of paragraph(1) or deemed necessary for the safety of traffic and prevention of danger. If there is, it can be measured whether the driver is intoxicated by breathing survey[29][30]. In this case, the driver must comply with the measurement by a police officer.” Therefore, when cracking down on drunk driving, blood alcohol concentration is primarily measured by respiration.

However, the measurement of blood alcohol concentration by respiration measurement actually estimates the alcohol concentration in the blood using only the alcohol concentration in exhaled air, not the blood alcohol concentration prescribed by the Road Traffic Act as the standard for drunk driving. It cannot be regarded as direct evidence for that. Article 44(3) of the Road Traffic Act stipulates that “A driver who is dissatisfied with the measurement result under paragraph 2 may obtain the driver’s consent and take another measurement by means of blood sampling, etc.” Drivers who are dissatisfied are allowed to re-test through a blood test. When a driver requests blood collection from the beginning or requests blood collection at the measurement site because he or she is dissatisfied with the results of the respiratory measurement, blood is collected at a medical institution, such as a nearby hospital or clinic, and then the blood is requested for analysis to the National Forensic Service. In this case, if a significant elapse from the intermittent time to the blood sampling time has elapsed, the blood alcohol concentration is calculated according to the Widmark calculation method. In order for drunk driving to be established, it is necessary to prove that the blood alcohol concentration at the time of driving was 0.03% or higher. can occur.

At this time, the police usually use the so-called 'widmark formula' to estimate the blood alcohol concentration at the time of driving based on the amount of alcohol consumed, the time
of drinking, weight, etc. or post-mortem measurements. In general, the Supreme Court will say that, in the case of using empirical rules such as scientific formulas to determine the existence or non-existence of criminal constituent facts, strict proof is required for individual and specific facts that are the premises for the application of the rules, and in the case of Widmark formula, the application Since the amount of alcohol consumed, time of drinking, weight, etc. are required as data for this, strict proof is needed to admit such a premise (Supreme Court decision 99 degrees 128 on June 27, 2000; Supreme Court decision on October 12, 2007) 1292 judgment in 2007. The Supreme Court said that there are various factors that can affect blood alcohol concentration in addition to the basic data required for the application of the above formula, so this should also be clearly identified by evidence. The Supreme Court also acknowledges that changes in blood alcohol concentration are affected by various factors. However, the Supreme Court excludes judgment on these influencing factors in the trial process, even though it is necessary to clarify various factors through evidence. Therefore, empirical research that can increase the reliability and validity of Widmark is required.

4.8. Police officer drunk driving

Regarding the reasons and standards for disciplinary action for general public officials, according to the 'Enforcement Rules of the Public Official Discipline Ordinance', even if a traffic accident with human or material damage occurs, the 'salary reduction' Honesty is the standard. However, for police officers, if they drive under the influence of 'police officer disciplinary action', regardless of the degree of drinking, as long as they cause a traffic accident that results in personal or material damage, ‘demotion to dismissal’ is possible. Police officers are stricter than general public officials. Since police officers have the authority to crack down on drunk driving, this purpose may have been reflected, but it needs to be reexamined in terms of equal rights.

5. Conclusion

Drunk driving is not just a traffic crime, it is a potential murder. Although the Constitutional Court’s decision was partially unconstitutional, previous legislation has focused on significantly increasing the penalty for drunk driving and broadening the range of offenses punishable for drunk driving[31]. Of course, intensifying punishment can be effective in terms of general prevention of crime. However, it is necessary to improve public awareness and conduct regular traffic accident prevention education to solve more fundamental problems and to have high efficiency and normative power. The 2016 “Audi Reverse Driving Case” and the 2018 “Yoon Chang-ho Incident” greatly spread public opinion on the crime of drunk driving and increased the scope of punishment, while also raising the statutory punishment for each section. Under the current Road Traffic Act, if the blood alcohol concentration is above a certain level, the crime is immediately established without reviewing whether the driving ability is reduced or not. ‘Per se law’ has a greater purpose in promoting overall safety of road traffic rather than individualizing punishment. The precedent also held that the legislative purpose of the offense of drunk driving under the Road Traffic Act was to “ensure safe and smooth traffic by preventing and removing traffic hazards and obstacles caused by driving while intoxicated on the road”. In order to eradicate drunk driving as described above, it is necessary to strengthen the punishment for drunk drivers and take proactive and ex post preventive measures such as orders to take safe driving courses. In other words, ‘extrinsic motivation’ such as punishment and ‘intrinsic motivation’ of complying with norms should be paralleled.

6. References

6.1. Journal articles


### 6.2. Thesis degree


### 6.3. Books


### 6.4. Additional references


### 7. Appendix

#### 7.1. Authors contribution

<table>
<thead>
<tr>
<th>Initial</th>
<th>Contribution</th>
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<tr>
<td>KP</td>
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<tr>
<td></td>
<td>- Design ✓</td>
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<tr>
<td></td>
<td>- Getting results ✓</td>
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<td>- Play a decisive role in modification ✓</td>
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<td>- Significant contributions to concepts, designs, practices, analysis and interpretation of data ✓</td>
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<tr>
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<td>- Participants in Drafting and Revising Papers ✓</td>
</tr>
<tr>
<td></td>
<td>- Someone who can explain all aspects of the paper ✓</td>
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#### 7.2. Funding agency

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